

ภาคผนวกที่ 1

ผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

Request No. LA67-0318

Report No. 6703-0107

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack SAMPLE NO. : 00559

SAMPLING DATE : 06/03/2024 SAMPLING TIME : 13:55-14:35

RECEIVED DATE : 11/03/2024 REPORTED DATE : 20/03/2024

TESTED DATE : 11-13/03/2024

STACK DESCRIPTION @

Height :	13.00 m	Type of Process :	Exhaust
Diameter :	0.93 m	Type of Fuel :	-
Temperature :	40.00 °C	Oxygen Content :	20.20 %
Air Velocity :	23.02 m/s	Barometric Pressure :	754.00 mmHg
Flow rate ² :	14.24 m ³ /s	Atmospheric Temperature :	37.00 °C
Moisture Content :	3.46 %		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	13:55-14:35	4.3	400	mg/m ³
(TSP)	(U.S. EPA Method 5)				

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayaseewee (ว-003-ค-0021)
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

20/03/2024



Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

20/03/2024

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Request No. LA67-0318

Report No. 6703-0108

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack

SAMPLE NO. : 00560

SAMPLING DATE : 06/03/2024

SAMPLING TIME : 13:55-14:35

RECEIVED DATE : 11/03/2024

REPORTED DATE : 20/03/2024

TESTED DATE : 11-16/03/2024

STACK DESCRIPTION

Height : 13.00 m

Type of Process : Exhaust

Diameter : 0.93 m

Type of Fuel : -

Temperature : 40.00 °C

Oxygen Content : 20.20 %

Air Velocity : 23.02 m/s

Barometric Pressure : 754.00 mmHg

Flow rate¹ : 14.24 m³/s

Atmospheric Temperature : 37.00 °C

Moisture Content : 3.46 %

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Zinc Oxide	Isokinetic, Digestion, ICP (U.S. EPA Method 29)	13:55-14:35	4.37	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayaseewee
- Parameter Outside The Scope of The Registration of The Department of Industrial Works.



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Approved By

Thongchai Boonsak

(Mr. Thongchai Boonsak)

20/03/2024

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Request No. LA67-0432

Report No. 6704-0487

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Hot Mill Stack (New Slab Heater) SAMPLE NO. : 01178
SAMPLING DATE : 11/04/2024 SAMPLING TIME : 13:50-14:35
RECEIVED DATE : 19/04/2024 REPORTED DATE : 29/04/2024
TESTED DATE : 19-25/04/2024
STACK DESCRIPTION @

Height :	30.00	m	Type of Process :	Combustion
Diameter :	2.00	m	Type of Fuel :	Natural Gas
Temperature :	250.00	°C	Operation Capacity :	6 piece /hr.
Air Velocity :	4.96	m/s	Oxygen Content :	2.18 %
Flow rate ² :	8.34	m ³ /s	Barometric Pressure :	755.50 mmHg
Moisture Content :	5.48	%	Atmospheric Temperature :	34.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²		STD ¹	UNIT
			2.18 % O ₂	7 % O ₂		
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	13:50-14:35	7.9	5.9	320	mg/m ³

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Metee Sukprasert (1-003-ค-0035)
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(1-003-ค-0007)

29/04/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(1-003-ค-0012)

29/04/2024

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Request No. LA67-0432

Report No. 6704-0489

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Hot Mill Stack (New Slab Heater) SAMPLE NO. : 01180
SAMPLING DATE : 11/04/2024 SAMPLING TIME : 14:05-14:10
RECEIVED DATE : 19/04/2024 REPORTED DATE : 29/04/2024
TESTED DATE : 19-25/04/2024

STACK DESCRIPTION@

Height :	30.00	m	Type of Process :	Combustion
Diameter :	2.00	m	Type of Fuel :	Natural Gas
Temperature :	250.00	°C	Operation Capacity :	6 piece /hr.
Air Velocity :	4.96	m/s	Oxygen Content :	2.18 %
Flow rate ² :	8.34	m ³ /s	Barometric Pressure :	755.50 mmHg
Moisture Content :	5.48	%	Atmospheric Temperature :	34.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²		STD ¹	UNIT
			2.18 % O ₂	7 % O ₂		
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	14:05-14:10	13.6	10.1	376	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		7.2	5.3	200	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

29/04/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

29/04/2024

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Request No. LA67-0432

Report No. 6704-0488

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Hot Mill Stack (New Slab Heater) SAMPLE NO. : 01179
SAMPLING DATE : 11/04/2024 SAMPLING TIME : 13:50-14:20
RECEIVED DATE : 19/04/2024 REPORTED DATE : 29/04/2024
TESTED DATE : 19-25/04/2024

STACK DESCRIPTION @

Height :	30.00	m	Type of Process :	Combustion
Diameter :	2.00	m	Type of Fuel :	Natural Gas
Temperature :	250.00	°C	Operation Capacity :	6 piece /hr.
Air Velocity :	4.96	m/s	Oxygen Content :	2.18 %
Flow rate ² :	8.34	m ³ /s	Barometric Pressure :	755.50 mmHg
Moisture Content :	5.48	%	Atmospheric Temperature :	34.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²		STD ¹	UNIT
			2.18 % O ₂	7 % O ₂		
Sulfur Dioxide	Absorption, Barium-Thorin	13:50-14:20	<3.4	<2.5	157	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	<1.0	60	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

29/04/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

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Request No. LA67-0318

Report No. 6703-0111

TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.		
ADDRESS	: 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230		
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.		
SAMPLE POINT	: ปล่องกระบวนการล้าง (PK-01)	SAMPLE NO.	: 00563
SAMPLING DATE	: 06/03/2024	SAMPLING TIME	: 15:20-15:25
RECEIVED DATE	: 11/03/2024	REPORTED DATE	: 20/03/2024
TESTED DATE	: 11-13/03/2024		
STACK DESCRIPTION [@]			
Height :	12.00 m	Type of Process :	Wet Scrubber
Diameter :	0.80 m	Type of Fuel :	-
Temperature :	38.00 °C	Oxygen Content :	20.90 %
Air Velocity :	7.33 m/s	Barometric Pressure :	754.00 mmHg
Flow rate ¹⁾ :	3.39 m ³ /s	Atmospheric Temperature :	39.00 °C
Moisture Content :	3.20 %		

PARAMETER	TEST METHOD	TIME	RESULT ¹⁾	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	15:20-15:25	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- ¹⁾ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ค-0021)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

20/03/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

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Request No. LA67-0318

Report No. 6703-0110

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (PK-01)

SAMPLE NO. : 00562

SAMPLING DATE : 06/03/2024

SAMPLING TIME : 15:00-15:30

RECEIVED DATE : 11/03/2024

REPORTED DATE : 20/03/2024

TESTED DATE : 11-13/03/2024

STACK DESCRIPTION @

Height : 12.00 m

Type of Process : Wet Scrubber

Diameter : 0.80 m

Type of Fuel : -

Temperature : 38.00 °C

Oxygen Content : 20.90 %

Air Velocity : 7.33 m/s

Barometric Pressure : 754.00 mmHg

Flow rate^{1/2} : 3.39 m³/s

Atmospheric Temperature : 39.00 °C

Moisture Content : 3.20 %

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	15:00-15:30	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- ^{1/} Notification of The Ministry of Industry B.E. 2549 (2006)
- ^{2/} Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ก-0021)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

20/03/2024



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Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

20/03/2024

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Request No. LA67-0318

Report No. 6703-0109

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-01) SAMPLE NO. : 00561
SAMPLING DATE : 06/03/2024 SAMPLING TIME : 15:00-15:45
RECEIVED DATE : 11/03/2024 REPORTED DATE : 20/03/2024
TESTED DATE : 11-13/03/2024
STACK DESCRIPTION[®]

Height :	12.00	m	Type of Process :	Wet Scrubber
Diameter :	0.80	m	Type of Fuel :	-
Temperature :	38.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.33	m/s	Barometric Pressure :	754.00 mmHg
Flow rate ² :	3.39	m ³ /s	Atmospheric Temperature :	39.00 °C
Moisture Content :	3.20	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Barium-Thorin Titrimetric	15:00-15:45	<0.05	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ก-0021)
- [®] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

20/03/2024



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Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

20/03/2024

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Request No. LA67-0315

Report No. 6703-0101

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (AP-02)

SAMPLE NO. : 00541

SAMPLING DATE : 07/03/2024

SAMPLING TIME : 09:15-09:20

RECEIVED DATE : 11/03/2024

REPORTED DATE : 20/03/2024

TESTED DATE : 11-13/03/2024

STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.46	m	Type of Fuel :	-
Temperature :	32.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.12	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ¹ :	1.10	m ³ /s	Atmospheric Temperature :	30.00 °C
Moisture Content :	4.54	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	09:15-09:20	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Nitchaphon Tonglor (จ-003-ท-0032)
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....



(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

20/03/2024



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Approved By.....



(Mr. Thongchai Boonsak)

(จ-003-ท-0012)

20/03/2024

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Request No. LA67-0315

Report No. 6703-0100

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่องกระบวนการล้าง (AP-02) SAMPLE NO. : 00540
 SAMPLING DATE : 07/03/2024 SAMPLING TIME : 09:00-09:30
 RECEIVED DATE : 11/03/2024 REPORTED DATE : 20/03/2024
 TESTED DATE : 11-13/03/2024
 STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.46	m	Type of Fuel :	-
Temperature :	32.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.12	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ² :	1.10	m ³ /s	Atmospheric Temperature :	30.00 °C
Moisture Content :	4.54	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	09:00-09:30	5.7	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		2.2	500	ppm

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
3. Sampling By Mr. Nitchaphon Tonglor (ว-003-ก-0032)
- 4.³ These Data Outside The Scope of The Registration of The Department of Industrial Works.

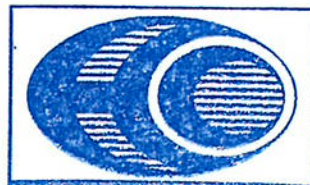
Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

20/03/2024



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Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

20/03/2024

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Request No. LA67-0315

Report No. 6703-0098

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (AP-02)

SAMPLE NO. : 00538

SAMPLING DATE : 07/03/2024

SAMPLING TIME : 09:45-10:20

RECEIVED DATE : 11/03/2024

REPORTED DATE : 20/03/2024

TESTED DATE : 11-13/03/2024

STACK DESCRIPTION[@]

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.46	m	Type of Fuel :	-
Temperature :	31.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.17	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ² :	1.11	m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	4.42	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Barium-Thorin Titrimetric	09:45-10:20	<0.05	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Nitchaphon Tonglor (ว-003-ค-0032)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

20/03/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

20/03/2024

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Request No. LA67-0339

Report No. 6703-0291

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03) SAMPLE NO. : 00759
SAMPLING DATE : 15/03/2024 SAMPLING TIME : 13:45-14:50
RECEIVED DATE : 19/03/2024 REPORTED DATE : 23/03/2024
TESTED DATE : 19-22/03/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	29.00	°C	Oxygen Content :	20.90 %
Air Velocity :	11.01	m/s	Barometric Pressure :	757.75 mmHg
Flow rate ¹ :	4.02	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.81	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	13:45-14:50	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- 1.¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 2.² These Data Outside The Scope of The Registration of The Department of Industrial Works.
3. Sampling By Mr. Teerapong Naulin (ว-003-ค-0014)

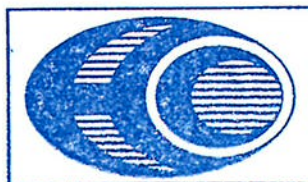
Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

23/03/2024



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Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

23/03/2024



Request No. LA67-0339

Report No. 6703-0288

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03) SAMPLE NO. : 00756
SAMPLING DATE : 15/03/2024 SAMPLING TIME : 13:40-14:10
RECEIVED DATE : 19/03/2024 REPORTED DATE : 23/03/2024
TESTED DATE : 19-21/03/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	29.00	°C	Oxygen Content :	20.90 %
Air Velocity :	11.01	m/s	Barometric Pressure :	757.75 mmHg
Flow rate ² :	4.02	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.81	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	13:40-14:10	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Teerapong Naulin (จ-003-ท-0014)

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

23/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ท-0012)

23/03/2024



Request No. LA67-0339

Report No. 6703-0290

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03) SAMPLE NO. : 00758
 SAMPLING DATE : 15/03/2024 SAMPLING TIME : 13:40-14:15
 RECEIVED DATE : 19/03/2024 REPORTED DATE : 23/03/2024
 TESTED DATE : 19-21/03/2024
 STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	29.00	°C	Oxygen Content :	20.90 %
Air Velocity :	11.01	m/s	Barometric Pressure :	757.75 mmHg
Flow rate ² :	4.02	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.81	%		

PARAMETER*	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Titrimetric	13:40-14:15	5.2	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		1.3	25	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Teerapong Naulin (ว-003-ค-0014)

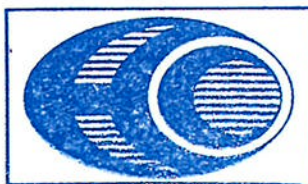
Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

23/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

23/03/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-0339

Report No. 6703-0289

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03) SAMPLE NO. : 00757
SAMPLING DATE : 15/03/2024 SAMPLING TIME : 13:40-14:10
RECEIVED DATE : 19/03/2024 REPORTED DATE : 23/03/2024
TESTED DATE : 19-22/03/2024
STACK DESCRIPTION
Height : 10.00 m Type of Process : Exhaust
Diameter : 0.70 m Type of Fuel : -
Temperature : 29.00 °C Oxygen Content : 20.90 %
Air Velocity : 11.01 m/s Barometric Pressure : 757.75 mmHg
Flow rate¹ : 4.02 m³/s Atmospheric Temperature : 35.00 °C
Moisture Content : 3.81 %

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Nitric acid	Absorption, Ion Chromatography	13:40-14:10	6.36	mg/m ³
(HNO ₃)	(U.S.EPA Method 26A)		2.47	ppm

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Teerapong Naulin
- Parameter Outside The Scope of The Registration of The Department of Industrial Works.



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....



(Mr. Thongchai Boonsak)

23/03/2024



Request No. LA67-0321

Report No. 6703-0147

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-07) SAMPLE NO. : 00618
SAMPLING DATE : 12/03/2024 SAMPLING TIME : 09:00-09:05
RECEIVED DATE : 13/03/2024 REPORTED DATE : 20/03/2024
TESTED DATE : 13-20/03/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.67	m	Type of Fuel :	-
Temperature :	30.00	°C	Oxygen Content :	20.90 %
Air Velocity :	5.95	m/s	Barometric Pressure :	759.25 mmHg
Flow rate ^{1/} :	1.98	m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	3.83	%		

PARAMETER	TEST METHOD	TIME	RESULT ^{1/}	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	09:00-09:05	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- ^{1/} Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ^{2/} These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Nitchaphon Tonglor (ว-003-ท-0032)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

20/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

20/03/2024

COPY

Request No. LA67-0321

Report No. 6703-0145

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่องกระบวนการล้าง (PK-07) SAMPLE NO. : 00616
 SAMPLING DATE : 12/03/2024 SAMPLING TIME : 08:50-09:20
 RECEIVED DATE : 13/03/2024 REPORTED DATE : 20/03/2024
 TESTED DATE : 13-20/03/2024
 STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.67	m	Type of Fuel :	-
Temperature :	30.00	°C	Oxygen Content :	20.90 %
Air Velocity :	5.95	m/s	Barometric Pressure :	759.25 mmHg
Flow rate ² :	1.98	m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	3.83	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	08:50-09:20	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 3.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.
4. Sampling By Mr. Nitchaphon Tonglor (จ-003-ก-0032)

Examined By.....



(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

20/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(Mr. Thongchai Boonsak)

(จ-003-ก-0012)

20/03/2024

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Request No. LA67-0321

Report No. 6703-0146

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่องกระบวนการล้าง (PK-07) SAMPLE NO. : 00617
 SAMPLING DATE : 12/03/2024 SAMPLING TIME : 08:50-09:35
 RECEIVED DATE : 13/03/2024 REPORTED DATE : 20/03/2024
 TESTED DATE : 13-20/03/2024
 STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.67	m	Type of Fuel :	-
Temperature :	30.00	°C	Oxygen Content :	20.90 %
Air Velocity :	5.95	m/s	Barometric Pressure :	759.25 mmHg
Flow rate ² :	1.98	m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	3.83	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Barium-Thorin Titrimetric	08:50-09:35	<0.05	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25	ppm

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 3.³ These Data Outside The Scope of The Registration of The Department of Industrial Works.
4. Sampling By Mr. Nitchaphon Tonglor (จ-003-ก-0032)

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

20/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ก-0012)

20/03/2024

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Request No. ATR6701030

Report No. 6701-0259 - 6701-0261

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo.5 T. Tungsukla A. Sriracha , Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 31/01/2024 SAMPLE NO. : A67010259 - A67010261
TESTED DATE : 31/01/2024-31/01/2024 REPORTED DATE : 05/02/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹⁾	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	22-23/01/2024	0.081	0.33	mg/m ³
		23-24/01/2024	0.088	0.33	mg/m ³
		24-25/01/2024	0.076	0.33	mg/m ³

REMARK:

¹⁾ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
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Approved By 

(Miss Thanatporn Klinsopon)

05/02/2024

COPY

Request No. ATR6701030

Report No. 6701-0262 - 6701-0264

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo.5 T. Tungsukla A. Sriracha , Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 31/01/2024 SAMPLE NO. : A67010262 - A67010264
TESTED DATE : 31/01/2024-03/02/2024 REPORTED DATE : 05/02/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	22-23/01/2024	< 0.01	mg/m ³
		23-24/01/2024	< 0.01	mg/m ³
		24-25/01/2024	< 0.01	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsohon)

05/02/2024

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Request No. ATR6703030

Report No. 6703-0536 - 6703-0538

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 18/03/2024 SAMPLE NO. : A67030536 - A67030538
TESTED DATE : 18/03/2024-20/03/2024 REPORTED DATE : 28/03/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{/1}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	05-06/03/2024	0.073	0.33	mg/m ³
		06-07/03/2024	0.062	0.33	mg/m ³
		07-08/03/2024	0.068	0.33	mg/m ³

REMARK:^{/1} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Suttha Songthaninai)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

28/03/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6703030

Report No. 6703-0539 - 6703-0541

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 18/03/2024 SAMPLE NO. : A67030539 - A67030541
TESTED DATE : 18/03/2024-28/03/2024 REPORTED DATE : 28/03/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	05-06/03/2024	< 0.01	mg/m ³
		06-07/03/2024	< 0.01	mg/m ³
		07-08/03/2024	< 0.01	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Suttha Songthaninai)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoapon)

28/03/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6705080

Report No. 6705-1352 - 6705-1354

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 23/05/2024 SAMPLE NO. : A67051352 - A67051354
TESTED DATE : 23/05/2024-29/05/2024 REPORTED DATE : 04/06/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	13-14/05/2024	0.110	0.33	mg/m ³
		14-15/05/2024	0.096	0.33	mg/m ³
		15-16/05/2024	0.131	0.33	mg/m ³

REMARK:^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



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Approved By

(Miss Thanatporn Klinsoon)

04/06/2024

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Request No. ATR6705080

Report No. 6705-1355 - 6705-1357

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 23/05/2024 SAMPLE NO. : A67051355 - A67051357
TESTED DATE : 23/05/2024-01/06/2024 REPORTED DATE : 04/06/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	13-14/05/2024	0.002	mg/m ³
		14-15/05/2024	< 0.002	mg/m ³
		15-16/05/2024	< 0.002	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



Approved By

(Miss Thanatporn Klinsopon)

04/06/2024

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Request No. ATR6701030

Report No. 6701-0253 - 6701-0255

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo.5 T. Tung Sukla A. Sriracha , Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 31/01/2024 SAMPLE NO. : A67010253 - A67010255
TESTED DATE : 31/01/2024-31/01/2024 REPORTED DATE : 05/02/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	22-23/01/2024	0.097	0.33	mg/m ³
		23-24/01/2024	0.110	0.33	mg/m ³
		24-25/01/2024	0.127	0.33	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

05/02/2024

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Request No. ATR6701030

Report No. 6701-0256 - 6701-0258

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo.5 T. Tungsukla A. Sriracha , Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 31/01/2024 SAMPLE NO. : A67010256 - A67010258
TESTED DATE : 31/01/2024-03/02/2024 REPORTED DATE : 05/02/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	22-23/01/2024	< 0.01	mg/m ³
		23-24/01/2024	< 0.01	mg/m ³
		24-25/01/2024	0.01	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By 

(Miss Thanatporn Klinsopon)

05/02/2024

COPY

Request No. ATR6703030

Report No. 6703-0530 - 6703-0532

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 18/03/2024 SAMPLE NO. : A67030530 - A67030532
TESTED DATE : 18/03/2024-20/03/2024 REPORTED DATE : 28/03/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	05-06/03/2024	0.066	0.33	mg/m ³
		06-07/03/2024	0.068	0.33	mg/m ³
		07-08/03/2024	0.063	0.33	mg/m ³

REMARK:^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Suttha Songthaninai)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

28/03/2024

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COPY

Request No. ATR6703030

Report No. 6703-0533 - 6703-0535

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 18/03/2024 SAMPLE NO. : A67030533 - A67030535
TESTED DATE : 18/03/2024-28/03/2024 REPORTED DATE : 28/03/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration, ICP-OES Method	05-06/03/2024	< 0.01	mg/m ³
		06-07/03/2024	< 0.01	mg/m ³
		07-08/03/2024	< 0.01	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Suttha Songthaninai)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Approved By

(Miss Thanatporn Klinsoon)

28/03/2024

COPY

Request No. ATR6705080

Report No. 6705-1358 - 6705-1360

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 23/05/2024 SAMPLE NO. : A67051358 - A67051360
TESTED DATE : 23/05/2024-29/05/2024 REPORTED DATE : 04/06/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	13-14/05/2024	0.076	0.33	mg/m ³
		14-15/05/2024	0.108	0.33	mg/m ³
		15-16/05/2024	0.137	0.33	mg/m ³

REMARK:^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By

(Miss Thanatporn Klinsopon)

04/06/2024

COPY

Request No. ATR6705080

Report No. 6705-1361 - 6705-1363

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 23/05/2024 SAMPLE NO. : A67051361 - A67051363
TESTED DATE : 23/05/2024-01/06/2024 REPORTED DATE : 04/06/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	13-14/05/2024	0.002	mg/m ³
		14-15/05/2024	0.003	mg/m ³
		15-16/05/2024	< 0.002	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

04/06/2024

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Request No. ATR6701030

Report No. 6701-0265 - 6701-0267

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo.5 T. Tungsukla A. Sriracha , Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 31/01/2024 SAMPLE NO. : A67010265 - A67010267
TESTED DATE : 31/01/2024-31/01/2024 REPORTED DATE : 05/02/2024

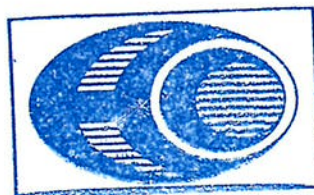
PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹⁾	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	22-23/01/2024	0.084	0.33	mg/m ³
		23-24/01/2024	0.124	0.33	mg/m ³
		24-25/01/2024	0.125	0.33	mg/m ³

REMARK:

¹⁾ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Approved By

(Miss Thanatporn Klinsoyon)

05/02/2024

COPY

Request No. ATR6701030

Report No. 6701-0268 - 6701-0270

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo.5 T. Tungsukla A. Sriracha , Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 31/01/2024 SAMPLE NO. : A67010268 - A67010270
TESTED DATE : 31/01/2024-03/02/2024 REPORTED DATE : 05/02/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	22-23/01/2024	< 0.01	mg/m ³
		23-24/01/2024	< 0.01	mg/m ³
		24-25/01/2024	< 0.01	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoyon)

05/02/2024

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Request No. ATR6703030

Report No. 6703-0542 - 6703-0544

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 18/03/2024 SAMPLE NO. : A67030542 - A67030544
TESTED DATE : 18/03/2024-20/03/2024 REPORTED DATE : 28/03/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	05-06/03/2024	0.090	0.33	mg/m ³
		06-07/03/2024	0.083	0.33	mg/m ³
		07-08/03/2024	0.079	0.33	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Suttha Songthaninai)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

28/03/2024

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Request No. ATR6703030

Report No. 6703-0545 - 6703-0547

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 18/03/2024 SAMPLE NO. : A67030545 - A67030547
TESTED DATE : 18/03/2024-28/03/2024 REPORTED DATE : 28/03/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	05-06/03/2024	< 0.01	mg/m ³
		06-07/03/2024	< 0.01	mg/m ³
		07-08/03/2024	< 0.01	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Suttha Songthaninai)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By

(Miss Thanatporn Klinsoon)

28/03/2024

COPY

Request No. ATR6705080

Report No. 6705-1364 - 6705-1366

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 23/05/2024 SAMPLE NO. : A67051364 - A67051366
TESTED DATE : 23/05/2024-29/05/2024 REPORTED DATE : 04/06/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{/1}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	13-14/05/2024	0.089	0.33	mg/m ³
		14-15/05/2024	0.142	0.33	mg/m ³
		15-16/05/2024	0.072	0.33	mg/m ³

REMARK:^{/1} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By

(Miss Thanatporn Klinsoon)

04/06/2024

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Request No. ATR6705080

Report No. 6705-1367 - 6705-1369

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 23/05/2024 SAMPLE NO. : A67051367 - A67051369
TESTED DATE : 23/05/2024-01/06/2024 REPORTED DATE : 04/06/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	13-14/05/2024	0.002	mg/m ³
		14-15/05/2024	0.002	mg/m ³
		15-16/05/2024	< 0.002	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

04/06/2024

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Request No. LA67-R0138

Report No. R6701-0779 - R6701-0781

TEST REPORT

CUSTOMER : Siam Poongsani Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 00788-00790
 DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 22-25/01/2024
 INSTRUMENT : API Model T200 S/N 7355 RECEIVED DATE : 25/01/2024
 REPORTED DATE : 30/01/2024

TIME / DATE	22-23/01/2024	23-24/01/2024	24-25/01/2024	UNIT
10:00 - 11:00 ¹²	0.018	0.025	0.021	ppm
11:00 - 12:00	0.022	0.023	0.019	ppm
12:00 - 13:00	0.017	0.022	0.021	ppm
13:00 - 14:00	0.012	0.018	0.021	ppm
14:00 - 15:00	0.014	0.051	0.021	ppm
15:00 - 16:00	0.012	0.043	0.022	ppm
16:00 - 17:00	0.016	0.026	0.019	ppm
17:00 - 18:00	0.018	0.022	0.019	ppm
18:00 - 19:00	0.022	0.024	0.022	ppm
19:00 - 20:00	0.028	0.021	0.016	ppm
20:00 - 21:00	0.031	0.019	0.016	ppm
21:00 - 22:00	0.028	0.020	0.015	ppm
22:00 - 23:00	0.036	0.014	0.021	ppm
23:00 - 00:00	0.027	0.015	0.022	ppm
00:00 - 01:00	0.028	0.022	0.023	ppm
01:00 - 02:00	0.042	0.038	0.026	ppm
02:00 - 03:00	0.029	0.034	0.021	ppm
03:00 - 04:00	0.023	0.039	0.020	ppm
04:00 - 05:00	0.018	0.039	0.021	ppm
05:00 - 06:00	0.021	0.046	0.018	ppm
06:00 - 07:00	0.031	0.047	0.019	ppm
07:00 - 08:00	0.031	0.043	0.013	ppm
08:00 - 09:00	0.031	0.038	0.018	ppm
09:00 - 10:00	0.028	0.028	0.022	ppm
Maximum 1 hr.	0.042	0.051	0.026	ppm
Average 24 hr.	0.024	0.030	0.020	ppm
Standard (1 hr.) ¹¹	0.17	0.17	0.17	ppm

REMARK : ¹¹ Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)¹² Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarat Photankhuan)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Approved By.....

(MS. THANATPORN KLINSOPON)

30/01/2024

COPY

Request No. LA67-R0332

Report No. R6703-0712 - R6703-0714

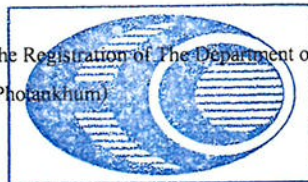
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 02965-02967
DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 05-08/03/2024
INSTRUMENT : API Model T200 S/N 7355 RECEIVED DATE : 08/03/2024
REPORTED DATE : 19/03/2024

TIME / DATE	05-06/03/2024	06-07/03/2024	07-08/03/2024	UNIT
10:00 - 11:00 ^{/2}	0.018	0.008	0.011	ppm
11:00 - 12:00	0.013	0.011	0.012	ppm
12:00 - 13:00	0.014	0.015	0.029	ppm
13:00 - 14:00	0.015	0.023	0.022	ppm
14:00 - 15:00	0.014	0.039	0.029	ppm
15:00 - 16:00	0.014	0.020	0.025	ppm
16:00 - 17:00	0.014	0.020	0.026	ppm
17:00 - 18:00	0.014	0.026	0.027	ppm
18:00 - 19:00	0.022	0.037	0.025	ppm
19:00 - 20:00	0.017	0.022	0.022	ppm
20:00 - 21:00	0.017	0.016	0.020	ppm
21:00 - 22:00	0.012	0.015	0.016	ppm
22:00 - 23:00	0.010	0.009	0.015	ppm
23:00 - 00:00	0.009	0.009	0.014	ppm
00:00 - 01:00	0.010	0.009	0.012	ppm
01:00 - 02:00	0.011	0.010	0.011	ppm
02:00 - 03:00	0.009	0.008	0.010	ppm
03:00 - 04:00	0.008	0.009	0.008	ppm
04:00 - 05:00	0.009	0.008	0.009	ppm
05:00 - 06:00	0.008	0.008	0.010	ppm
06:00 - 07:00	0.010	0.009	0.010	ppm
07:00 - 08:00	0.011	0.012	0.013	ppm
08:00 - 09:00	0.012	0.015	0.013	ppm
09:00 - 10:00	0.010	0.012	0.012	ppm
Maximum 1 hr.	0.022	0.039	0.029	ppm
Average 24 hr.	0.013	0.015	0.017	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

19/03/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. LA67-R05130

Report No. R6705-3728 - R6705-3730

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model T200 S/N 6756

SAMPLE NO. : 14276-14278
SAMPLING DATE : 13-16/05/2024
RECEIVED DATE : 16/05/2024
REPORTED DATE : 28/05/2024

TIME / DATE	13-14/05/2024	14-15/05/2024	15-16/05/2024	UNIT
10:00 - 11:00 ^{/2}	0.017	0.024	0.015	ppm
11:00 - 12:00	0.014	0.029	0.017	ppm
12:00 - 13:00	0.012	0.031	0.015	ppm
13:00 - 14:00	0.012	0.023	0.015	ppm
14:00 - 15:00	0.014	0.023	0.015	ppm
15:00 - 16:00	0.016	0.019	0.014	ppm
16:00 - 17:00	0.015	0.018	0.015	ppm
17:00 - 18:00	0.024	0.021	0.017	ppm
18:00 - 19:00	0.034	0.023	0.017	ppm
19:00 - 20:00	0.026	0.020	0.020	ppm
20:00 - 21:00	0.038	0.021	0.025	ppm
21:00 - 22:00	0.036	0.018	0.029	ppm
22:00 - 23:00	0.034	0.019	0.025	ppm
23:00 - 00:00	0.036	0.020	0.015	ppm
00:00 - 01:00	0.030	0.017	0.014	ppm
01:00 - 02:00	0.025	0.021	0.014	ppm
02:00 - 03:00	0.023	0.024	0.014	ppm
03:00 - 04:00	0.023	0.024	0.013	ppm
04:00 - 05:00	0.022	0.022	0.013	ppm
05:00 - 06:00	0.020	0.015	0.016	ppm
06:00 - 07:00	0.019	0.013	0.016	ppm
07:00 - 08:00	0.020	0.013	0.018	ppm
08:00 - 09:00	0.022	0.013	0.017	ppm
09:00 - 10:00	0.023	0.016	0.017	ppm
Maximum 1 hr.	0.038	0.031	0.029	ppm
Average 24 hr.	0.023	0.020	0.017	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarat Rhotanphum)

Approved By.....

(MS. THANATPORN KLINSOPON)

28/05/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLYTHIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
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COPY

Request No. LA67-R0138

Report No. R6701-0773 - R6701-0775

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model M200E S/N 3999

SAMPLE NO. : 00782-00784
SAMPLING DATE : 22-25/01/2024
RECEIVED DATE : 25/01/2024
REPORTED DATE : 30/01/2024

TIME / DATE	22-23/01/2024	23-24/01/2024	24-25/01/2024	UNIT
09:00 - 10:00 ^{/2}	0.007	0.020	0.012	ppm
10:00 - 11:00	0.007	0.020	0.011	ppm
11:00 - 12:00	0.006	0.012	0.011	ppm
12:00 - 13:00	0.006	0.009	0.011	ppm
13:00 - 14:00	0.005	0.006	0.009	ppm
14:00 - 15:00	0.007	0.010	0.008	ppm
15:00 - 16:00	0.006	0.015	0.010	ppm
16:00 - 17:00	0.007	0.014	0.013	ppm
17:00 - 18:00	0.005	0.009	0.012	ppm
18:00 - 19:00	0.006	0.011	0.014	ppm
19:00 - 20:00	0.014	0.008	0.015	ppm
20:00 - 21:00	0.017	0.012	0.018	ppm
21:00 - 22:00	0.015	0.017	0.023	ppm
22:00 - 23:00	0.012	0.020	0.020	ppm
23:00 - 00:00	0.010	0.019	0.020	ppm
00:00 - 01:00	0.012	0.022	0.015	ppm
01:00 - 02:00	0.010	0.021	0.011	ppm
02:00 - 03:00	0.010	0.018	0.013	ppm
03:00 - 04:00	0.010	0.017	0.011	ppm
04:00 - 05:00	0.013	0.013	0.012	ppm
05:00 - 06:00	0.014	0.011	0.013	ppm
06:00 - 07:00	0.017	0.012	0.011	ppm
07:00 - 08:00	0.018	0.013	0.009	ppm
08:00 - 09:00	0.019	0.014	0.012	ppm
Maximum 1 hr.	0.019	0.022	0.023	ppm
Average 24 hr.	0.010	0.014	0.013	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phosankhuan)



Approved By.....

(MS. THANATPORN KLINSOPON)

30/01/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Request No. LA67-R0332

Report No. R6703-0718 - R6703-0720

TEST REPORT

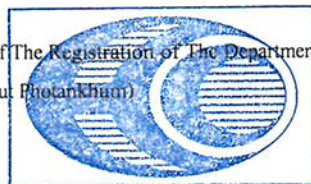
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model T200 S/N 7874

SAMPLE NO. : 02971-02973
SAMPLING DATE : 05-08/03/2024
RECEIVED DATE : 08/03/2024
REPORTED DATE : 19/03/2024

TIME / DATE	05-06/03/2024	06-07/03/2024	07-08/03/2024	UNIT
09:00 - 10:00 ^{/2}	0.006	0.006	0.010	ppm
10:00 - 11:00	0.003	0.005	0.008	ppm
11:00 - 12:00	0.006	0.008	0.012	ppm
12:00 - 13:00	0.005	0.011	0.019	ppm
13:00 - 14:00	0.006	0.008	0.023	ppm
14:00 - 15:00	0.006	0.010	0.025	ppm
15:00 - 16:00	0.006	0.011	0.014	ppm
16:00 - 17:00	0.007	0.020	0.018	ppm
17:00 - 18:00	0.009	0.012	0.024	ppm
18:00 - 19:00	0.009	0.011	0.027	ppm
19:00 - 20:00	0.009	0.009	0.018	ppm
20:00 - 21:00	0.010	0.008	0.014	ppm
21:00 - 22:00	0.006	0.008	0.011	ppm
22:00 - 23:00	0.006	0.009	0.010	ppm
23:00 - 00:00	0.006	0.010	0.009	ppm
00:00 - 01:00	0.006	0.008	0.010	ppm
01:00 - 02:00	0.006	0.006	0.009	ppm
02:00 - 03:00	0.005	0.008	0.008	ppm
03:00 - 04:00	0.005	0.007	0.007	ppm
04:00 - 05:00	0.005	0.009	0.009	ppm
05:00 - 06:00	0.007	0.008	0.011	ppm
06:00 - 07:00	0.008	0.010	0.015	ppm
07:00 - 08:00	0.009	0.014	0.015	ppm
08:00 - 09:00	0.009	0.014	0.013	ppm
Maximum 1 hr.	0.010	0.020	0.027	ppm
Average 24 hr.	0.007	0.010	0.014	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankham)



Approved By.....

(MS. THANATPORN KLINSOPON)

19/03/2024

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

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Request No. LA67-R05130

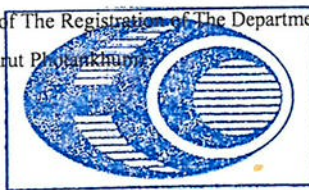
Report No. R6705-3722 - R6705-3724

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model M200E S/N 4084

SAMPLE NO. : 14270-14272
SAMPLING DATE : 13-16/05/2024
RECEIVED DATE : 16/05/2024
REPORTED DATE : 28/05/2024

TIME / DATE	13-14/05/2024	14-15/05/2024	15-16/05/2024	UNIT
09:00 - 10:00 ^{/2}	0.003	0.004	0.003	ppm
10:00 - 11:00	0.003	0.004	0.003	ppm
11:00 - 12:00	0.003	0.004	0.003	ppm
12:00 - 13:00	0.003	0.003	0.003	ppm
13:00 - 14:00	0.002	0.002	0.002	ppm
14:00 - 15:00	0.002	0.003	0.002	ppm
15:00 - 16:00	0.003	0.003	0.002	ppm
16:00 - 17:00	0.003	0.003	0.003	ppm
17:00 - 18:00	0.003	0.004	0.005	ppm
18:00 - 19:00	0.004	0.004	0.004	ppm
19:00 - 20:00	0.004	0.005	0.005	ppm
20:00 - 21:00	0.006	0.004	0.004	ppm
21:00 - 22:00	0.006	0.005	0.005	ppm
22:00 - 23:00	0.006	0.004	0.004	ppm
23:00 - 00:00	0.005	0.003	0.003	ppm
00:00 - 01:00	0.003	0.002	0.003	ppm
01:00 - 02:00	0.004	0.002	0.003	ppm
02:00 - 03:00	0.004	0.002	0.003	ppm
03:00 - 04:00	0.004	0.002	0.002	ppm
04:00 - 05:00	0.005	0.002	0.002	ppm
05:00 - 06:00	0.005	0.002	0.002	ppm
06:00 - 07:00	0.005	0.002	0.002	ppm
07:00 - 08:00	0.006	0.003	0.003	ppm
08:00 - 09:00	0.006	0.003	0.003	ppm
Maximum 1 hr.	0.006	0.005	0.005	ppm
Average 24 hr.	0.004	0.003	0.003	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phosankhump)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

28/05/2024

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Request No. LA67-R0138

Report No. R6701-0785 - R6701-0787

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 00794-00796
DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 22-25/01/2024
INSTRUMENT : API Model T200 S/N 6756 RECEIVED DATE : 25/01/2024
REPORTED DATE : 30/01/2024

TIME / DATE	22-23/01/2024	23-24/01/2024	24-25/01/2024	UNIT
10:00 - 11:00 ²	0.012	0.007	0.008	ppm
11:00 - 12:00	0.012	0.012	0.007	ppm
12:00 - 13:00	0.009	0.011	0.007	ppm
13:00 - 14:00	0.007	0.009	0.006	ppm
14:00 - 15:00	0.009	0.009	0.006	ppm
15:00 - 16:00	0.007	0.013	0.009	ppm
16:00 - 17:00	0.005	0.013	0.016	ppm
17:00 - 18:00	0.004	0.013	0.014	ppm
18:00 - 19:00	0.004	0.011	0.015	ppm
19:00 - 20:00	0.003	0.011	0.018	ppm
20:00 - 21:00	0.005	0.012	0.017	ppm
21:00 - 22:00	0.008	0.014	0.017	ppm
22:00 - 23:00	0.010	0.013	0.015	ppm
23:00 - 00:00	0.006	0.013	0.014	ppm
00:00 - 01:00	0.007	0.012	0.010	ppm
01:00 - 02:00	0.008	0.011	0.007	ppm
02:00 - 03:00	0.010	0.011	0.005	ppm
03:00 - 04:00	0.010	0.011	0.008	ppm
04:00 - 05:00	0.008	0.008	0.008	ppm
05:00 - 06:00	0.007	0.004	0.009	ppm
06:00 - 07:00	0.007	0.004	0.007	ppm
07:00 - 08:00	0.007	0.005	0.008	ppm
08:00 - 09:00	0.006	0.007	0.008	ppm
09:00 - 10:00	0.008	0.007	0.008	ppm
Maximum 1 hr.	0.012	0.014	0.018	ppm
Average 24 hr.	0.007	0.010	0.010	ppm
Standard (1 hr.) ¹	0.17	0.17	0.17	ppm

REMARK :

¹ Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)² Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummaru Photanukhum)



Approved By.....

(MS. THANATPORN KLINSOPON)

30/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R0332

Report No. R6703-0724 - R6703-0726

TEST REPORT

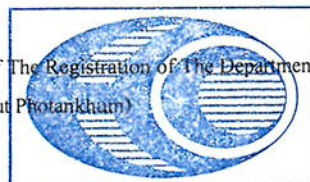
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตรกริการค้าของนิคมอุตสาหกรรมแหลมฉบังท่าประมาณ 0.5 กม.
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model T200 S/N 6757

SAMPLE NO. : 02977-02979
SAMPLING DATE : 05-08/03/2024
RECEIVED DATE : 08/03/2024
REPORTED DATE : 19/03/2024

TIME / DATE	05-06/03/2024	06-07/03/2024	07-08/03/2024	UNIT
09:00 - 10:00 ^{/2}	0.010	0.021	0.020	ppm
10:00 - 11:00	0.019	0.017	0.023	ppm
11:00 - 12:00	0.017	0.017	0.030	ppm
12:00 - 13:00	0.016	0.022	0.029	ppm
13:00 - 14:00	0.017	0.023	0.025	ppm
14:00 - 15:00	0.016	0.022	0.021	ppm
15:00 - 16:00	0.018	0.018	0.019	ppm
16:00 - 17:00	0.016	0.017	0.019	ppm
17:00 - 18:00	0.018	0.018	0.024	ppm
18:00 - 19:00	0.020	0.023	0.027	ppm
19:00 - 20:00	0.021	0.014	0.021	ppm
20:00 - 21:00	0.019	0.016	0.015	ppm
21:00 - 22:00	0.016	0.017	0.016	ppm
22:00 - 23:00	0.016	0.017	0.014	ppm
23:00 - 00:00	0.013	0.013	0.013	ppm
00:00 - 01:00	0.012	0.011	0.011	ppm
01:00 - 02:00	0.010	0.011	0.010	ppm
02:00 - 03:00	0.012	0.009	0.011	ppm
03:00 - 04:00	0.010	0.008	0.010	ppm
04:00 - 05:00	0.011	0.009	0.011	ppm
05:00 - 06:00	0.012	0.011	0.014	ppm
06:00 - 07:00	0.015	0.015	0.018	ppm
07:00 - 08:00	0.018	0.018	0.020	ppm
08:00 - 09:00	0.020	0.015	0.013	ppm
Maximum 1 hr.	0.021	0.023	0.030	ppm
Average 24 hr.	0.015	0.016	0.018	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankham)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

19/03/2024

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Request No. LA67-R05130

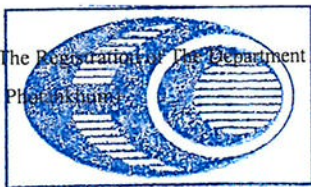
Report No. R6705-3734 - R6705-3736

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model T200 S/N 2004

SAMPLE NO. : 14282-14284
SAMPLING DATE : 13-16/05/2024
RECEIVED DATE : 16/05/2024
REPORTED DATE : 28/05/2024

TIME / DATE	13-14/05/2024	14-15/05/2024	15-16/05/2024	UNIT
11:00 - 12:00 ^{/2}	0.024	0.041	0.043	ppm
12:00 - 13:00	0.027	0.039	0.036	ppm
13:00 - 14:00	0.027	0.037	0.024	ppm
14:00 - 15:00	0.023	0.038	0.030	ppm
15:00 - 16:00	0.023	0.045	0.030	ppm
16:00 - 17:00	0.024	0.047	0.033	ppm
17:00 - 18:00	0.020	0.058	0.036	ppm
18:00 - 19:00	0.022	0.054	0.040	ppm
19:00 - 20:00	0.023	0.076	0.036	ppm
20:00 - 21:00	0.024	0.066	0.035	ppm
21:00 - 22:00	0.036	0.075	0.035	ppm
22:00 - 23:00	0.040	0.050	0.030	ppm
23:00 - 00:00	0.024	0.035	0.026	ppm
00:00 - 01:00	0.014	0.033	0.018	ppm
01:00 - 02:00	0.013	0.033	0.014	ppm
02:00 - 03:00	0.019	0.033	0.014	ppm
03:00 - 04:00	0.023	0.023	0.015	ppm
04:00 - 05:00	0.023	0.030	0.015	ppm
05:00 - 06:00	0.021	0.028	0.014	ppm
06:00 - 07:00	0.021	0.033	0.016	ppm
07:00 - 08:00	0.023	0.047	0.024	ppm
08:00 - 09:00	0.029	0.045	0.025	ppm
09:00 - 10:00	0.030	0.047	0.022	ppm
10:00 - 11:00	0.034	0.047	0.028	ppm
Maximum 1 hr.	0.040	0.076	0.043	ppm
Average 24 hr.	0.024	0.044	0.027	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phornkham)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(MS. THANATPORN KLINSOPON)

28/05/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R0138

Report No. R6701-0776 - R6701-0778

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณที่ทำการข่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
PARAMETER* : Sulfur Dioxide SAMPLE NO. : 00785-00787
DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 22-25/01/2024
INSTRUMENT : API Model M100E S/N 3220 RECEIVED DATE : 25/01/2024
REPORTED DATE : 30/01/2024

TIME / DATE	22-23/01/2024	23-24/01/2024	24-25/01/2024	UNIT
10:00 - 11:00 ^{/3}	0.010	0.010	0.011	ppm
11:00 - 12:00	0.011	0.008	0.011	ppm
12:00 - 13:00	0.010	0.010	0.012	ppm
13:00 - 14:00	0.010	0.012	0.012	ppm
14:00 - 15:00	0.010	0.012	0.012	ppm
15:00 - 16:00	0.011	0.011	0.010	ppm
16:00 - 17:00	0.011	0.012	0.010	ppm
17:00 - 18:00	0.013	0.012	0.011	ppm
18:00 - 19:00	0.010	0.012	0.009	ppm
19:00 - 20:00	0.011	0.012	0.010	ppm
20:00 - 21:00	0.010	0.009	0.012	ppm
21:00 - 22:00	0.011	0.011	0.011	ppm
22:00 - 23:00	0.011	0.010	0.009	ppm
23:00 - 00:00	0.011	0.010	0.010	ppm
00:00 - 01:00	0.011	0.008	0.011	ppm
01:00 - 02:00	0.010	0.008	0.012	ppm
02:00 - 03:00	0.010	0.010	0.010	ppm
03:00 - 04:00	0.009	0.014	0.009	ppm
04:00 - 05:00	0.009	0.013	0.009	ppm
05:00 - 06:00	0.009	0.013	0.009	ppm
06:00 - 07:00	0.008	0.011	0.010	ppm
07:00 - 08:00	0.008	0.010	0.009	ppm
08:00 - 09:00	0.011	0.013	0.009	ppm
09:00 - 10:00	0.011	0.012	0.010	ppm
Maximum 1 hr.	0.013	0.014	0.012	ppm
Average 24 hr.	0.010	0.011	0.010	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Pholamkham)

Approved By.....

(MS. THANATPORN KLINSOPON)

30/01/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
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COPY

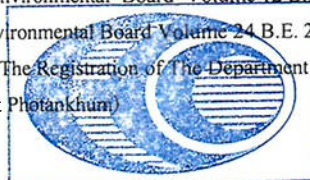
Request No. LA67-R0332

Report No. R6703-0709 - R6703-0711

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 02962-02964
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 05-08/03/2024
 INSTRUMENT : API Model T100 S/N 6459 RECEIVED DATE : 08/03/2024
 REPORTED DATE : 19/03/2024

TIME / DATE	05-06/03/2024	06-07/03/2024	07-08/03/2024	UNIT
10:00 - 11:00 ^{1/3}	0.012	0.012	0.011	ppm
11:00 - 12:00	0.012	0.012	0.011	ppm
12:00 - 13:00	0.012	0.012	0.011	ppm
13:00 - 14:00	0.013	0.012	0.011	ppm
14:00 - 15:00	0.012	0.011	0.011	ppm
15:00 - 16:00	0.013	0.012	0.011	ppm
16:00 - 17:00	0.013	0.012	0.011	ppm
17:00 - 18:00	0.013	0.012	0.011	ppm
18:00 - 19:00	0.012	0.011	0.011	ppm
19:00 - 20:00	0.012	0.011	0.010	ppm
20:00 - 21:00	0.012	0.011	0.010	ppm
21:00 - 22:00	0.012	0.011	0.010	ppm
22:00 - 23:00	0.012	0.011	0.010	ppm
23:00 - 00:00	0.012	0.011	0.010	ppm
00:00 - 01:00	0.012	0.011	0.010	ppm
01:00 - 02:00	0.011	0.011	0.010	ppm
02:00 - 03:00	0.011	0.011	0.010	ppm
03:00 - 04:00	0.011	0.011	0.010	ppm
04:00 - 05:00	0.011	0.011	0.010	ppm
05:00 - 06:00	0.011	0.011	0.010	ppm
06:00 - 07:00	0.011	0.011	0.010	ppm
07:00 - 08:00	0.012	0.011	0.010	ppm
08:00 - 09:00	0.012	0.011	0.011	ppm
09:00 - 10:00	0.011	0.011	0.011	ppm
Maximum 1 hr.	0.013	0.012	0.011	ppm
Average 24 hr.	0.012	0.011	0.011	ppm
Standard (1 hr.) ^{1/}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{1/2}	0.12	0.12	0.12	ppm

REMARK : ^{1/} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{1/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhum)

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

19/03/2024

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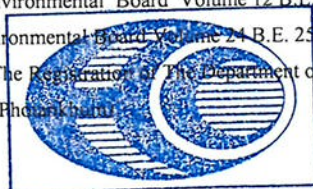
Request No. LA67-R05130

Report No. R6705-3725 - R6705-3727

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการข่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 14273-14275
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 13-16/05/2024
 INSTRUMENT : API Model M100E S/N 640 RECEIVED DATE : 16/05/2024
 REPORTED DATE : 28/05/2024

TIME / DATE	13-14/05/2024	14-15/05/2024	15-16/05/2024	UNIT
10:00 - 11:00 ^{1/3}	0.005	0.005	0.006	ppm
11:00 - 12:00	0.005	0.006	0.006	ppm
12:00 - 13:00	0.005	0.006	0.006	ppm
13:00 - 14:00	0.005	0.007	0.007	ppm
14:00 - 15:00	0.005	0.007	0.007	ppm
15:00 - 16:00	0.006	0.006	0.007	ppm
16:00 - 17:00	0.006	0.005	0.006	ppm
17:00 - 18:00	0.005	0.006	0.007	ppm
18:00 - 19:00	0.006	0.006	0.006	ppm
19:00 - 20:00	0.006	0.006	0.005	ppm
20:00 - 21:00	0.006	0.006	0.005	ppm
21:00 - 22:00	0.006	0.005	0.006	ppm
22:00 - 23:00	0.006	0.005	0.005	ppm
23:00 - 00:00	0.005	0.006	0.005	ppm
00:00 - 01:00	0.006	0.005	0.006	ppm
01:00 - 02:00	0.006	0.006	0.007	ppm
02:00 - 03:00	0.006	0.006	0.006	ppm
03:00 - 04:00	0.006	0.007	0.007	ppm
04:00 - 05:00	0.006	0.005	0.007	ppm
05:00 - 06:00	0.006	0.006	0.007	ppm
06:00 - 07:00	0.007	0.007	0.007	ppm
07:00 - 08:00	0.007	0.007	0.008	ppm
08:00 - 09:00	0.007	0.007	0.007	ppm
09:00 - 10:00	0.006	0.006	0.007	ppm
Maximum 1 hr.	0.007	0.007	0.008	ppm
Average 24 hr.	0.006	0.006	0.006	ppm
Standard (1 hr.) ^{1/}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{2/}	0.12	0.12	0.12	ppm

REMARK : ^{1/} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{2/} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{3/} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phichankhan)

Approved By.....

(MS. THANATPORN KLINSOPON)

28/05/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Request No. LA67-R0138

Report No. R6701-0770 - R6701-0772

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model T100 S/N 6459

SAMPLE NO. : 00779-00781
SAMPLING DATE : 22-25/01/2024
RECEIVED DATE : 25/01/2024
REPORTED DATE : 30/01/2024

TIME / DATE	22-23/01/2024	23-24/01/2024	24-25/01/2024	UNIT
09:00 - 10:00 ¹³	0.010	0.014	0.014	ppm
10:00 - 11:00	0.010	0.014	0.014	ppm
11:00 - 12:00	0.010	0.013	0.013	ppm
12:00 - 13:00	0.010	0.012	0.013	ppm
13:00 - 14:00	0.012	0.012	0.013	ppm
14:00 - 15:00	0.010	0.012	0.013	ppm
15:00 - 16:00	0.010	0.013	0.013	ppm
16:00 - 17:00	0.010	0.013	0.013	ppm
17:00 - 18:00	0.010	0.013	0.013	ppm
18:00 - 19:00	0.010	0.014	0.014	ppm
19:00 - 20:00	0.017	0.013	0.013	ppm
20:00 - 21:00	0.016	0.013	0.013	ppm
21:00 - 22:00	0.015	0.013	0.013	ppm
22:00 - 23:00	0.015	0.013	0.013	ppm
23:00 - 00:00	0.014	0.013	0.013	ppm
00:00 - 01:00	0.014	0.013	0.013	ppm
01:00 - 02:00	0.014	0.014	0.014	ppm
02:00 - 03:00	0.015	0.014	0.014	ppm
03:00 - 04:00	0.013	0.014	0.013	ppm
04:00 - 05:00	0.013	0.013	0.013	ppm
05:00 - 06:00	0.013	0.013	0.013	ppm
06:00 - 07:00	0.013	0.013	0.013	ppm
07:00 - 08:00	0.013	0.013	0.013	ppm
08:00 - 09:00	0.013	0.014	0.013	ppm
Maximum 1 hr.	0.017	0.014	0.014	ppm
Average 24 hr.	0.012	0.013	0.013	ppm
Standard (1 hr.) ¹¹	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ¹²	0.12	0.12	0.12	ppm

REMARK :

¹¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)¹² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)¹³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phosamnuen)



Approved By.....

(MS. THANATPORN KLINSOPON)

30/01/2024

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

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Request No. LA67-R0332

Report No. R6703-0715 - R6703-0717

TEST REPORT

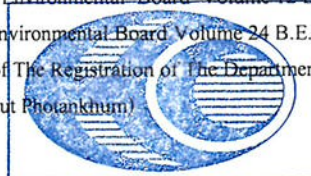
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model T100 S/N 5702

SAMPLE NO. : 02968-02970
SAMPLING DATE : 05-08/03/2024
RECEIVED DATE : 08/03/2024
REPORTED DATE : 19/03/2024

TIME / DATE	05-06/03/2024	06-07/03/2024	07-08/03/2024	UNIT
09:00 - 10:00 ³	0.020	0.019	0.019	ppm
10:00 - 11:00	0.020	0.019	0.019	ppm
11:00 - 12:00	0.021	0.019	0.019	ppm
12:00 - 13:00	0.019	0.019	0.019	ppm
13:00 - 14:00	0.019	0.019	0.019	ppm
14:00 - 15:00	0.019	0.020	0.019	ppm
15:00 - 16:00	0.020	0.020	0.019	ppm
16:00 - 17:00	0.020	0.019	0.019	ppm
17:00 - 18:00	0.020	0.019	0.019	ppm
18:00 - 19:00	0.020	0.019	0.019	ppm
19:00 - 20:00	0.019	0.019	0.019	ppm
20:00 - 21:00	0.019	0.019	0.019	ppm
21:00 - 22:00	0.019	0.019	0.019	ppm
22:00 - 23:00	0.019	0.019	0.019	ppm
23:00 - 00:00	0.019	0.019	0.019	ppm
00:00 - 01:00	0.019	0.019	0.019	ppm
01:00 - 02:00	0.019	0.019	0.019	ppm
02:00 - 03:00	0.019	0.019	0.019	ppm
03:00 - 04:00	0.019	0.019	0.019	ppm
04:00 - 05:00	0.019	0.019	0.019	ppm
05:00 - 06:00	0.019	0.019	0.019	ppm
06:00 - 07:00	0.019	0.019	0.019	ppm
07:00 - 08:00	0.019	0.019	0.019	ppm
08:00 - 09:00	0.019	0.019	0.019	ppm
Maximum 1 hr.	0.021	0.020	0.019	ppm
Average 24 hr.	0.019	0.019	0.019	ppm
Standard (1 hr.) ¹	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ²	0.12	0.12	0.12	ppm

REMARK : ¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

19/03/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R05130

Report No. R6705-3719 - R6705-3721

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model T100 S/N 1608

SAMPLE NO. : 14267-14269
SAMPLING DATE : 13-16/05/2024
RECEIVED DATE : 16/05/2024
REPORTED DATE : 28/05/2024

TIME / DATE	13-14/05/2024	14-15/05/2024	15-16/05/2024	UNIT
09:00 - 10:00 ^{1/3}	0.008	0.010	0.010	ppm
10:00 - 11:00	0.008	0.008	0.008	ppm
11:00 - 12:00	0.008	0.008	0.008	ppm
12:00 - 13:00	0.008	0.008	0.009	ppm
13:00 - 14:00	0.008	0.008	0.009	ppm
14:00 - 15:00	0.008	0.009	0.009	ppm
15:00 - 16:00	0.009	0.009	0.009	ppm
16:00 - 17:00	0.009	0.009	0.009	ppm
17:00 - 18:00	0.009	0.010	0.010	ppm
18:00 - 19:00	0.008	0.008	0.008	ppm
19:00 - 20:00	0.008	0.008	0.008	ppm
20:00 - 21:00	0.009	0.008	0.009	ppm
21:00 - 22:00	0.009	0.009	0.009	ppm
22:00 - 23:00	0.008	0.008	0.009	ppm
23:00 - 00:00	0.008	0.009	0.009	ppm
00:00 - 01:00	0.009	0.009	0.009	ppm
01:00 - 02:00	0.009	0.010	0.010	ppm
02:00 - 03:00	0.008	0.008	0.008	ppm
03:00 - 04:00	0.008	0.008	0.009	ppm
04:00 - 05:00	0.008	0.009	0.009	ppm
05:00 - 06:00	0.009	0.009	0.009	ppm
06:00 - 07:00	0.009	0.009	0.009	ppm
07:00 - 08:00	0.009	0.009	0.009	ppm
08:00 - 09:00	0.009	0.009	0.009	ppm
Maximum 1 hr.	0.009	0.010	0.010	ppm
Average 24 hr.	0.008	0.009	0.009	ppm
Standard (1 hr.) ^{1/}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{2/}	0.12	0.12	0.12	ppm

REMARK : ^{1/} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{2/} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{3/} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phetachun)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

28/05/2024

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Request No. LA67-R0138

Report No. R6701-0782 - R6701-0784

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
PARAMETER* : Sulfur Dioxide SAMPLE NO. : 00791-00793
DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 22-25/01/2024
INSTRUMENT : API Model TI00 S/N 1607 RECEIVED DATE : 25/01/2024
REPORTED DATE : 30/01/2024

TIME / DATE	22-23/01/2024	23-24/01/2024	24-25/01/2024	UNIT
10:00 - 11:00 ³	0.009	0.010	0.010	ppm
11:00 - 12:00	0.009	0.009	0.010	ppm
12:00 - 13:00	0.009	0.009	0.007	ppm
13:00 - 14:00	0.007	0.012	0.010	ppm
14:00 - 15:00	0.008	0.011	0.010	ppm
15:00 - 16:00	0.009	0.011	0.009	ppm
16:00 - 17:00	0.012	0.011	0.008	ppm
17:00 - 18:00	0.012	0.013	0.009	ppm
18:00 - 19:00	0.010	0.010	0.012	ppm
19:00 - 20:00	0.010	0.011	0.011	ppm
20:00 - 21:00	0.010	0.011	0.011	ppm
21:00 - 22:00	0.010	0.010	0.009	ppm
22:00 - 23:00	0.009	0.011	0.011	ppm
23:00 - 00:00	0.008	0.011	0.012	ppm
00:00 - 01:00	0.009	0.011	0.013	ppm
01:00 - 02:00	0.012	0.012	0.012	ppm
02:00 - 03:00	0.011	0.013	0.013	ppm
03:00 - 04:00	0.010	0.010	0.013	ppm
04:00 - 05:00	0.011	0.011	0.012	ppm
05:00 - 06:00	0.009	0.010	0.012	ppm
06:00 - 07:00	0.010	0.012	0.010	ppm
07:00 - 08:00	0.008	0.012	0.011	ppm
08:00 - 09:00	0.009	0.012	0.011	ppm
09:00 - 10:00	0.011	0.011	0.010	ppm
Maximum 1 hr.	0.012	0.013	0.013	ppm
Average 24 hr.	0.010	0.011	0.011	ppm
Standard (1 hr.) ¹	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ²	0.12	0.12	0.12	ppm

REMARK : ¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankun)

Approved By.....

(MS. THANATPORN KLINSOPON)

30/01/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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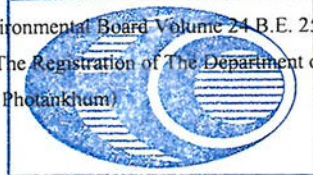
Request No. LA67-R0332

Report No. R6703-0721 - R6703-0723

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังท่าประมาณ 0.5 กม.
PARAMETER* : Sulfur Dioxide SAMPLE NO. : 02974-02976
DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 05-08/03/2024
INSTRUMENT : API Model T100 S/N 5700 RECEIVED DATE : 08/03/2024
REPORTED DATE : 19/03/2024

TIME / DATE	05-06/03/2024	06-07/03/2024	07-08/03/2024	UNIT
09:00 - 10:00 ^{/3}	0.020	0.021	0.020	ppm
10:00 - 11:00	0.019	0.020	0.021	ppm
11:00 - 12:00	0.019	0.020	0.021	ppm
12:00 - 13:00	0.020	0.021	0.021	ppm
13:00 - 14:00	0.020	0.021	0.021	ppm
14:00 - 15:00	0.020	0.021	0.021	ppm
15:00 - 16:00	0.021	0.021	0.021	ppm
16:00 - 17:00	0.020	0.021	0.021	ppm
17:00 - 18:00	0.020	0.021	0.021	ppm
18:00 - 19:00	0.021	0.021	0.021	ppm
19:00 - 20:00	0.021	0.021	0.021	ppm
20:00 - 21:00	0.021	0.020	0.021	ppm
21:00 - 22:00	0.020	0.021	0.021	ppm
22:00 - 23:00	0.020	0.020	0.020	ppm
23:00 - 00:00	0.020	0.020	0.021	ppm
00:00 - 01:00	0.020	0.020	0.021	ppm
01:00 - 02:00	0.020	0.020	0.020	ppm
02:00 - 03:00	0.020	0.020	0.020	ppm
03:00 - 04:00	0.020	0.020	0.021	ppm
04:00 - 05:00	0.020	0.020	0.021	ppm
05:00 - 06:00	0.020	0.020	0.021	ppm
06:00 - 07:00	0.020	0.020	0.021	ppm
07:00 - 08:00	0.021	0.020	0.021	ppm
08:00 - 09:00	0.021	0.020	0.021	ppm
Maximum 1 hr.	0.021	0.021	0.021	ppm
Average 24 hr.	0.020	0.020	0.021	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhum)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

19/03/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R05130

Report No. R6705-3731 - R6705-3733

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model M100E S/N 603

SAMPLE NO. : 14279-14281
SAMPLING DATE : 13-16/05/2024
RECEIVED DATE : 16/05/2024
REPORTED DATE : 28/05/2024

TIME / DATE	13-14/05/2024	14-15/05/2024	15-16/05/2024	UNIT
11:00 - 12:00 ^{/3}	0.028	0.021	0.021	ppm
12:00 - 13:00	0.028	0.021	0.021	ppm
13:00 - 14:00	0.029	0.021	0.021	ppm
14:00 - 15:00	0.027	0.021	0.021	ppm
15:00 - 16:00	0.027	0.021	0.021	ppm
16:00 - 17:00	0.028	0.021	0.021	ppm
17:00 - 18:00	0.022	0.022	0.022	ppm
18:00 - 19:00	0.020	0.020	0.020	ppm
19:00 - 20:00	0.020	0.020	0.020	ppm
20:00 - 21:00	0.020	0.020	0.021	ppm
21:00 - 22:00	0.020	0.021	0.021	ppm
22:00 - 23:00	0.020	0.021	0.021	ppm
23:00 - 00:00	0.020	0.021	0.021	ppm
00:00 - 01:00	0.021	0.021	0.021	ppm
01:00 - 02:00	0.021	0.021	0.021	ppm
02:00 - 03:00	0.021	0.021	0.021	ppm
03:00 - 04:00	0.021	0.021	0.021	ppm
04:00 - 05:00	0.021	0.021	0.021	ppm
05:00 - 06:00	0.021	0.021	0.021	ppm
06:00 - 07:00	0.021	0.021	0.021	ppm
07:00 - 08:00	0.021	0.021	0.021	ppm
08:00 - 09:00	0.021	0.021	0.021	ppm
09:00 - 10:00	0.021	0.021	0.021	ppm
10:00 - 11:00	0.021	0.021	0.021	ppm
Maximum 1 hr.	0.029	0.022	0.022	ppm
Average 24 hr.	0.022	0.021	0.021	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummaru Praphanjan)

Approved By.....

(MS. THANATPORN KLINSOPON)

28/05/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Wind Speed & Wind Direction

Request No. LA67-R0138

Siam Poongsan Metal Co., Ltd.

Sample No. 00798

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : January 22-25, 2024

Time	January 22-23, 2024		January 23-24, 2024		January 24-25, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.0	-	0.0	-	0.4	E
11:00-12:00	0.0	-	0.0	-	0.4	E
12:00-13:00	0.0	-	0.0	-	0.4	E
13:00-14:00	0.0	-	0.0	-	0.0	-
14:00-15:00	0.0	-	0.0	-	0.0	-
15:00-16:00	0.0	-	0.0	-	0.0	-
16:00-17:00	0.0	-	0.0	-	0.0	-
17:00-18:00	0.0	-	0.0	-	0.0	-
18:00-19:00	0.0	-	0.0	-	0.0	-
19:00-20:00	0.0	-	0.0	-	0.0	-
20:00-21:00	0.0	-	0.0	-	0.0	-
21:00-22:00	0.0	-	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	0.0	-
02:00-03:00	0.0	-	0.0	-	0.0	-
03:00-04:00	0.0	-	0.0	-	0.0	-
04:00-05:00	0.0	-	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.4	E	0.4	E
09:00-10:00	0.0	-	0.4	E	0.9	E

COPY

Wind Speed & Wind Direction

Request No. LA67-R0332

Siam Poongsan Metal Co., Ltd.

Sample No. 02980

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : March 5-8, 2024

Time	March 5-6, 2024		March 6-7, 2024		March 7-8, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.4	S	0.4	S	0.4	S
11:00-12:00	0.9	W	0.4	W	0.4	W
12:00-13:00	1.3	W	0.9	W	1.3	W
13:00-14:00	0.9	WSW	1.3	WSW	1.8	WSW
14:00-15:00	0.9	WSW	1.8	W	1.3	WSW
15:00-16:00	1.3	WSW	1.3	WSW	1.3	WSW
16:00-17:00	0.9	WSW	0.9	W	0.9	WSW
17:00-18:00	0.4	S	0.9	S	0.9	S
18:00-19:00	0.4	S	0.4	SSE	0.4	SSW
19:00-20:00	0.4	SSE	0.4	S	0.4	S
20:00-21:00	0.4	S	0.4	S	0.0	-
21:00-22:00	0.4	SSE	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	0.0	-
02:00-03:00	0.0	-	0.0	-	0.0	-
03:00-04:00	0.0	-	0.0	-	0.0	-
04:00-05:00	0.0	-	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.0	-	0.0	-
09:00-10:00	0.4	S	0.4	S	0.4	S

COPY

Wind Speed & Wind Direction

Request No. LA67-R05130

Siam Poongsan Metal Co., Ltd.

Sample No. 14287

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : May 13-16, 2024

Time	May 13-14, 2024		May 14-15, 2024		May 15-16, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.0	-	0.0	-	0.0	-
11:00-12:00	0.0	-	0.4	NW	0.0	-
12:00-13:00	0.0	-	0.9	NW	0.0	-
13:00-14:00	0.0	-	0.9	NNW	0.0	-
14:00-15:00	0.0	-	0.4	NNW	0.0	-
15:00-16:00	0.0	-	0.4	NW	0.0	-
16:00-17:00	0.0	-	0.4	NNW	0.0	-
17:00-18:00	0.0	-	0.4	NNW	0.0	-
18:00-19:00	0.0	-	0.0	-	0.0	-
19:00-20:00	0.0	-	0.0	-	0.0	-
20:00-21:00	0.0	-	0.0	-	0.0	-
21:00-22:00	0.0	-	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	0.0	-
02:00-03:00	0.0	-	0.0	-	0.0	-
03:00-04:00	0.0	-	0.0	-	0.0	-
04:00-05:00	0.0	-	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.0	-	0.0	-
09:00-10:00	0.0	-	0.0	-	0.0	-



Wind Speed & Wind Direction

Request No. LA67-R0138

Siam Poongsan Metal Co., Ltd.

Sample No. 00799

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : January 22-25, 2024

Time	January 22-23, 2024		January 23-24, 2024		January 24-25, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	0.0	-	0.4	E	1.3	ENE
10:00-11:00	0.4	SSW	0.4	ESE	1.3	NNE
11:00-12:00	0.9	SW	0.9	ESE	1.3	NE
12:00-13:00	1.8	WNW	1.3	E	1.3	NE
13:00-14:00	2.2	W	1.8	E	1.3	NE
14:00-15:00	2.2	W	1.3	SSW	1.3	NNW
15:00-16:00	2.7	W	0.9	SSW	0.4	WNW
16:00-17:00	2.7	WNW	0.9	SSW	0.4	W
17:00-18:00	0.9	W	1.8	W	0.9	W
18:00-19:00	0.9	WSW	1.3	W	0.4	W
19:00-20:00	0.4	SSW	0.9	W	0.4	W
20:00-21:00	0.4	S	0.0	-	0.4	NNE
21:00-22:00	0.0	-	0.4	WSW	0.4	NNE
22:00-23:00	0.4	E	0.4	NNE	0.4	NNE
23:00-00:00	0.4	S	0.4	NNE	0.4	NNE
00:00-01:00	0.0	-	0.0	-	0.9	N
01:00-02:00	0.0	-	0.0	-	1.3	NNW
02:00-03:00	0.0	-	0.0	-	1.3	NNW
03:00-04:00	0.0	-	0.4	NNE	1.8	N
04:00-05:00	0.0	-	0.9	NNE	1.3	NW
05:00-06:00	0.0	-	0.9	NE	0.4	NNE
06:00-07:00	0.0	-	0.9	NE	0.4	NE
07:00-08:00	0.4	E	0.9	NE	0.9	NNE
08:00-09:00	0.4	NE	1.3	NE	0.9	NE

COPY

Wind Speed & Wind Direction

Request No. LA67-R0332

Siam Poongsan Metal Co., Ltd.

Sample No. 02981

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : March 5-8, 2024

Time	March 5-6, 2024		March 6-7, 2024		March 7-8, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	3.1	SW	1.3	SSW	1.3	SSW
10:00-11:00	2.2	SW	1.8	SSW	1.8	SSW
11:00-12:00	2.7	SW	2.2	SW	2.2	SW
12:00-13:00	3.1	WSW	2.2	WSW	2.2	WSW
13:00-14:00	3.1	WSW	3.1	SW	3.1	WSW
14:00-15:00	3.1	SW	3.6	SW	3.1	WSW
15:00-16:00	3.6	SW	3.1	SW	3.6	SW
16:00-17:00	3.6	SW	3.6	WSW	4.0	SW
17:00-18:00	3.1	SW	2.7	WSW	3.6	SW
18:00-19:00	2.2	SW	2.2	SW	2.7	SW
19:00-20:00	1.8	SSW	2.2	SSW	2.2	SW
20:00-21:00	1.8	SSW	2.2	SSW	1.3	SSW
21:00-22:00	1.8	SSW	1.3	SSW	1.3	SSW
22:00-23:00	1.3	SSW	1.3	SSW	1.3	SSW
23:00-00:00	1.3	SSW	0.9	SSW	1.3	SSW
00:00-01:00	0.9	SSW	0.9	SSW	0.9	SSW
01:00-02:00	0.9	SSW	0.9	SSW	0.9	SSW
02:00-03:00	0.9	SSW	0.9	SSW	0.9	SSW
03:00-04:00	0.4	SW	0.9	SSW	0.9	SSW
04:00-05:00	0.9	SW	0.9	SW	0.9	SSW
05:00-06:00	0.9	SW	0.9	SSW	0.9	SSW
06:00-07:00	0.4	SW	0.9	SW	0.9	SW
07:00-08:00	0.9	SW	0.9	SW	0.9	SW
08:00-09:00	0.9	SSW	0.9	SW	1.3	SSW

Wind Speed & Wind Direction

Request No. LA67-R05130

Siam Poongsan Metal Co., Ltd.

Sample No. 14286

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : May 13-16, 2024

Time	May 13-14, 2024		May 14-15, 2024		May 15-16, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	0.9	SSE	0.9	NNW	1.3	WSW
10:00-11:00	0.9	SE	2.2	W	1.8	WSW
11:00-12:00	1.8	SSE	3.1	WNW	2.2	WSW
12:00-13:00	1.8	SSE	3.1	W	2.2	SE
13:00-14:00	2.7	SSE	3.1	WSW	1.3	ENE
14:00-15:00	2.7	S	3.1	WSW	0.9	SE
15:00-16:00	1.8	NE	3.1	WSW	1.3	SE
16:00-17:00	3.1	ENE	1.8	W	1.3	SSE
17:00-18:00	2.7	ENE	1.3	WNW	1.3	SE
18:00-19:00	0.9	SSE	1.3	WSW	0.4	SE
19:00-20:00	0.4	ENE	0.4	WSW	0.9	SE
20:00-21:00	0.0	-	0.0	-	0.4	SE
21:00-22:00	0.9	N	0.0	-	0.9	ENE
22:00-23:00	1.3	N	0.0	-	0.9	ENE
23:00-00:00	0.9	N	0.0	-	0.9	ENE
00:00-01:00	0.9	NE	0.0	-	0.4	ENE
01:00-02:00	0.4	E	0.4	S	0.4	ENE
02:00-03:00	0.4	SE	0.0	-	0.4	SSE
03:00-04:00	1.3	NNW	0.4	ENE	0.4	ENE
04:00-05:00	1.3	NNW	0.4	ENE	0.9	ENE
05:00-06:00	0.9	ENE	0.0	-	0.9	ENE
06:00-07:00	0.0	-	0.4	ENE	0.9	NE
07:00-08:00	0.4	NNE	0.4	SE	0.9	N
08:00-09:00	0.9	ENE	0.9	SSE	0.9	NNE

COPY

Wind Speed & Wind Direction

Request No. LA67-R0138

Siam Poongsan Metal Co., Ltd.

Sample No. 00797

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : January 22-25, 2024

Time	January 22-23, 2024		January 23-24, 2024		January 24-25, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.0	-	0.0	-	0.4	W
11:00-12:00	0.9	NNW	0.0	-	0.4	WSW
12:00-13:00	1.3	NW	0.0	-	0.4	W
13:00-14:00	2.2	N	0.0	-	0.4	WSW
14:00-15:00	2.7	N	0.9	S	0.0	-
15:00-16:00	2.7	NNW	0.9	S	0.9	N
16:00-17:00	2.2	NNW	0.9	S	0.4	N
17:00-18:00	1.3	NW	1.3	NNW	0.9	N
18:00-19:00	0.4	NW	1.3	N	0.9	NNW
19:00-20:00	0.4	S	1.3	NNW	0.4	NNW
20:00-21:00	0.4	S	0.0	-	0.0	-
21:00-22:00	0.4	S	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	0.0	-
02:00-03:00	0.0	-	0.0	-	0.4	N
03:00-04:00	0.0	-	0.0	-	0.4	N
04:00-05:00	0.0	-	0.4	N	0.4	N
05:00-06:00	0.0	-	0.4	N	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.4	W	0.4	WSW
08:00-09:00	0.0	-	0.4	WSW	0.4	W
09:00-10:00	0.0	-	0.4	N	0.9	W

COPY

Wind Speed & Wind Direction

Request No. LA67-R0332

Siam Poongsan Metal Co., Ltd.

Sample No. 02982

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : March 5-8, 2024

Time	March 5-6, 2024		March 6-7, 2024		March 7-8, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	2.2	SSW	0.9	SSW	0.9	S
10:00-11:00	1.8	SSW	1.3	SSW	1.3	S
11:00-12:00	1.8	WSW	1.8	SW	1.8	S
12:00-13:00	1.8	SW	1.8	SW	1.8	WNW
13:00-14:00	2.2	SW	2.2	NNW	2.7	NW
14:00-15:00	2.7	SW	2.7	NNW	2.2	SW
15:00-16:00	2.2	WSW	2.7	S	2.7	S
16:00-17:00	2.7	WSW	2.7	S	3.1	S
17:00-18:00	2.2	SW	2.2	SSW	2.7	S
18:00-19:00	1.8	SW	1.8	S	2.2	S
19:00-20:00	1.3	SW	1.8	S	1.8	S
20:00-21:00	0.9	SW	1.8	S	1.3	S
21:00-22:00	1.3	SW	0.9	S	0.4	S
22:00-23:00	1.3	SW	0.4	S	0.9	S
23:00-00:00	0.9	SW	0.4	S	1.3	S
00:00-01:00	0.9	SW	0.0	-	0.0	-
01:00-02:00	0.9	SW	0.9	S	0.0	-
02:00-03:00	0.4	SSW	0.4	S	0.4	S
03:00-04:00	0.0	-	0.0	-	0.4	S
04:00-05:00	0.0	-	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.0	-	0.4	S

COPY

Wind Speed & Wind Direction

Request No. LA67-R05130

Siam Poongsan Metal Co., Ltd.

Sample No. 14285

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : May 13-16, 2024

Time	May 13-14, 2024		May 14-15, 2024		May 15-16, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
11:00-12:00	0.9	ESE	1.8	NNW	1.8	NNW
12:00-13:00	1.8	SSE	4.0	NNW	1.8	NNW
13:00-14:00	2.2	SSE	4.0	NNW	1.8	SSE
14:00-15:00	2.7	SSE	3.6	NNW	0.4	SSE
15:00-16:00	2.2	SSE	3.1	NNW	0.4	SE
16:00-17:00	1.3	SSE	2.2	NNW	1.3	SSE
17:00-18:00	0.9	N	1.8	NNW	0.9	SSE
18:00-19:00	0.4	WSW	0.9	NNW	0.9	SSE
19:00-20:00	0.0	-	1.3	NNW	0.0	-
20:00-21:00	0.0	-	0.4	NW	0.0	-
21:00-22:00	0.4	NNW	0.4	NW	0.0	-
22:00-23:00	0.4	SW	0.0	-	0.0	-
23:00-00:00	0.4	WSW	0.4	SE	0.0	-
00:00-01:00	0.4	WSW	0.4	SE	0.0	-
01:00-02:00	0.0	-	0.4	SE	0.0	-
02:00-03:00	0.0	-	0.4	S	0.0	-
03:00-04:00	0.0	-	0.4	S	0.0	-
04:00-05:00	0.4	NNW	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.0	-	0.4	SW
09:00-10:00	0.0	-	0.9	SE	0.0	-
10:00-11:00	0.4	NNW	0.9	NW	0.4	SE

Wind Speed & Wind Direction

Request No. LA67-R0138

Siam Poongsan Metal Co., Ltd.

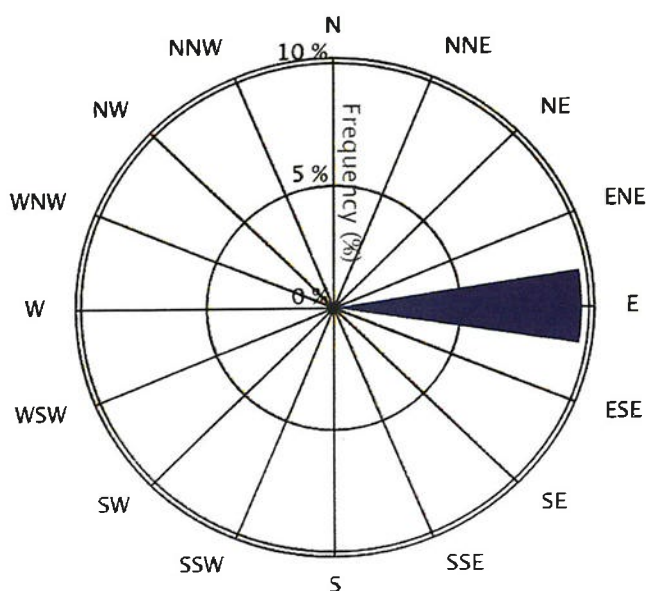
Sample No. 00798

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : January 22-25, 2024

Calm 90.3 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	9.7	0.0	0.0	0.0	0.0	0.0	9.7
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calm	90.3						

COPY

Wind Speed & Wind Direction

Request No. LA67-R0332

Siam Poongsan Metal Co., Ltd.

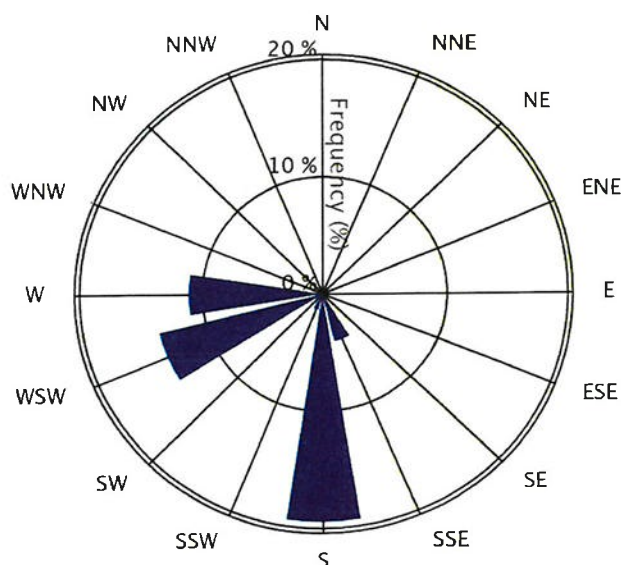
Sample No. 02980

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : March 5-8, 2024

Calm 50.0 %



0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	4.2	0.0	0.0	0.0	0.0	0.0	4.2
S	19.4	0.0	0.0	0.0	0.0	0.0	19.4
SSW	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	13.9	0.0	0.0	0.0	0.0	0.0	13.9
W	11.1	0.0	0.0	0.0	0.0	0.0	11.1
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calm	50.0						

Wind Speed & Wind Direction

Request No. LA67-R05130

Siam Poongsan Metal Co., Ltd.

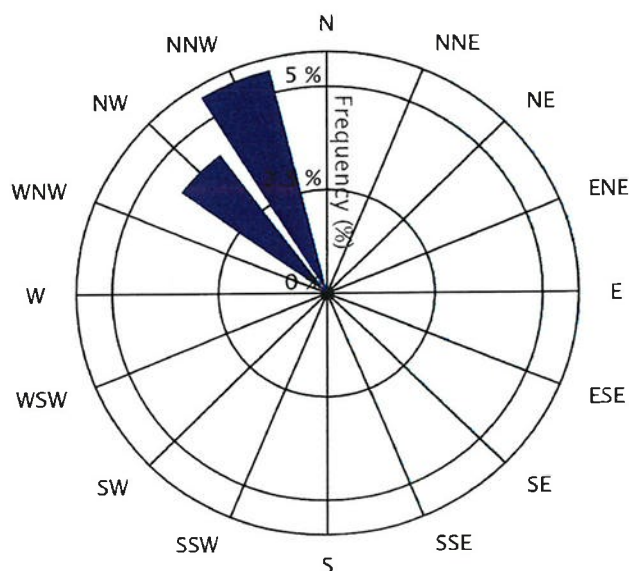
Sample No. 14287

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : May 13-16, 2024

Calm 90.3 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	4.2	0.0	0.0	0.0	0.0	0.0	4.2
NNW	5.6	0.0	0.0	0.0	0.0	0.0	5.6
Calm	90.3						

COPY

Wind Speed & Wind Direction

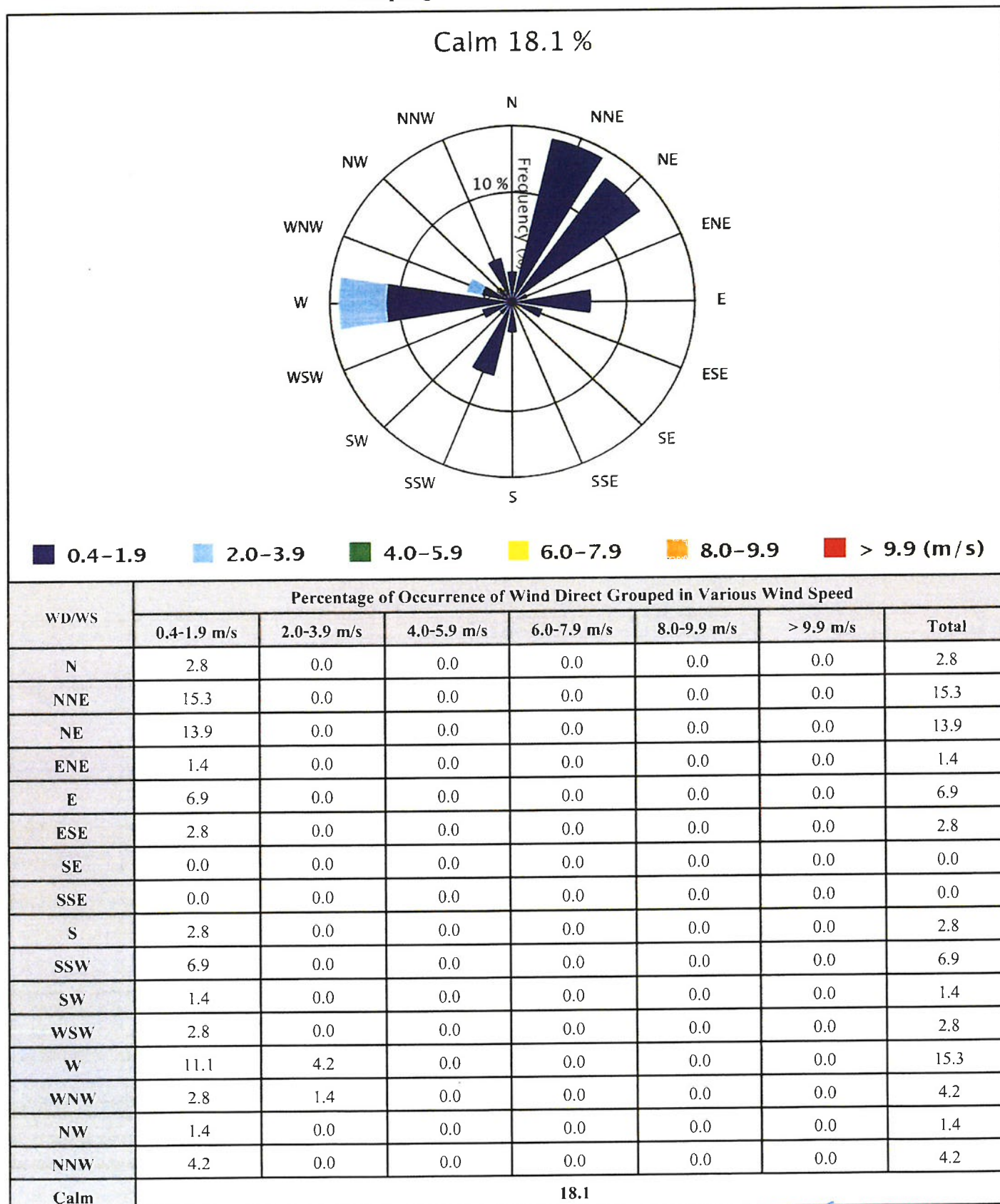
Request No. LA67-R0138

Siam Poongsan Metal Co., Ltd.

Sample No. 00799

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : January 22-25, 2024



COPY

Wind Speed & Wind Direction

Request No. LA67-R0332

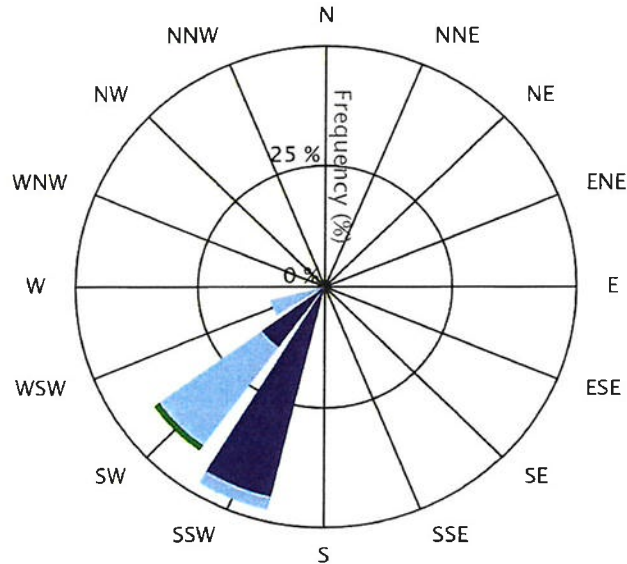
Siam Poongsan Metal Co., Ltd.

Sample No. 02981

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : March 5-8, 2024

Calm 0.0 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	44.4	2.8	0.0	0.0	0.0	0.0	47.2
SW	15.3	25.0	1.4	0.0	0.0	0.0	41.7
WSW	0.0	11.1	0.0	0.0	0.0	0.0	11.1
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calm	0.0						

Wind Speed & Wind Direction

Request No. LA67-R05130

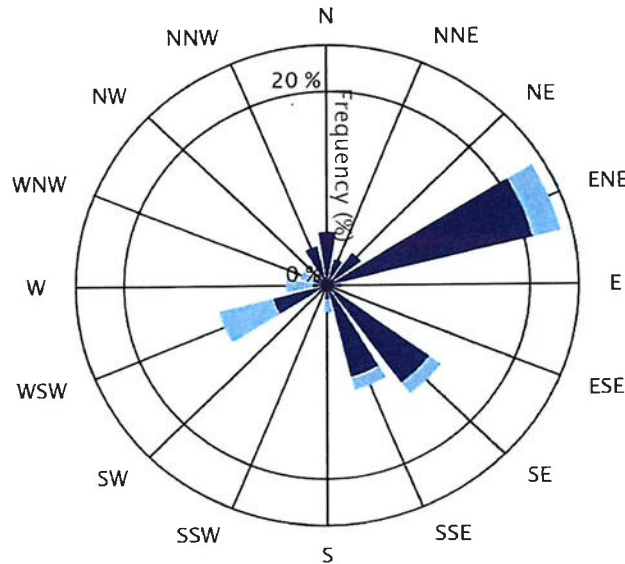
Siam Poongsan Metal Co., Ltd.

Sample No. 14286

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : May 13-16, 2024

Calm 12.5 %



0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	5.6	0.0	0.0	0.0	0.0	0.0	5.6
NNE	2.8	0.0	0.0	0.0	0.0	0.0	2.8
NE	4.2	0.0	0.0	0.0	0.0	0.0	4.2
ENE	20.8	2.8	0.0	0.0	0.0	0.0	23.6
E	1.4	0.0	0.0	0.0	0.0	0.0	1.4
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	12.5	1.4	0.0	0.0	0.0	0.0	13.9
SSE	9.7	1.4	0.0	0.0	0.0	0.0	11.1
S	1.4	1.4	0.0	0.0	0.0	0.0	2.8
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	5.6	5.6	0.0	0.0	0.0	0.0	11.2
W	1.4	2.8	0.0	0.0	0.0	0.0	4.2
WNW	1.4	1.4	0.0	0.0	0.0	0.0	2.8
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	4.2	0.0	0.0	0.0	0.0	0.0	4.2
Calm	12.5						

COPY

Wind Speed & Wind Direction

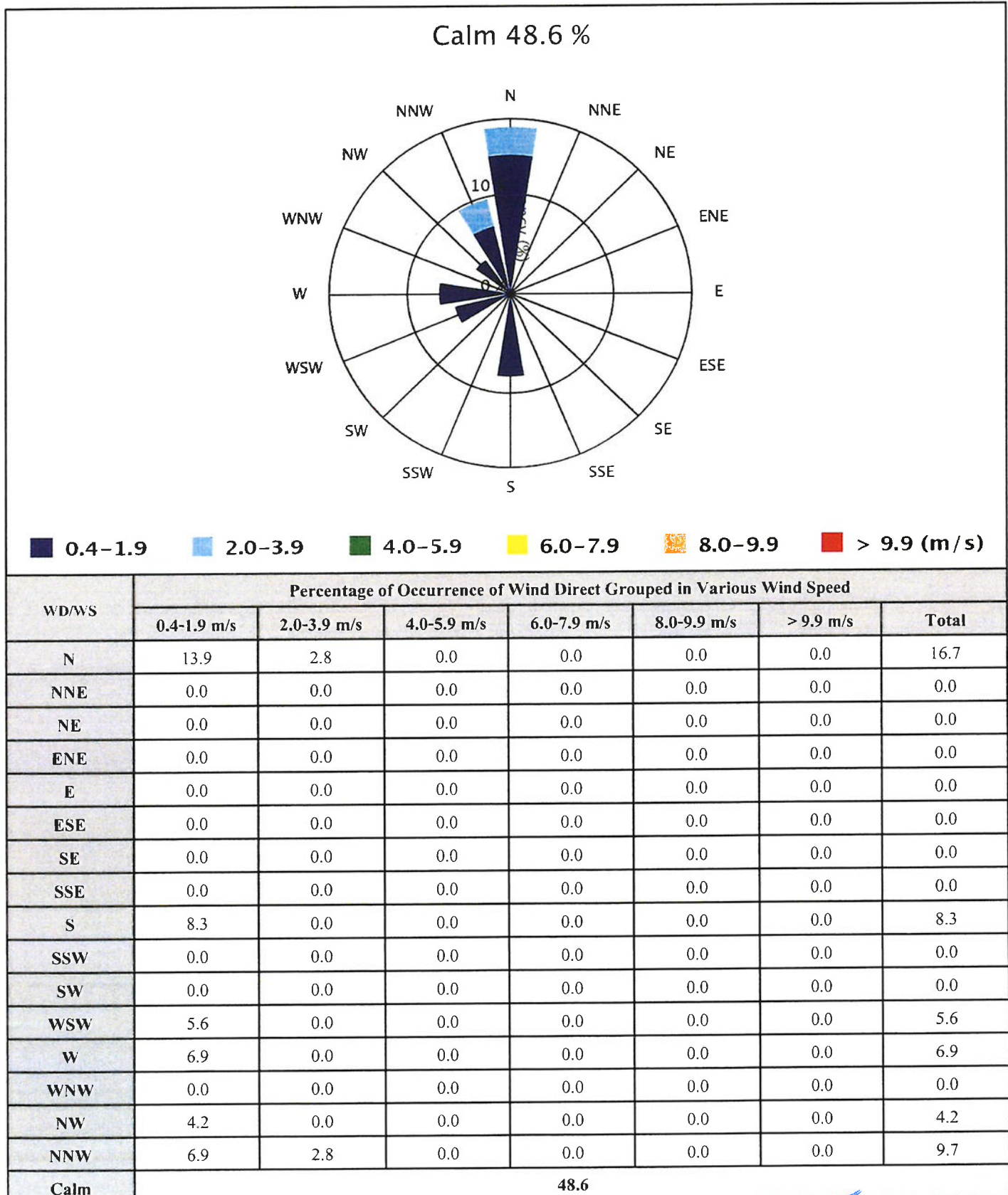
Request No. LA67-R0138

Siam Poongsan Metal Co., Ltd.

Sample No. 00797

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : January 22-25, 2024



COPY

Wind Speed & Wind Direction

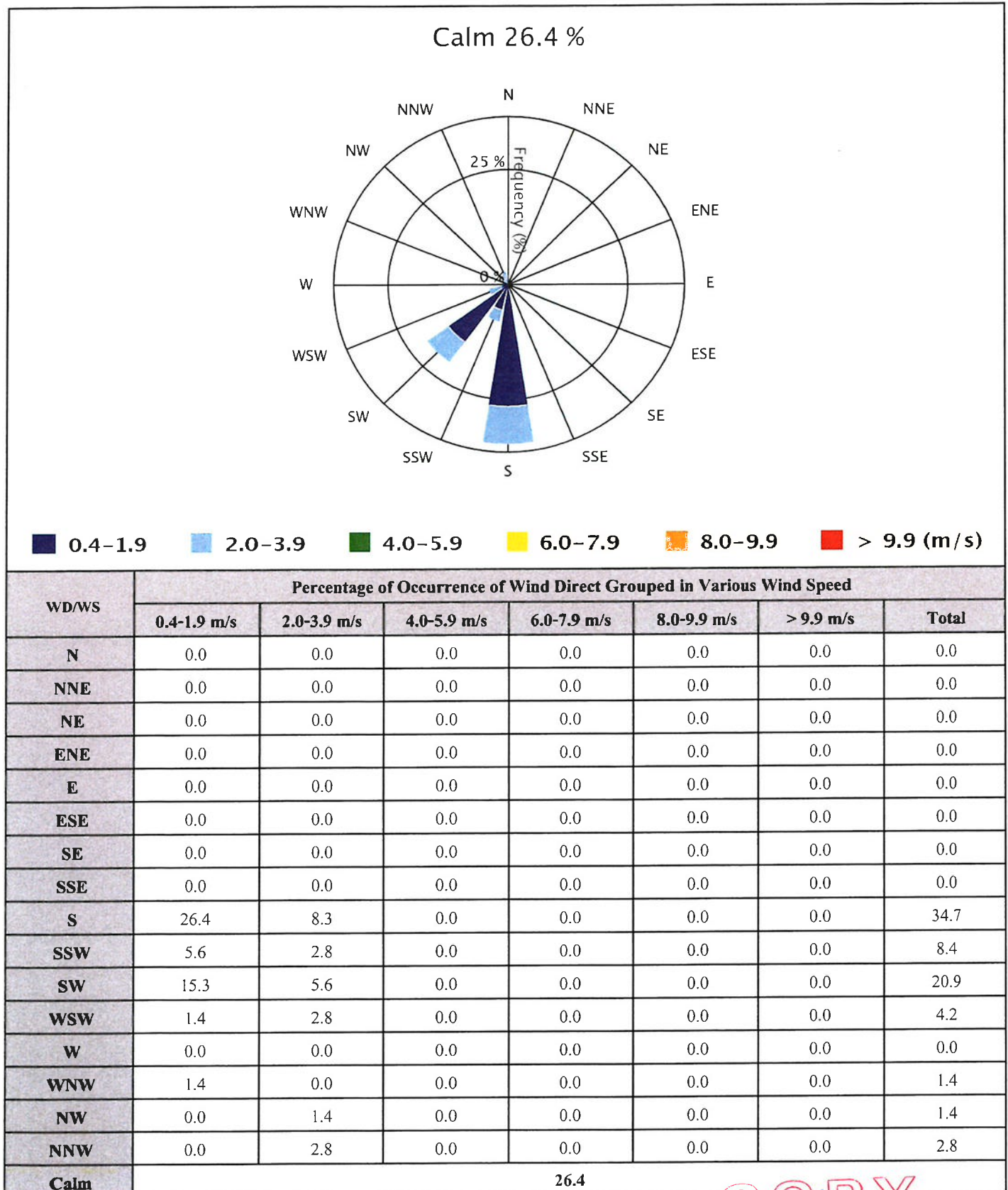
Request No. LA67-R0332

Siam Poongsan Metal Co., Ltd.

Sample No. 02982

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : March 5-8, 2024



COPY

Wind Speed & Wind Direction

Request No. LA67-R05130

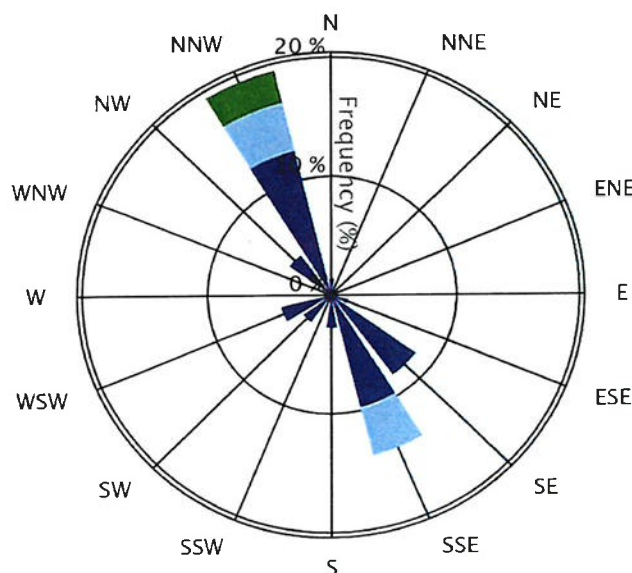
Siam Poongsan Metal Co., Ltd.

Sample No. 14285

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : May 13-16, 2024

Calm 41.7 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	1.4	0.0	0.0	0.0	0.0	0.0	1.4
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SE	8.3	0.0	0.0	0.0	0.0	0.0	8.3
SSE	9.7	4.2	0.0	0.0	0.0	0.0	13.9
S	2.8	0.0	0.0	0.0	0.0	0.0	2.8
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	2.8	0.0	0.0	0.0	0.0	0.0	2.8
WSW	4.2	0.0	0.0	0.0	0.0	0.0	4.2
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	4.2	0.0	0.0	0.0	0.0	0.0	4.2
NNW	12.5	4.2	2.8	0.0	0.0	0.0	19.5
Calm	41.7						

COPY

Request No. LA67-0117

Report No. 6701-0173

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Inlet Dust Collector of Melting Casting Stack SAMPLE NO. : 00074
 SAMPLING DATE : 23/01/2024 SAMPLING TIME : 08:40-09:15
 RECEIVED DATE : 24/01/2024 REPORTED DATE : 29/01/2024
 TESTED DATE : 24-27/01/2024

STACK DESCRIPTION

Height :	-	m	Type of Process :	Exhaust
Diameter :	0.84	m	Type of Fuel :	-
Temperature :	38.00	°C	Oxygen Content :	20.90 %
Air Velocity :	22.13	m/s	Barometric Pressure :	761.50 mmHg
Flow rate ¹ :	11.23	m ³ /s	Atmospheric Temperature :	30.00 °C
Moisture Content :	3.18	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:40-09:15	39.0	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (จ-003-ค-0021)
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By



(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

29/01/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By



(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

29/01/2024

COPY

Request No. LA67-0315

Report No. 6703-0097

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Inlet Dust Collector of Melting Casting Stack SAMPLE NO. : 00537
SAMPLING DATE : 06/03/2024 SAMPLING TIME : 13:55-14:25
RECEIVED DATE : 11/03/2024 REPORTED DATE : 20/03/2024
TESTED DATE : 11-13/03/2024
STACK DESCRIPTION @
Height : - m Type of Process : Exhaust
Diameter : 0.84 m Type of Fuel : -
Temperature : 47.00 °C Oxygen Content : 20.90 %
Air Velocity : 19.96 m/s Barometric Pressure : 754.00 mmHg
Flow rate¹ : 9.68 m³/s Atmospheric Temperature : 32.00 °C
Moisture Content : 3.17 %

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	13:55-14:25	18.5	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Nitchaphon Tonglor (จ-003-ก-0032)
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By



(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

20/03/2024




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Approved By



(Mr. Thongchai Boonsak)

(จ-003-ก-0012)

20/03/2024



Request No. LA67-0532

Report No. 6705-0248

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Inlet Dust Collector of Melting Casting Stack SAMPLE NO. : 01682
SAMPLING DATE : 16/05/2024 SAMPLING TIME : 08:40-09:15
RECEIVED DATE : 21/05/2024 REPORTED DATE : 28/05/2024
TESTED DATE : 21-27/05/2024

STACK DESCRIPTION @

Height :	-	m	Type of Process :	Exhaust
Diameter :	0.84	m	Type of Fuel :	-
Temperature :	47.00	°C	Oxygen Content :	20.90 %
Air Velocity :	24.25	m/s	Barometric Pressure :	758.50 mmHg
Flow rate ¹ :	11.91	m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	3.17	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:40-09:15	17.4	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Teerapong Naulin (จ-003-ค-0014)
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

28/05/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

28/05/2024

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Request No. LA67-0117

Report No. 6701-0174

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack SAMPLE NO. : 00075
SAMPLING DATE : 23/01/2024 SAMPLING TIME : 08:40-09:15
RECEIVED DATE : 24/01/2024 REPORTED DATE : 29/01/2024
TESTED DATE : 24-27/01/2024

STACK DESCRIPTION^(a)

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	46.00	°C	Oxygen Content :	20.90 %
Air Velocity :	22.15	m/s	Barometric Pressure :	761.50 mmHg
Flow rate ⁽²⁾ :	13.63	m ³ /s	Atmospheric Temperature :	30.00 °C
Moisture Content :	3.16	%		

PARAMETER	TEST METHOD	TIME	RESULT ⁽²⁾	STD ⁽¹⁾	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:40-09:15	11.4	400	mg/m ³

REMARK:

- ⁽¹⁾ Notification of The Ministry of Industry B.E. 2549 (2006)
- ⁽²⁾ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ค-0021)
- ^(a) These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

29/01/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

29/01/2024

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Request No. LA67-0318

Report No. 6703-0107

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack SAMPLE NO. : 00559

SAMPLING DATE : 06/03/2024 SAMPLING TIME : 13:55-14:35

RECEIVED DATE : 11/03/2024 REPORTED DATE : 20/03/2024

TESTED DATE : 11-13/03/2024

STACK DESCRIPTION @

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	40.00	°C	Oxygen Content :	20.20 %
Air Velocity :	23.02	m/s	Barometric Pressure :	754.00 mmHg
Flow rate ² :	14.24	m ³ /s	Atmospheric Temperature :	37.00 °C
Moisture Content :	3.46	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	13:55-14:35	4.3	400	mg/m ³

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ท-0021)
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

20/03/2024



Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ท-0012)

20/03/2024

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Request No. LA67-0532

Report No. 6705-0249

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack SAMPLE NO. : 01683
 SAMPLING DATE : 16/05/2024 SAMPLING TIME : 08:40-09:15
 RECEIVED DATE : 21/05/2024 REPORTED DATE : 28/05/2024
 TESTED DATE : 21-27/05/2024

STACK DESCRIPTION @

Height :	13.00 m	Type of Process :	Exhaust
Diameter :	0.93 m	Type of Fuel :	-
Temperature :	42.00 °C	Oxygen Content :	20.90 %
Air Velocity :	23.72 m/s	Barometric Pressure :	758.50 mmHg
Flow rate ² :	14.64 m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	3.65 %		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:40-09:15	6.4	400	mg/m ³

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
3. Sampling By Mr. Teerapong Naulin (ว-003-ท-0014)
- 4.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

28/05/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ท-0012)

28/05/2024

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Test Report

Request No : W6701350

Report No : 6701-1384

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67011101

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 17/01/2024 **

Sampling By : ETC **

Sampling Time : 1:10 PM **

Sampling Method : Grab **

Received Date : 18/01/2024

Tested Date : 18/01/2024 - 23/01/2024

Reported Date : 24/01/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	11.4
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	106
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	183
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	1.53
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature *	°C	Laboratory and Field Method	34
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5

Physical Appearance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (๖-003-๓-0017) *

4. ** = These data are non laboratory data.

Examined By : 

(Miss Apiradee Chuen-arom)

(๖-003-๓-0007)

24/01/2024



Approved By : 

(Miss Nunnaphat Bakhuntod)

(๖-003-๓-0005)

24/01/2024

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Test Report

Request No : W6701350

Report No : 6701-1384

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Lacmchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67011101

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 17/01/2024 **

Sampling By : ETC **

Sampling Time : 1:10 PM **

Sampling Method : Grab **

Received Date : 18/01/2024

Tested Date : 18/01/2024 - 23/01/2024

Reported Date : 24/01/2024

Parameter	Unit	Method	Result
Zinc *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	40.8

Physical Appearance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]


Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA. AWWA. WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.


3. * = Test Report/Sampling marked Not Accredited. Sampling By Mr. Parkpoom Buasawad (๖-003-๐-0017) *

4. ** = These data are non laboratory data.

Examined By : 
(Miss Apiradee Chuen-arom)
(๖-003-๐-0007)
24/01/2024



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Approved By : 
(Miss Nunnaphat Bakhuntod)
(๖-003-๐-0005)
24/01/2024

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Test Report

Request No : W6701350

Report No : 6701-1384

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67011101

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 17/01/2024

Sampling By : ETC

Sampling Time : 1:10 PM

Sampling Method : Grab

Received Date : 18/01/2024

Tested Date : 18/01/2024 - 23/01/2024

Reported Date : 24/01/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.2

Physical Appearance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. Parameter Outside The Scope of The Registration of Department of Industrial Works

2. Sampling By Mr. Parkpoom Buasawad



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Examined By :

(Miss Apiradee Chuen-arom)

24/01/2024

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Test Report

Request No : W6702428

Report No : 6702-1471

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67021266

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 15/02/2024 **

Sampling By : ETC **

Sampling Time : 9:55 AM **

Sampling Method : Grab **

Received Date : 16/02/2024

Tested Date : 16/02/2024 - 22/02/2024

Reported Date : 26/02/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	91
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	89.5
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.86
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	34

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (๖-003-๓-๐๐17) *

4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(๖-003-๓-๐๐๐7)

26/02/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(๖-003-๓-๐๐๐5)

26/02/2024

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Test Report

Request No : W6702428

Report No : 6702-1471

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67021266

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 15/02/2024 **

Sampling By : ETC **

Sampling Time : 9:55 AM **

Sampling Method : Grab **

Received Date : 16/02/2024

Tested Date : 16/02/2024 - 22/02/2024

Reported Date : 26/02/2024

Parameter	Unit	Method	Result
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5
Zinc *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	33.6

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ก-0017) *

4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

26/02/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ก-0005)

26/02/2024

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Test Report

Request No : W6702428

Report No : 6702-1471

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67021266

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 15/02/2024

Sampling By : ETC

Sampling Time : 9:55 AM

Sampling Method : Grab

Received Date : 16/02/2024

Tested Date : 16/02/2024 - 22/02/2024

Reported Date : 26/02/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.3

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. Parameter Outside The Scope of The Registration of Department of Industrial Works

2. Sampling By Mr. Parkpoom Buasawad



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Examined By :

(Miss Apiradee Chuen-arom)

26/02/2024

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Test Report

Request No : W6703430

Report No : 6703-1411

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67031286

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 15/03/2024 **

Sampling By : ETC **

Sampling Time : 11:30 AM **

Sampling Method : Grab **

Received Date : 16/03/2024

Tested Date : 18/03/2024 - 22/03/2024

Reported Date : 23/03/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	89
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	112
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.60
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	35

Physical Appearance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ก-0031) *

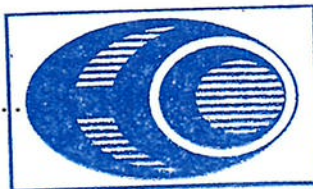
4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

23/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ก-0005)

23/03/2024

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Test Report

Request No : W6703430

Report No : 6703-1411

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67031286

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 15/03/2024 **

Sampling By : ETC **

Sampling Time : 11:30 AM **

Sampling Method : Grab **

Received Date : 16/03/2024

Tested Date : 18/03/2024 - 22/03/2024

Reported Date : 23/03/2024

Parameter	Unit	Method	Result
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5
Zinc *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	55.4

Physical Apperance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ค-0031) *

4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

23/03/2024



Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

23/03/2024

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Test Report

Request No : W6703430

Report No : 6703-1411

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67031286

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 15/03/2024

Sampling By : ETC

Sampling Time : 11:30 AM

Sampling Method : Grab

Received Date : 16/03/2024

Tested Date : 18/03/2024 - 22/03/2024

Reported Date : 23/03/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.1

Physical Apperance : 1. Sample : sky-blue , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Parameter Outside The Scope of The Registration of Department of Industrial Works

3. Sampling By Mr. Supharerk Phatklang



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Examined By :

(Miss Apiradee Chuen-arom)

23/03/2024

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Test Report

Request No : W6704603

Report No : 6705-0390

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67041812

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 26/04/2024 **

Sampling By : ETC **

Sampling Time : 11:00 AM **

Sampling Method : Grab **

Received Date : 27/04/2024

Tested Date : 29/04/2024 - 03/05/2024

Reported Date : 09/05/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	2.3
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	71
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	138
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.52
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	30

Physical Appearance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwuan (จ-003-ท-0016) *

4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

09/05/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

09/05/2024

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Test Report

Request No : W6704603

Report No : 6705-0390

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67041812

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 26/04/2024 **

Sampling By : ETC **

Sampling Time : 11:00 AM **

Sampling Method : Grab **

Received Date : 27/04/2024

Tested Date : 29/04/2024 - 03/05/2024

Reported Date : 09/05/2024

Parameter	Unit	Method	Result
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	6
Zinc *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	73.8

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

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4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

09/05/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ก-0005)

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Test Report

Request No : W6704603

Report No : 6705-0390

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67041812

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 26/04/2024

Sampling By : ETC

Sampling Time : 11:00 AM

Sampling Method : Grab

Received Date : 27/04/2024

Tested Date : 29/04/2024 - 03/05/2024

Reported Date : 09/05/2024

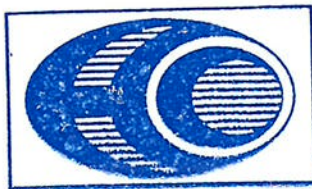
Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	1.3

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. Parameter Outside The Scope of The Registration of Department of Industrial Works

2. Sampling By Mr. Songpon Phiwuan



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Page 1 of 1

Examined By :

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09/05/2024

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Test Report

Request No : W6705289

Report No : 6705-1229

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67050958

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 10/05/2024 **

Sampling By : ETC **

Sampling Time : 9:37 AM **

Sampling Method : Grab **

Received Date : 11/05/2024

Tested Date : 13/05/2024 - 21/05/2024

Reported Date : 23/05/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	177
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	52.6
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.66
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	7.3
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	34

Physical Appearance : 1. Sample : slightly-gray , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

2. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

3. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pompinan Viriyakusolkul (จ-003-ก-0036) *

4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ก-0007)

23/05/2024



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Page 1 of 2

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ก-0005)

23/05/2024

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Test Report

Request No : W6705289

Report No : 6705-1229

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67050958

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent) **

Sampling Date : 10/05/2024 **

Sampling By : ETC **

Sampling Time : 9:37 AM **

Sampling Method : Grab **

Received Date : 11/05/2024

Tested Date : 13/05/2024 - 21/05/2024

Reported Date : 23/05/2024

Parameter	Unit	Method	Result
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	16
Zinc *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	25.6

Physical Apperance : 1. Sample : slightly-gray, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

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3. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pompinan Viriyakusolkul (จ-003-ท-0036) *

4. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

23/05/2024



Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

23/05/2024

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Test Report

Request No : W6705289

Report No : 6705- 1229

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67050958

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 10/05/2024

Sampling By : ETC

Sampling Time : 9:37 AM

Sampling Method : Grab

Received Date : 11/05/2024

Tested Date : 13/05/2024 - 21/05/2024

Reported Date : 23/05/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.4

Physical Apperance : 1. Sample : slightly-gray , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. Parameter Outside The Scope of The Registration of Department of Industrial Works

2. Sampling By Miss Pornpinan Viriyakusolkul



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Examined By :

(Miss Apiradee Chuen-arom)

23/05/2024

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Test Report

Request No : W6706381

Report No : 6706-1910

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67061141

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/06/2024

Sampling By : ETC

Sampling Time : 10:30 AM

Sampling Method : Grab

Received Date : 14/06/2024

Tested Date : 14/06/2024 - 21/06/2024

Reported Date : 28/06/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	48
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	100
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.57
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature	°C	Laboratory and Field Method (SM:2550 B)	36

Physical Appearance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Supharerk Phatklang (ว-003-ท-0031)

Examined By :

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

28/06/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(ว-003-ท-0005)

28/06/2024

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Test Report

Request No : W6706381

Report No : 6706-1910

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67061141

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/06/2024

Sampling By : ETC

Sampling Time : 10:30 AM

Sampling Method : Grab

Received Date : 14/06/2024

Tested Date : 14/06/2024 - 21/06/2024

Reported Date : 28/06/2024

Parameter	Unit	Method	Result
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	37.9

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

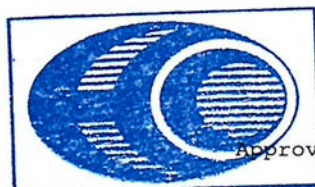
2. Sampling By Mr. Supharerk Phatklang (จ-003-ค-0031)

Examined By : 

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

28/06/2024



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Approved By : 

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

28/06/2024

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Test Report

Request No : W6706381

Report No : 6706-1910

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67061141

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/06/2024

Sampling By : ETC

Sampling Time : 10:30 AM

Sampling Method : Grab

Received Date : 14/06/2024

Tested Date : 14/06/2024 - 21/06/2024

Reported Date : 28/06/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.8

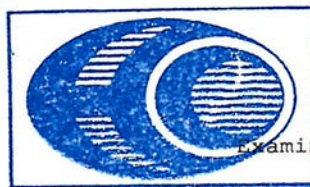
Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Parameter Outside The Scope of The Registration of Department of Industrial Works

3. Sampling By Mr. Supharerk Phatklang



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Examined By :

(Miss Apiradee Chuen-arom)

28/06/2024

Test Report

Request No : W6701350

Report No : 6701-1385

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67011102

Sample Name : น้ำทิ้งผ่านระบบบำบัด (Effluent) **

Sampling Date : 17/01/2024 **

Sampling By : ETC **

Sampling Time : 1:20 PM **

Sampling Method : Grab **

Received Date : 18/01/2024

Tested Date : 18/01/2024 - 23/01/2024

Reported Date : 24/01/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	16.5	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux.Titrimetric Method (SM:5220C)	56	≤750
Copper @	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.96	≤2
Nickel @	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	6.4	5.5 - 9.0
Temperature *	°C	Laboratory and Field Method	32	≤45

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /I Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ท-0017) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
24/01/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
24/01/2024

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Test Report

Request No : W6701350

Report No : 6701-1385

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha. Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67011102

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 17/01/2024 **

Sampling By : ETC **

Sampling Time : 1:20 PM **

Sampling Method : Grab **

Received Date : 18/01/2024

Tested Date : 18/01/2024 - 23/01/2024

Reported Date : 24/01/2024

Parameter	Unit	Method	Result	Standard ¹
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.46	≤5

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /I Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

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4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ก-0017) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

24/01/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ก-0005)

24/01/2024

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Test Report

Request No : W6702428

Report No : 6702-1472

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungskula, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67021267

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 15/02/2024 **

Sampling By : ETC **

Sampling Time : 10:00 AM **

Sampling Method : Grab **

Received Date : 16/02/2024

Tested Date : 16/02/2024 - 24/02/2024

Reported Date : 26/02/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	8.5	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	63	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.60	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.2	5.5 - 9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	32	≤45

Physical Appearance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ก-0017) *

5. ** = These data are non laboratory data.

Examined By : 

(Miss Apiradee Chuen-arom)
(จ-003-ก-0007)
26/02/2024



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Approved By : 

(Miss Nunnaphat Bakhuntod)
(จ-003-ก-0005)
26/02/2024

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Test Report

Request No : W6702428

Report No : 6702-1472

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67021267

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 15/02/2024 **

Sampling By : ETC **

Sampling Time : 10:00 AM **

Sampling Method : Grab **

Received Date : 16/02/2024

Tested Date : 16/02/2024 - 24/02/2024

Reported Date : 26/02/2024

Parameter	Unit	Method	Result	Standard ^{1/}
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.31	≤5

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /I Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ก-0017) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

26/02/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ก-0005)

26/02/2024

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Test Report

Request No : W6703430

Report No : 6703-1412

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67031287

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 15/03/2024 **

Sampling By : ETC **

Sampling Time : 11:40 AM **

Sampling Method : Grab **

Received Date : 16/03/2024

Tested Date : 18/03/2024 - 22/03/2024

Reported Date : 23/03/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	4.5	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	83	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.84	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.2	5.5 - 9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	33	≤45

Physical Appearance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

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4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ท-0031) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

23/03/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

23/03/2024

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Test Report

Request No : W6703430

Report No : 6703-1412

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67031287

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 15/03/2024 **

Sampling By : ETC **

Sampling Time : 11:40 AM **

Sampling Method : Grab **

Received Date : 16/03/2024

Tested Date : 18/03/2024 - 22/03/2024

Reported Date : 23/03/2024

Parameter	Unit	Method	Result	Standard ¹
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	5	≤200
Zinc @	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.38	≤5

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)


2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ท-0031) *

5. ** = These data are non laboratory data.

Examined By : 

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

23/03/2024



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Approved By : 

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

23/03/2024

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Test Report

Request No : W6704603

Report No : 6705-0391

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67041813

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 26/04/2024 **

Sampling By : ETC **

Sampling Time : 10:50 AM **

Sampling Method : Grab **

Received Date : 27/04/2024

Tested Date : 29/04/2024 - 09/05/2024

Reported Date : 09/05/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	47	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.84	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.4	5.5 - 9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	31	≤45

Physical Appearance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwan (จ-003-ท-0016) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

09/05/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

09/05/2024

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Test Report

Request No : W6704603

Report No : 6705-0391

Customer : Siam Poongsan Metal Co.,Ltd **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67041813

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 26/04/2024 **

Sampling By : ETC **

Sampling Time : 10:50 AM **

Sampling Method : Grab **

Received Date : 27/04/2024

Tested Date : 29/04/2024 - 09/05/2024

Reported Date : 09/05/2024

Parameter	Unit	Method	Result	Standard ¹
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc @	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.69	≤5

Physical Apperance : 1. Sample : yellowish , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

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5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

09/05/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

09/05/2024

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Test Report

Request No : W6705289

Report No : 6705-1230

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67050959

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 10/05/2024 **

Sampling By : ETC **

Sampling Time : 9:32 AM **

Sampling Method : Grab **

Received Date : 11/05/2024

Tested Date : 13/05/2024 - 17/05/2024

Reported Date : 23/05/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	78	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	1.35	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.0	5.5 - 9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	34	≤45

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ท-0036) *

5. ** = These data are non laboratory data.

Examined By : 

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)

23/05/2024



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Approved By : 

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)

23/05/2024

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Test Report

Request No : W6705289

Report No : 6705-1230

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 67050959

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent) **

Sampling Date : 10/05/2024 **

Sampling By : ETC **

Sampling Time : 9:32 AM **

Sampling Method : Grab **

Received Date : 11/05/2024

Tested Date : 13/05/2024 - 17/05/2024

Reported Date : 23/05/2024

Parameter	Unit	Method	Result	Standard ¹
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	6	≤200
Zinc @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.84	≤5

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 76 / 2560 (2017)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pompinan Viriyakusolkul (จ-003-ค-0036) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

23/05/2024



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

23/05/2024

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Test Report

Request No : W6706381, W6707265

Report No : 6706-1911-1, 6707-1181

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67061142, W67070818

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 13/06/2024, 09/07/2024

Sampling By : ETC

Sampling Time : 10:45 AM, 11:35 AM

Sampling Method : Grab

Received Date : 14/06/2024, 10/07/2024

Tested Date : 14/06/2024 - 21/06/2024

Reported Date : 22/07/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	7.2	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	86	≤750
Copper/2	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.70	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	6.2	5.5-9.0

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. /2 Sample No. W67070818 : Sampling Date 09/07/2024 (11:35 AM) : Tested Date 10/07/2024 - 17/07/2024

4. Sampling By Mr. Supharek Phatklang (จ-003-ค-0031)

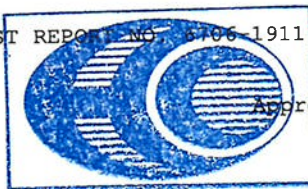
Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

22/07/2024

SUPPLEMENT TO TEST REPORT NO. 6706-1911



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

22/07/2024

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Test Report

Request No : W6706381, W6707265

Report No : 6706-1911-1, 6707-1181

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67061142, W67070818

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 13/06/2024, 09/07/2024

Sampling By : ETC

Sampling Time : 10:45 AM, 11:35 AM

Sampling Method : Grab

Received Date : 14/06/2024, 10/07/2024

Tested Date : 14/06/2024 - 21/06/2024

Reported Date : 22/07/2024

Parameter	Unit	Method	Result	Standard/ ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	34	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	12	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	1.21	≤5

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1./1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3./2 Sample No. W67070818 : Sampling Date 09/07/2024 (11:35 AM) : Tested Date 10/07/2024 – 17/07/2024

4. Sampling By Mr. Supharek Phatklang (จ-003-ท-0031)

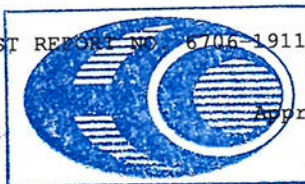
Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

22/07/2024

SUPPLEMENT TO TEST REPORT NO. 6706-1911



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Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

22/07/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมร้วค้ำนทิสเหนือ**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322744 : Class 2

SAMPLE NO. : 00574
MEASURING DATE : 16-17/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	67.6	dB(A)
10:00 - 11:00	68.7	dB(A)
11:00 - 12:00	66.5	dB(A)
12:00 - 13:00	64.7	dB(A)
13:00 - 14:00	67.6	dB(A)
14:00 - 15:00	68.0	dB(A)
15:00 - 16:00	67.2	dB(A)
16:00 - 17:00	66.3	dB(A)
17:00 - 18:00	66.2	dB(A)
18:00 - 19:00	66.4	dB(A)
19:00 - 20:00	65.5	dB(A)
20:00 - 21:00	65.7	dB(A)
21:00 - 22:00	65.2	dB(A)
22:00 - 23:00	65.3	dB(A)
23:00 - 00:00	64.7	dB(A)
00:00 - 01:00	64.8	dB(A)
01:00 - 02:00	65.1	dB(A)
02:00 - 03:00	64.5	dB(A)
03:00 - 04:00	64.6	dB(A)
04:00 - 05:00	64.9	dB(A)
05:00 - 06:00	64.9	dB(A)
06:00 - 07:00	65.5	dB(A)
07:00 - 08:00	66.8	dB(A)
08:00 - 09:00	67.7	dB(A)
L_{eq} 24 hr.	66.2	dB(A)
L_{dn} #	71.7	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanaporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)
23/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วด้านทิศเหนือ**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322746 : Class 2

SAMPLE NO. : 01101
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
08:45 - 09:45 ¹³	66.1	dB(A)
09:45 - 10:45	66.1	dB(A)
10:45 - 11:45	66.3	dB(A)
11:45 - 12:45	66.3	dB(A)
12:45 - 13:45	65.9	dB(A)
13:45 - 14:45	65.9	dB(A)
14:45 - 15:45	66.4	dB(A)
15:45 - 16:45	66.3	dB(A)
16:45 - 17:45	66.8	dB(A)
17:45 - 18:45	66.1	dB(A)
18:45 - 19:45	66.8	dB(A)
19:45 - 20:45	66.3	dB(A)
20:45 - 21:45	68.0	dB(A)
21:45 - 22:45	66.1	dB(A)
22:45 - 23:45	66.8	dB(A)
23:45 - 00:45	65.1	dB(A)
00:45 - 01:45	65.4	dB(A)
01:45 - 02:45	65.2	dB(A)
02:45 - 03:45	64.7	dB(A)
03:45 - 04:45	64.6	dB(A)
04:45 - 05:45	65.1	dB(A)
05:45 - 06:45	66.3	dB(A)
06:45 - 07:45	66.8	dB(A)
07:45 - 08:45	66.4	dB(A)
L_{eq} 24 hr.	66.1	dB(A)
L_{dn} #	72.1	dB(A)
Standard	70 ¹¹ , 70 ¹²	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ริมรั้วด้านทิศเหนือ

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00322756 : Class 2

SAMPLE NO. : 03001

MEASURING DATE : 06-07/03/2024

RECEIVED DATE : 14/03/2024

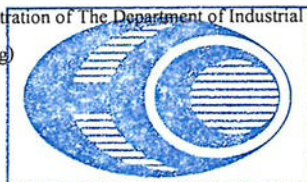
REPORTED DATE : 20/03/2024

TIME \ DATE	06-07/03/2024 (L_{eq})	UNIT
09:10 - 10:10 ^{/3}	67.1	dB(A)
10:10 - 11:10	66.0	dB(A)
11:10 - 12:10	64.5	dB(A)
12:10 - 13:10	65.2	dB(A)
13:10 - 14:10	67.8	dB(A)
14:10 - 15:10	65.8	dB(A)
15:10 - 16:10	67.1	dB(A)
16:10 - 17:10	65.7	dB(A)
17:10 - 18:10	66.2	dB(A)
18:10 - 19:10	69.0	dB(A)
19:10 - 20:10	66.1	dB(A)
20:10 - 21:10	65.4	dB(A)
21:10 - 22:10	64.8	dB(A)
22:10 - 23:10	65.0	dB(A)
23:10 - 00:10	65.7	dB(A)
00:10 - 01:10	64.5	dB(A)
01:10 - 02:10	65.5	dB(A)
02:10 - 03:10	65.5	dB(A)
03:10 - 04:10	65.4	dB(A)
04:10 - 05:10	64.7	dB(A)
05:10 - 06:10	65.1	dB(A)
06:10 - 07:10	66.3	dB(A)
07:10 - 08:10	67.5	dB(A)
08:10 - 09:10	67.4	dB(A)
L_{eq} 24 hr.	66.1	dB(A)
L_{dn}	71.9	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00443359 : Class 2

SAMPLE NO. : 08565
MEASURING DATE : 11-12/04/2024
RECEIVED DATE : 12/04/2024
REPORTED DATE : 23/04/2024

TIME \ DATE	11-12/04/2024 (L_{eq})	UNIT
09:00 - 10:00 ¹⁾	67.0	dB(A)
10:00 - 11:00	65.5	dB(A)
11:00 - 12:00	65.2	dB(A)
12:00 - 13:00	65.5	dB(A)
13:00 - 14:00	67.6	dB(A)
14:00 - 15:00	66.9	dB(A)
15:00 - 16:00	66.3	dB(A)
16:00 - 17:00	67.5	dB(A)
17:00 - 18:00	66.3	dB(A)
18:00 - 19:00	66.6	dB(A)
19:00 - 20:00	66.3	dB(A)
20:00 - 21:00	65.8	dB(A)
21:00 - 22:00	66.6	dB(A)
22:00 - 23:00	66.2	dB(A)
23:00 - 00:00	66.0	dB(A)
00:00 - 01:00	65.6	dB(A)
01:00 - 02:00	64.6	dB(A)
02:00 - 03:00	64.7	dB(A)
03:00 - 04:00	65.1	dB(A)
04:00 - 05:00	65.5	dB(A)
05:00 - 06:00	66.1	dB(A)
06:00 - 07:00	66.8	dB(A)
07:00 - 08:00	68.4	dB(A)
08:00 - 09:00	69.6	dB(A)
L_{eq} 24 hr.	66.5	dB(A)
L_{dn}	72.3	dB(A)
Standard	70 ¹⁾ , 70 ²⁾	dB(A)

REMARK : ¹⁾ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)²⁾ Notification of Ministry of the Industry B.E. 2548 (2005)³⁾ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 01209915 : Class 2

SAMPLE NO. : 14104
MEASURING DATE : 15-16/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	15-16/05/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	67.8	dB(A)
10:00 - 11:00	69.0	dB(A)
11:00 - 12:00	65.1	dB(A)
12:00 - 13:00	67.9	dB(A)
13:00 - 14:00	68.5	dB(A)
14:00 - 15:00	68.8	dB(A)
15:00 - 16:00	68.8	dB(A)
16:00 - 17:00	68.3	dB(A)
17:00 - 18:00	68.4	dB(A)
18:00 - 19:00	67.4	dB(A)
19:00 - 20:00	66.3	dB(A)
20:00 - 21:00	66.2	dB(A)
21:00 - 22:00	66.5	dB(A)
22:00 - 23:00	65.9	dB(A)
23:00 - 00:00	65.6	dB(A)
00:00 - 01:00	65.5	dB(A)
01:00 - 02:00	65.6	dB(A)
02:00 - 03:00	65.4	dB(A)
03:00 - 04:00	65.5	dB(A)
04:00 - 05:00	64.9	dB(A)
05:00 - 06:00	66.5	dB(A)
06:00 - 07:00	66.0	dB(A)
07:00 - 08:00	66.2	dB(A)
08:00 - 09:00	66.6	dB(A)
L_{eq} 24 hr.	67.0	dB(A)
L_{dn}	72.4	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Jutarat Suksaget)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322749 : Class 2

SAMPLE NO. : 19177
MEASURING DATE : 06-07/06/2024
RECEIVED DATE : 12/06/2024
REPORTED DATE : 27/06/2024

TIME \ DATE	06-07/06/2024 (L_{eq})	UNIT
09:20 - 10:20 ¹	68.9	dB(A)
10:20 - 11:20	68.2	dB(A)
11:20 - 12:20	66.3	dB(A)
12:20 - 13:20	67.8	dB(A)
13:20 - 14:20	69.2	dB(A)
14:20 - 15:20	69.5	dB(A)
15:20 - 16:20	68.7	dB(A)
16:20 - 17:20	68.4	dB(A)
17:20 - 18:20	68.1	dB(A)
18:20 - 19:20	67.1	dB(A)
19:20 - 20:20	66.3	dB(A)
20:20 - 21:20	67.6	dB(A)
21:20 - 22:20	66.9	dB(A)
22:20 - 23:20	67.8	dB(A)
23:20 - 00:20	66.6	dB(A)
00:20 - 01:20	66.1	dB(A)
01:20 - 02:20	66.9	dB(A)
02:20 - 03:20	67.9	dB(A)
03:20 - 04:20	65.7	dB(A)
04:20 - 05:20	66.1	dB(A)
05:20 - 06:20	66.6	dB(A)
06:20 - 07:20	66.9	dB(A)
07:20 - 08:20	71.4	dB(A)
08:20 - 09:20	68.5	dB(A)
L_{eq} 24 hr.	67.9	dB(A)
L_{dn}	73.5	dB(A)
Standard	70 ¹ , 70 ²	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

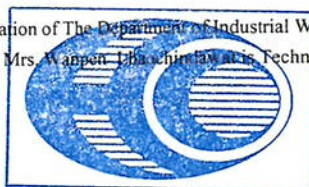
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วด้านทิศใต้**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322748 : Class 2

SAMPLE NO. : 00576
MEASURING DATE : 16-17/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:00 - 10:00 ⁷³	66.5	dB(A)
10:00 - 11:00	60.9	dB(A)
11:00 - 12:00	59.7	dB(A)
12:00 - 13:00	56.8	dB(A)
13:00 - 14:00	59.9	dB(A)
14:00 - 15:00	64.4	dB(A)
15:00 - 16:00	59.6	dB(A)
16:00 - 17:00	60.4	dB(A)
17:00 - 18:00	58.7	dB(A)
18:00 - 19:00	60.4	dB(A)
19:00 - 20:00	60.1	dB(A)
20:00 - 21:00	58.6	dB(A)
21:00 - 22:00	57.0	dB(A)
22:00 - 23:00	64.2	dB(A)
23:00 - 00:00	55.8	dB(A)
00:00 - 01:00	55.7	dB(A)
01:00 - 02:00	57.2	dB(A)
02:00 - 03:00	52.5	dB(A)
03:00 - 04:00	52.7	dB(A)
04:00 - 05:00	52.7	dB(A)
05:00 - 06:00	58.1	dB(A)
06:00 - 07:00	58.2	dB(A)
07:00 - 08:00	60.6	dB(A)
08:00 - 09:00	62.1	dB(A)
L_{eq} 24 hr.	60.3	dB(A)
L_{dn} #	65.1	dB(A)
Standard	$70^{/1}, 70^{/2}$	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanaporn Klinsonop is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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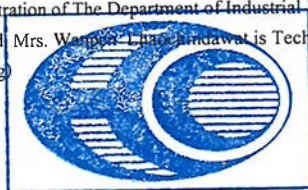
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรูด้านทิศใต้**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322751 : Class 2

SAMPLE NO. : 01104
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
09:05 - 10:05 ^{/3}	62.0	dB(A)
10:05 - 11:05	60.8	dB(A)
11:05 - 12:05	59.9	dB(A)
12:05 - 13:05	56.5	dB(A)
13:05 - 14:05	59.0	dB(A)
14:05 - 15:05	61.6	dB(A)
15:05 - 16:05	60.2	dB(A)
16:05 - 17:05	64.7	dB(A)
17:05 - 18:05	59.5	dB(A)
18:05 - 19:05	60.8	dB(A)
19:05 - 20:05	59.2	dB(A)
20:05 - 21:05	58.4	dB(A)
21:05 - 22:05	57.0	dB(A)
22:05 - 23:05	56.7	dB(A)
23:05 - 00:05	55.9	dB(A)
00:05 - 01:05	56.9	dB(A)
01:05 - 02:05	56.8	dB(A)
02:05 - 03:05	56.6	dB(A)
03:05 - 04:05	56.6	dB(A)
04:05 - 05:05	53.9	dB(A)
05:05 - 06:05	57.8	dB(A)
06:05 - 07:05	67.5	dB(A)
07:05 - 08:05	62.3	dB(A)
08:05 - 09:05	60.7	dB(A)
L_{eq} 24 hr.	60.5	dB(A)
L_{dn} #	66.6	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
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Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsonon is Section Head Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ริมรั้วด้านทิศใต้

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00322750 : Class 2

SAMPLE NO. : 03002

MEASURING DATE : 06-07/03/2024

RECEIVED DATE : 14/03/2024

REPORTED DATE : 20/03/2024

TIME \ DATE	06-07/03/2024 (L_{eq})	UNIT
08:50 - 09:50 ^{/3}	62.8	dB(A)
09:50 - 10:50	60.6	dB(A)
10:50 - 11:50	59.4	dB(A)
11:50 - 12:50	55.5	dB(A)
12:50 - 13:50	58.1	dB(A)
13:50 - 14:50	58.3	dB(A)
14:50 - 15:50	59.4	dB(A)
15:50 - 16:50	59.8	dB(A)
16:50 - 17:50	59.0	dB(A)
17:50 - 18:50	57.9	dB(A)
18:50 - 19:50	59.8	dB(A)
19:50 - 20:50	62.6	dB(A)
20:50 - 21:50	56.9	dB(A)
21:50 - 22:50	56.2	dB(A)
22:50 - 23:50	55.6	dB(A)
23:50 - 00:50	55.8	dB(A)
00:50 - 01:50	59.1	dB(A)
01:50 - 02:50	70.2	dB(A)
02:50 - 03:50	55.2	dB(A)
03:50 - 04:50	53.5	dB(A)
04:50 - 05:50	56.0	dB(A)
05:50 - 06:50	60.5	dB(A)
06:50 - 07:50	60.9	dB(A)
07:50 - 08:50	70.0	dB(A)
L_{eq} 24 hr.	62.0	dB(A)
L_{dn}	68.5	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Priyaporn Sungthong)



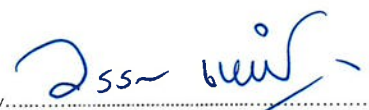
บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Approved By.....



(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024



TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 08564
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230	MEASURING DATE	: 11-12/04/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 12/04/2024
SAMPLE POINT	: ริมรั้วด้านทิศใต้	REPORTED DATE	: 23/04/2024
PARAMETER*	: L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}		
DETERMINATION METHOD	: ISO 1996-1:2016		
INSTRUMENT	: Integrated Sound Level Meter		
	S/N 01209915 : Class 2		

TIME \ DATE	11-12/04/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	63.1	dB(A)
10:00 - 11:00	60.9	dB(A)
11:00 - 12:00	59.1	dB(A)
12:00 - 13:00	56.3	dB(A)
13:00 - 14:00	62.5	dB(A)
14:00 - 15:00	59.3	dB(A)
15:00 - 16:00	60.8	dB(A)
16:00 - 17:00	65.9	dB(A)
17:00 - 18:00	66.8	dB(A)
18:00 - 19:00	59.8	dB(A)
19:00 - 20:00	57.8	dB(A)
20:00 - 21:00	56.5	dB(A)
21:00 - 22:00	56.6	dB(A)
22:00 - 23:00	59.9	dB(A)
23:00 - 00:00	54.5	dB(A)
00:00 - 01:00	56.8	dB(A)
01:00 - 02:00	56.0	dB(A)
02:00 - 03:00	56.2	dB(A)
03:00 - 04:00	54.3	dB(A)
04:00 - 05:00	53.8	dB(A)
05:00 - 06:00	57.3	dB(A)
06:00 - 07:00	59.0	dB(A)
07:00 - 08:00	59.7	dB(A)
08:00 - 09:00	62.3	dB(A)
L_{eq} 24 hr.	60.4	dB(A)
L_{dn}	64.4	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Yonlada Pale)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศใต้
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322746 : Class 2

SAMPLE NO. : 14105
MEASURING DATE : 15-16/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	15-16/05/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	61.2	dB(A)
10:00 - 11:00	61.7	dB(A)
11:00 - 12:00	63.7	dB(A)
12:00 - 13:00	59.3	dB(A)
13:00 - 14:00	59.3	dB(A)
14:00 - 15:00	55.4	dB(A)
15:00 - 16:00	58.3	dB(A)
16:00 - 17:00	59.9	dB(A)
17:00 - 18:00	58.5	dB(A)
18:00 - 19:00	58.3	dB(A)
19:00 - 20:00	56.6	dB(A)
20:00 - 21:00	54.6	dB(A)
21:00 - 22:00	52.9	dB(A)
22:00 - 23:00	53.3	dB(A)
23:00 - 00:00	50.8	dB(A)
00:00 - 01:00	51.8	dB(A)
01:00 - 02:00	60.4	dB(A)
02:00 - 03:00	57.4	dB(A)
03:00 - 04:00	52.0	dB(A)
04:00 - 05:00	50.6	dB(A)
05:00 - 06:00	52.1	dB(A)
06:00 - 07:00	55.8	dB(A)
07:00 - 08:00	58.3	dB(A)
08:00 - 09:00	64.6	dB(A)
L_{eq} 24 hr.	58.7	dB(A)
L_{dn}	62.7	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Jutarat Suksaget)

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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COPY

Request No. LA67-R0692

Report No. R6706-3502

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศใต้
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322755 : Class 2

SAMPLE NO. : 19178
MEASURING DATE : 06-07/06/2024
RECEIVED DATE : 12/06/2024
REPORTED DATE : 27/06/2024

TIME \ DATE	06-07/06/2024 (L_{eq})	UNIT
09:35 - 10:35 ¹	59.8	dB(A)
10:35 - 11:35	59.4	dB(A)
11:35 - 12:35	57.7	dB(A)
12:35 - 13:35	58.3	dB(A)
13:35 - 14:35	59.9	dB(A)
14:35 - 15:35	59.1	dB(A)
15:35 - 16:35	62.3	dB(A)
16:35 - 17:35	62.4	dB(A)
17:35 - 18:35	64.9	dB(A)
18:35 - 19:35	60.5	dB(A)
19:35 - 20:35	58.5	dB(A)
20:35 - 21:35	58.6	dB(A)
21:35 - 22:35	56.0	dB(A)
22:35 - 23:35	54.7	dB(A)
23:35 - 00:35	53.8	dB(A)
00:35 - 01:35	54.7	dB(A)
01:35 - 02:35	55.1	dB(A)
02:35 - 03:35	60.7	dB(A)
03:35 - 04:35	52.8	dB(A)
04:35 - 05:35	54.7	dB(A)
05:35 - 06:35	58.7	dB(A)
06:35 - 07:35	60.8	dB(A)
07:35 - 08:35	59.8	dB(A)
08:35 - 09:35	59.6	dB(A)
L_{eq} 24 hr.	59.4	dB(A)
L_{dn}	63.7	dB(A)
Standard	$70^{/1}$, $70^{/2}$	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมร้วด้านทิศตะวันออก**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322754 : Class 2

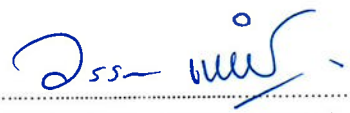
SAMPLE NO. : 00575
MEASURING DATE : 16-17/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	63.2	dB(A)
10:00 - 11:00	58.2	dB(A)
11:00 - 12:00	56.2	dB(A)
12:00 - 13:00	61.1	dB(A)
13:00 - 14:00	58.3	dB(A)
14:00 - 15:00	63.2	dB(A)
15:00 - 16:00	62.2	dB(A)
16:00 - 17:00	59.3	dB(A)
17:00 - 18:00	55.8	dB(A)
18:00 - 19:00	55.5	dB(A)
19:00 - 20:00	59.8	dB(A)
20:00 - 21:00	58.3	dB(A)
21:00 - 22:00	58.6	dB(A)
22:00 - 23:00	58.8	dB(A)
23:00 - 00:00	58.8	dB(A)
00:00 - 01:00	58.8	dB(A)
01:00 - 02:00	56.3	dB(A)
02:00 - 03:00	55.7	dB(A)
03:00 - 04:00	55.3	dB(A)
04:00 - 05:00	54.7	dB(A)
05:00 - 06:00	54.9	dB(A)
06:00 - 07:00	55.4	dB(A)
07:00 - 08:00	55.7	dB(A)
08:00 - 09:00	56.3	dB(A)
L_{eq} 24 hr.	58.7	dB(A)
L_{dn} #	63.8	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By 
(MRS. WANPEN LHAOCHINDAWAT)

23/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322750 : Class 2

SAMPLE NO. : 01102
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{1/3}	61.8	dB(A)
10:00 - 11:00	66.4	dB(A)
11:00 - 12:00	58.1	dB(A)
12:00 - 13:00	58.2	dB(A)
13:00 - 14:00	59.0	dB(A)
14:00 - 15:00	60.0	dB(A)
15:00 - 16:00	59.7	dB(A)
16:00 - 17:00	58.7	dB(A)
17:00 - 18:00	58.1	dB(A)
18:00 - 19:00	58.5	dB(A)
19:00 - 20:00	59.3	dB(A)
20:00 - 21:00	59.9	dB(A)
21:00 - 22:00	58.9	dB(A)
22:00 - 23:00	60.0	dB(A)
23:00 - 00:00	59.4	dB(A)
00:00 - 01:00	59.6	dB(A)
01:00 - 02:00	59.3	dB(A)
02:00 - 03:00	59.4	dB(A)
03:00 - 04:00	59.4	dB(A)
04:00 - 05:00	58.9	dB(A)
05:00 - 06:00	59.1	dB(A)
06:00 - 07:00	58.8	dB(A)
07:00 - 08:00	59.1	dB(A)
08:00 - 09:00	61.7	dB(A)
L_{eq} 24 hr.	60.1	dB(A)
L_{dn} #	65.9	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{1/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

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COPY

Request No. LA67-R0333

Report No. R6703-0747

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322753 : Class 2

SAMPLE NO. : 03003
MEASURING DATE : 06-07/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	06-07/03/2024 (L_{eq})	UNIT
08:45 - 09:45 ^{1/3}	59.1	dB(A)
09:45 - 10:45	57.4	dB(A)
10:45 - 11:45	58.8	dB(A)
11:45 - 12:45	60.2	dB(A)
12:45 - 13:45	62.6	dB(A)
13:45 - 14:45	62.9	dB(A)
14:45 - 15:45	61.5	dB(A)
15:45 - 16:45	59.6	dB(A)
16:45 - 17:45	60.9	dB(A)
17:45 - 18:45	58.3	dB(A)
18:45 - 19:45	57.9	dB(A)
19:45 - 20:45	58.5	dB(A)
20:45 - 21:45	58.0	dB(A)
21:45 - 22:45	57.7	dB(A)
22:45 - 23:45	58.1	dB(A)
23:45 - 00:45	57.9	dB(A)
00:45 - 01:45	57.7	dB(A)
01:45 - 02:45	57.4	dB(A)
02:45 - 03:45	57.0	dB(A)
03:45 - 04:45	57.3	dB(A)
04:45 - 05:45	58.0	dB(A)
05:45 - 06:45	58.9	dB(A)
06:45 - 07:45	58.6	dB(A)
07:45 - 08:45	58.6	dB(A)
L_{eq} 24 hr.	59.2	dB(A)
L_{dn}	64.6	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Priyaporn Sungthong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 01147298 : Class 2

SAMPLE NO. : 08566
MEASURING DATE : 11-12/04/2024
RECEIVED DATE : 12/04/2024
REPORTED DATE : 23/04/2024

TIME \ DATE	11-12/04/2024 (L_{eq})	UNIT
09:00 - 10:00 ¹³	62.2	dB(A)
10:00 - 11:00	63.8	dB(A)
11:00 - 12:00	63.8	dB(A)
12:00 - 13:00	60.0	dB(A)
13:00 - 14:00	61.4	dB(A)
14:00 - 15:00	62.6	dB(A)
15:00 - 16:00	64.3	dB(A)
16:00 - 17:00	62.5	dB(A)
17:00 - 18:00	57.3	dB(A)
18:00 - 19:00	56.5	dB(A)
19:00 - 20:00	54.9	dB(A)
20:00 - 21:00	56.1	dB(A)
21:00 - 22:00	56.4	dB(A)
22:00 - 23:00	56.0	dB(A)
23:00 - 00:00	55.4	dB(A)
00:00 - 01:00	55.8	dB(A)
01:00 - 02:00	55.8	dB(A)
02:00 - 03:00	55.5	dB(A)
03:00 - 04:00	53.9	dB(A)
04:00 - 05:00	53.4	dB(A)
05:00 - 06:00	53.6	dB(A)
06:00 - 07:00	53.9	dB(A)
07:00 - 08:00	55.1	dB(A)
08:00 - 09:00	61.0	dB(A)
L_{eq} 24 hr.	59.6	dB(A)
L_{dn}	62.9	dB(A)
Standard	70 ¹¹ . 70 ¹²	dB(A)

REMARK : ¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)¹² Notification of Ministry of the Industry B.E. 2548 (2005)¹³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

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Request No. LA67-R05122

Report No. R6705-3568

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00443358 : Class 2

SAMPLE NO. : 14106
MEASURING DATE : 15-16/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	15-16/05/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	62.8	dB(A)
10:00 - 11:00	63.9	dB(A)
11:00 - 12:00	62.6	dB(A)
12:00 - 13:00	60.5	dB(A)
13:00 - 14:00	64.3	dB(A)
14:00 - 15:00	64.2	dB(A)
15:00 - 16:00	64.3	dB(A)
16:00 - 17:00	63.7	dB(A)
17:00 - 18:00	63.6	dB(A)
18:00 - 19:00	56.7	dB(A)
19:00 - 20:00	56.3	dB(A)
20:00 - 21:00	57.7	dB(A)
21:00 - 22:00	58.1	dB(A)
22:00 - 23:00	57.8	dB(A)
23:00 - 00:00	57.9	dB(A)
00:00 - 01:00	57.5	dB(A)
01:00 - 02:00	56.5	dB(A)
02:00 - 03:00	56.0	dB(A)
03:00 - 04:00	54.2	dB(A)
04:00 - 05:00	53.5	dB(A)
05:00 - 06:00	53.7	dB(A)
06:00 - 07:00	59.5	dB(A)
07:00 - 08:00	54.1	dB(A)
08:00 - 09:00	63.8	dB(A)
L_{eq} 24 hr.	60.8	dB(A)
L_{dn}	64.5	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Jutarat Suksaget)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322747 : Class 2

SAMPLE NO. : 19175
MEASURING DATE : 06-07/06/2024
RECEIVED DATE : 12/06/2024
REPORTED DATE : 27/06/2024

TIME \ DATE	06-07/06/2024	UNIT
	(L_{eq})	
09:25 - 10:25 ^{1/3}	64.0	dB(A)
10:25 - 11:25	63.9	dB(A)
11:25 - 12:25	60.9	dB(A)
12:25 - 13:25	60.7	dB(A)
13:25 - 14:25	63.4	dB(A)
14:25 - 15:25	64.1	dB(A)
15:25 - 16:25	63.7	dB(A)
16:25 - 17:25	63.6	dB(A)
17:25 - 18:25	62.0	dB(A)
18:25 - 19:25	62.2	dB(A)
19:25 - 20:25	62.3	dB(A)
20:25 - 21:25	57.6	dB(A)
21:25 - 22:25	58.3	dB(A)
22:25 - 23:25	57.3	dB(A)
23:25 - 00:25	57.4	dB(A)
00:25 - 01:25	57.4	dB(A)
01:25 - 02:25	57.7	dB(A)
02:25 - 03:25	56.8	dB(A)
03:25 - 04:25	56.3	dB(A)
04:25 - 05:25	56.5	dB(A)
05:25 - 06:25	58.3	dB(A)
06:25 - 07:25	58.6	dB(A)
07:25 - 08:25	63.2	dB(A)
08:25 - 09:25	60.6	dB(A)
L_{eq} 24 hr.	61.1	dB(A)
L_{dn}	65.0	dB(A)
Standard	$70^{1/1}$, $70^{2/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322746 : Class 2

SAMPLE NO. : 00577
MEASURING DATE : 16-17/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	61.2	dB(A)
10:00 - 11:00	60.8	dB(A)
11:00 - 12:00	60.6	dB(A)
12:00 - 13:00	60.6	dB(A)
13:00 - 14:00	59.9	dB(A)
14:00 - 15:00	60.3	dB(A)
15:00 - 16:00	60.0	dB(A)
16:00 - 17:00	60.5	dB(A)
17:00 - 18:00	61.1	dB(A)
18:00 - 19:00	60.9	dB(A)
19:00 - 20:00	62.2	dB(A)
20:00 - 21:00	62.5	dB(A)
21:00 - 22:00	60.5	dB(A)
22:00 - 23:00	60.5	dB(A)
23:00 - 00:00	60.4	dB(A)
00:00 - 01:00	60.5	dB(A)
01:00 - 02:00	60.7	dB(A)
02:00 - 03:00	60.6	dB(A)
03:00 - 04:00	59.5	dB(A)
04:00 - 05:00	59.1	dB(A)
05:00 - 06:00	59.9	dB(A)
06:00 - 07:00	60.9	dB(A)
07:00 - 08:00	62.9	dB(A)
08:00 - 09:00	62.0	dB(A)
L_{eq} 24 hr.	60.8	dB(A)
L_{dn} #	66.8	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)
23/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00322748 : Class 2

SAMPLE NO. : 01103
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
09:20 - 10:20 ^{/3}	60.7	dB(A)
10:20 - 11:20	59.8	dB(A)
11:20 - 12:20	59.2	dB(A)
12:20 - 13:20	59.6	dB(A)
13:20 - 14:20	60.1	dB(A)
14:20 - 15:20	60.2	dB(A)
15:20 - 16:20	60.6	dB(A)
16:20 - 17:20	57.1	dB(A)
17:20 - 18:20	57.1	dB(A)
18:20 - 19:20	57.6	dB(A)
19:20 - 20:20	58.9	dB(A)
20:20 - 21:20	56.2	dB(A)
21:20 - 22:20	55.4	dB(A)
22:20 - 23:20	55.4	dB(A)
23:20 - 00:20	54.8	dB(A)
00:20 - 01:20	54.5	dB(A)
01:20 - 02:20	54.2	dB(A)
02:20 - 03:20	54.4	dB(A)
03:20 - 04:20	54.4	dB(A)
04:20 - 05:20	54.6	dB(A)
05:20 - 06:20	55.5	dB(A)
06:20 - 07:20	58.3	dB(A)
07:20 - 08:20	59.3	dB(A)
08:20 - 09:20	56.6	dB(A)
L_{eq} 24 hr.	57.8	dB(A)
L_{dn} #	62.4	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on General Noise Level Standards, Dated March 12, 1997,
Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated August 11, 1997,
Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level
From Factory B.E. 2553, Dated December 20, 2010
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

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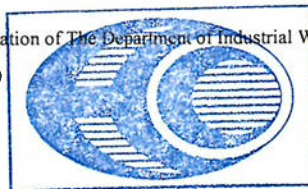
COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322746 : Class 2

SAMPLE NO. : 03004
MEASURING DATE : 06-07/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	06-07/03/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{1/3}	60.9	dB(A)
10:00 - 11:00	60.0	dB(A)
11:00 - 12:00	60.3	dB(A)
12:00 - 13:00	59.6	dB(A)
13:00 - 14:00	60.0	dB(A)
14:00 - 15:00	59.8	dB(A)
15:00 - 16:00	60.8	dB(A)
16:00 - 17:00	61.1	dB(A)
17:00 - 18:00	61.9	dB(A)
18:00 - 19:00	62.1	dB(A)
19:00 - 20:00	63.7	dB(A)
20:00 - 21:00	61.7	dB(A)
21:00 - 22:00	59.4	dB(A)
22:00 - 23:00	59.4	dB(A)
23:00 - 00:00	59.2	dB(A)
00:00 - 01:00	58.7	dB(A)
01:00 - 02:00	59.7	dB(A)
02:00 - 03:00	59.1	dB(A)
03:00 - 04:00	59.2	dB(A)
04:00 - 05:00	59.3	dB(A)
05:00 - 06:00	60.0	dB(A)
06:00 - 07:00	62.2	dB(A)
07:00 - 08:00	63.9	dB(A)
08:00 - 09:00	62.1	dB(A)
L_{eq} 24 hr.	60.8	dB(A)
L_{dn}	66.4	dB(A)
Standard	70 ^{1/1} , 70 ^{1/2}	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Priyaporn Sungthong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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Request No. LA67-R0470

Report No. R6704-2613

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00443357 : Class 2

SAMPLE NO. : 08563
MEASURING DATE : 11-12/04/2024
RECEIVED DATE : 12/04/2024
REPORTED DATE : 23/04/2024

TIME \ DATE	11-12/04/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	59.9	dB(A)
10:00 - 11:00	61.3	dB(A)
11:00 - 12:00	60.1	dB(A)
12:00 - 13:00	59.1	dB(A)
13:00 - 14:00	59.9	dB(A)
14:00 - 15:00	61.0	dB(A)
15:00 - 16:00	62.2	dB(A)
16:00 - 17:00	62.7	dB(A)
17:00 - 18:00	62.9	dB(A)
18:00 - 19:00	62.0	dB(A)
19:00 - 20:00	62.6	dB(A)
20:00 - 21:00	60.5	dB(A)
21:00 - 22:00	59.9	dB(A)
22:00 - 23:00	59.9	dB(A)
23:00 - 00:00	60.0	dB(A)
00:00 - 01:00	59.7	dB(A)
01:00 - 02:00	59.6	dB(A)
02:00 - 03:00	59.5	dB(A)
03:00 - 04:00	59.6	dB(A)
04:00 - 05:00	60.6	dB(A)
05:00 - 06:00	60.6	dB(A)
06:00 - 07:00	61.5	dB(A)
07:00 - 08:00	61.5	dB(A)
08:00 - 09:00	60.4	dB(A)
L_{eq} 24 hr.	60.9	dB(A)
L_{dn}	66.7	dB(A)
Standard	70 ^{/1} - 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

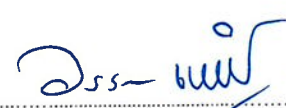
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Yonlada Pale)



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Approved By 
(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

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Request No. LA67-R05122

Report No. R6705-3569

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322744 : Class 2

SAMPLE NO. : 14107
MEASURING DATE : 15-16/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	15-16/05/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	58.7	dB(A)
10:00 - 11:00	68.2	dB(A)
11:00 - 12:00	67.0	dB(A)
12:00 - 13:00	66.5	dB(A)
13:00 - 14:00	60.9	dB(A)
14:00 - 15:00	59.8	dB(A)
15:00 - 16:00	59.6	dB(A)
16:00 - 17:00	61.4	dB(A)
17:00 - 18:00	61.9	dB(A)
18:00 - 19:00	60.6	dB(A)
19:00 - 20:00	61.3	dB(A)
20:00 - 21:00	58.9	dB(A)
21:00 - 22:00	57.9	dB(A)
22:00 - 23:00	57.5	dB(A)
23:00 - 00:00	57.6	dB(A)
00:00 - 01:00	57.7	dB(A)
01:00 - 02:00	59.3	dB(A)
02:00 - 03:00	61.2	dB(A)
03:00 - 04:00	57.8	dB(A)
04:00 - 05:00	60.3	dB(A)
05:00 - 06:00	60.3	dB(A)
06:00 - 07:00	61.3	dB(A)
07:00 - 08:00	61.8	dB(A)
08:00 - 09:00	59.3	dB(A)
L_{eq} 24 hr.	61.9	dB(A)
L_{dn}	66.6	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Equipment of Industrial Works.

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00222593 : Class 2

SAMPLE NO. : 19176
MEASURING DATE : 06-07/06/2024
RECEIVED DATE : 12/06/2024
REPORTED DATE : 27/06/2024

TIME \ DATE	06-07/06/2024 (L_{eq})	UNIT
09:30 - 10:30 ¹	72.4	dB(A)
10:30 - 11:30	62.2	dB(A)
11:30 - 12:30	60.0	dB(A)
12:30 - 13:30	59.9	dB(A)
13:30 - 14:30	59.9	dB(A)
14:30 - 15:30	60.2	dB(A)
15:30 - 16:30	60.5	dB(A)
16:30 - 17:30	62.1	dB(A)
17:30 - 18:30	61.7	dB(A)
18:30 - 19:30	61.6	dB(A)
19:30 - 20:30	62.0	dB(A)
20:30 - 21:30	60.2	dB(A)
21:30 - 22:30	59.4	dB(A)
22:30 - 23:30	59.1	dB(A)
23:30 - 00:30	58.6	dB(A)
00:30 - 01:30	58.3	dB(A)
01:30 - 02:30	58.2	dB(A)
02:30 - 03:30	58.3	dB(A)
03:30 - 04:30	58.1	dB(A)
04:30 - 05:30	61.3	dB(A)
05:30 - 06:30	60.9	dB(A)
06:30 - 07:30	63.3	dB(A)
07:30 - 08:30	62.7	dB(A)
08:30 - 09:30	61.1	dB(A)
L_{eq} 24 hr.	62.7	dB(A)
L_{dn}	67.1	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.***	SAMPLE NO.	: 00579
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***	MEASURING DATE	: 16-17/01/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.***	RECEIVED DATE	: 19/01/2024
SAMPLE POINT	: Melting***	REPORTED DATE	: 23/01/2024
PARAMETER****	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010##		
INSTRUMENT	: Integrated Sound Level Meter ;		
	S/N 00322745 : Class 2		

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:05 - 10:05 ^{1/3}	80.7	dB(A)
10:05 - 11:05	79.6	dB(A)
11:05 - 12:05	77.8	dB(A)
12:05 - 13:05	78.1	dB(A)
13:05 - 14:05	80.8	dB(A)
14:05 - 15:05	78.9	dB(A)
15:05 - 16:05	78.3	dB(A)
16:05 - 17:05	80.3	dB(A)
17:05 - 18:05	78.8	dB(A)
18:05 - 19:05	78.5	dB(A)
19:05 - 20:05	80.5	dB(A)
20:05 - 21:05	80.7	dB(A)
21:05 - 22:05	79.3	dB(A)
22:05 - 23:05	79.3	dB(A)
23:05 - 00:05	82.1	dB(A)
00:05 - 01:05	81.4	dB(A)
01:05 - 02:05	79.0	dB(A)
02:05 - 03:05	81.1	dB(A)
03:05 - 04:05	79.0	dB(A)
04:05 - 05:05	80.1	dB(A)
05:05 - 06:05	81.2	dB(A)
06:05 - 07:05	79.2	dB(A)
07:05 - 08:05	79.1	dB(A)
08:05 - 09:05	80.1	dB(A)
L_{eq} 24 hr.	79.9	dB(A)
<hr/>		
L_{eq} 8 hr. (TWA) ^{*/1}	09:05 - 17:05 น. = 79 17:05 - 01:05 น. = 80 01:05 - 09:05 น. = 79	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:05 - 17:05 น. = 79 17:05 - 01:05 น. = 80 01:05 - 09:05 น. = 79	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/1} , 90 ^{2/2}	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018

^{1/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

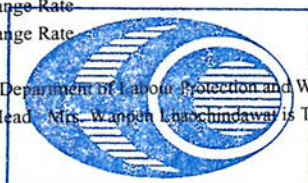
^{2/2} Notification of The Ministry of Industry B.E. 2546 (2003)

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

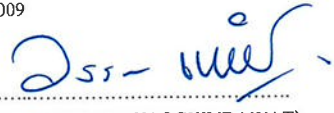
** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** These Data are Non Laboratory Data

**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsoopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By 
(MRS. WANPEN LHAOCHINDAWAT)
23/01/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : Melting***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322754 : Class 2

SAMPLE NO. : 01106
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
09:30 - 10:30 ^{/3}	83.0	dB(A)
10:30 - 11:30	79.6	dB(A)
11:30 - 12:30	81.9	dB(A)
12:30 - 13:30	80.6	dB(A)
13:30 - 14:30	81.0	dB(A)
14:30 - 15:30	81.0	dB(A)
15:30 - 16:30	81.4	dB(A)
16:30 - 17:30	79.9	dB(A)
17:30 - 18:30	79.0	dB(A)
18:30 - 19:30	80.9	dB(A)
19:30 - 20:30	80.0	dB(A)
20:30 - 21:30	79.3	dB(A)
21:30 - 22:30	81.4	dB(A)
22:30 - 23:30	80.1	dB(A)
23:30 - 00:30	79.8	dB(A)
00:30 - 01:30	79.7	dB(A)
01:30 - 02:30	80.7	dB(A)
02:30 - 03:30	80.0	dB(A)
03:30 - 04:30	79.4	dB(A)
04:30 - 05:30	80.8	dB(A)
05:30 - 06:30	80.6	dB(A)
06:30 - 07:30	80.0	dB(A)
07:30 - 08:30	78.5	dB(A)
08:30 - 09:30	79.0	dB(A)
L_{eq} 24 hr.	80.4	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	09:30 - 17:30 μ . = 81 17:30 - 01:30 μ . = 80 01:30 - 09:30 μ . = 79	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	09:30 - 17:30 μ . = 81 17:30 - 01:30 μ . = 80 01:30 - 09:30 μ . = 79	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018

^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate
** Based on Criteria 90 dB(A); 5 dB Exchange Rate
*** These Data are Non Laboratory Data
**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)
12/02/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322751 : Class 2

SAMPLE NO. : 03005
MEASURING DATE : 06-07/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	06-07/03/2024 (L_{eq})	UNIT
09:05 - 10:05 ^{1/3}	60.9	dB(A)
10:05 - 11:05	60.0	dB(A)
11:05 - 12:05	60.3	dB(A)
12:05 - 13:05	59.6	dB(A)
13:05 - 14:05	60.0	dB(A)
14:05 - 15:05	59.8	dB(A)
15:05 - 16:05	60.8	dB(A)
16:05 - 17:05	61.1	dB(A)
17:05 - 18:05	61.9	dB(A)
18:05 - 19:05	62.1	dB(A)
19:05 - 20:05	63.7	dB(A)
20:05 - 21:05	61.7	dB(A)
21:05 - 22:05	59.4	dB(A)
22:05 - 23:05	59.4	dB(A)
23:05 - 00:05	59.2	dB(A)
00:05 - 01:05	58.7	dB(A)
01:05 - 02:05	59.7	dB(A)
02:05 - 03:05	59.1	dB(A)
03:05 - 04:05	59.2	dB(A)
04:05 - 05:05	59.3	dB(A)
05:05 - 06:05	60.0	dB(A)
06:05 - 07:05	62.2	dB(A)
07:05 - 08:05	63.9	dB(A)
08:05 - 09:05	62.1	dB(A)
L_{eq} 24 hr.	60.8	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1/}	09:05 - 17:05 น. = 60 17:05 - 01:05 น. = 61 01:05 - 09:05 น. = 60	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2/}	09:05 - 17:05 น. = 60 17:05 - 01:05 น. = 60 01:05 - 09:05 น. = 60	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)

^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co.. Ltd.	SAMPLE NO.	: 08561
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230	MEASURING DATE	: 11-12/04/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co.. Ltd.	RECEIVED DATE	: 12/04/2024
SAMPLE POINT	: Melting	REPORTED DATE	: 23/04/2024
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010		
INSTRUMENT	: Integrated Sound Level Meter :		
	S/N 00443358 : Class 2		

TIME \ DATE	11-12/04/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	79.0	dB(A)
10:00 - 11:00	79.4	dB(A)
11:00 - 12:00	80.7	dB(A)
12:00 - 13:00	81.3	dB(A)
13:00 - 14:00	78.9	dB(A)
14:00 - 15:00	80.5	dB(A)
15:00 - 16:00	80.1	dB(A)
16:00 - 17:00	79.7	dB(A)
17:00 - 18:00	79.9	dB(A)
18:00 - 19:00	79.9	dB(A)
19:00 - 20:00	79.9	dB(A)
20:00 - 21:00	86.3	dB(A)
21:00 - 22:00	81.9	dB(A)
22:00 - 23:00	85.4	dB(A)
23:00 - 00:00	87.4	dB(A)
00:00 - 01:00	79.6	dB(A)
01:00 - 02:00	79.4	dB(A)
02:00 - 03:00	80.8	dB(A)
03:00 - 04:00	82.3	dB(A)
04:00 - 05:00	80.0	dB(A)
05:00 - 06:00	79.5	dB(A)
06:00 - 07:00	81.7	dB(A)
07:00 - 08:00	79.6	dB(A)
08:00 - 09:00	82.7	dB(A)
L_{eq} 24 hr.	81.8	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:00 - 17:00 น. = 80 17:00 - 01:00 น. = 83 01:00 - 09:00 น. = 80	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:00 - 17:00 น. = 79 17:00 - 01:00 น. = 83 01:00 - 09:00 น. = 80	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222594 : Class 2

SAMPLE NO. : 14109
MEASURING DATE : 16-17/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	16-17/05/2024 (L_{eq})	UNIT
08:40 - 09:40 ^{/3}	83.2	dB(A)
09:40 - 10:40	83.0	dB(A)
10:40 - 11:40	81.0	dB(A)
11:40 - 12:40	82.8	dB(A)
12:40 - 13:40	82.8	dB(A)
13:40 - 14:40	83.1	dB(A)
14:40 - 15:40	82.3	dB(A)
15:40 - 16:40	83.7	dB(A)
16:40 - 17:40	88.7	dB(A)
17:40 - 18:40	88.0	dB(A)
18:40 - 19:40	84.5	dB(A)
19:40 - 20:40	82.5	dB(A)
20:40 - 21:40	82.2	dB(A)
21:40 - 22:40	82.3	dB(A)
22:40 - 23:40	83.5	dB(A)
23:40 - 00:40	81.5	dB(A)
00:40 - 01:40	81.6	dB(A)
01:40 - 02:40	81.9	dB(A)
02:40 - 03:40	82.4	dB(A)
03:40 - 04:40	81.1	dB(A)
04:40 - 05:40	80.5	dB(A)
05:40 - 06:40	82.4	dB(A)
06:40 - 07:40	81.1	dB(A)
07:40 - 08:40	80.0	dB(A)
L_{eq} 24 hr.	83.3	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	08:40 - 16:40 น. = 82 16:40 - 00:40 น. = 85 00:40 - 08:40 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	08:40 - 16:40 น. = 82 16:40 - 00:40 น. = 84 00:40 - 08:40 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

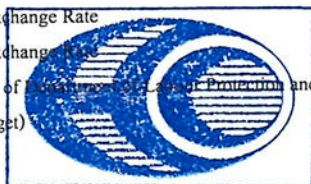
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Measurement of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Melting

PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.

DETERMINATION METHOD : ISO 11202:2010

INSTRUMENT : Integrated Sound Level Meter ;

S/N 00322745 : Class 2

SAMPLE NO. : 19180

MEASURING DATE : 06-07/06/2024

RECEIVED DATE : 12/06/2024

REPORTED DATE : 27/06/2024

TIME \ DATE	06-07/06/2024 (L_{eq})	UNIT
09:10 - 10:10 ¹	80.1	dB(A)
10:10 - 11:10	83.0	dB(A)
11:10 - 12:10	82.1	dB(A)
12:10 - 13:10	80.9	dB(A)
13:10 - 14:10	81.1	dB(A)
14:10 - 15:10	83.5	dB(A)
15:10 - 16:10	80.9	dB(A)
16:10 - 17:10	80.4	dB(A)
17:10 - 18:10	83.3	dB(A)
18:10 - 19:10	79.4	dB(A)
19:10 - 20:10	79.3	dB(A)
20:10 - 21:10	80.8	dB(A)
21:10 - 22:10	84.2	dB(A)
22:10 - 23:10	80.5	dB(A)
23:10 - 00:10	82.1	dB(A)
00:10 - 01:10	83.8	dB(A)
01:10 - 02:10	80.8	dB(A)
02:10 - 03:10	81.2	dB(A)
03:10 - 04:10	83.9	dB(A)
04:10 - 05:10	79.8	dB(A)
05:10 - 06:10	80.3	dB(A)
06:10 - 07:10	82.6	dB(A)
07:10 - 08:10	82.0	dB(A)
08:10 - 09:10	80.6	dB(A)
L_{eq} 24 hr.	81.8	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	09:10 - 17:10 น. = 81 17:10 - 01:10 น. = 82 01:10 - 09:10 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	09:10 - 17:10 น. = 81 17:10 - 01:10 น. = 81 01:10 - 09:10 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No.B403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

27/06/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : Casting***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222593 : Class 2

SAMPLE NO. : 00578
MEASURING DATE : 16-17/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:10 - 10:10 ^{/3}	80.3	dB(A)
10:10 - 11:10	79.8	dB(A)
11:10 - 12:10	78.3	dB(A)
12:10 - 13:10	78.4	dB(A)
13:10 - 14:10	79.3	dB(A)
14:10 - 15:10	79.3	dB(A)
15:10 - 16:10	78.8	dB(A)
16:10 - 17:10	79.7	dB(A)
17:10 - 18:10	79.0	dB(A)
18:10 - 19:10	78.5	dB(A)
19:10 - 20:10	79.2	dB(A)
20:10 - 21:10	81.1	dB(A)
21:10 - 22:10	79.6	dB(A)
22:10 - 23:10	79.2	dB(A)
23:10 - 00:10	81.3	dB(A)
00:10 - 01:10	78.9	dB(A)
01:10 - 02:10	79.0	dB(A)
02:10 - 03:10	79.4	dB(A)
03:10 - 04:10	78.0	dB(A)
04:10 - 05:10	78.9	dB(A)
05:10 - 06:10	79.7	dB(A)
06:10 - 07:10	79.3	dB(A)
07:10 - 08:10	78.4	dB(A)
08:10 - 09:10	81.5	dB(A)
L_{eq} 24 hr.	79.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	09:10 - 17:10 น. = 79 17:10 - 01:10 น. = 79 01:10 - 09:10 น. = 79	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	09:10 - 17:10 น. = 79 17:10 - 01:10 น. = 79 01:10 - 09:10 น. = 79	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018
^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
* Based on Criteria 85 dB(A); 3 dB Exchange Rate
** Based on Criteria 90 dB(A); 5 dB Exchange Rate
*** These Data are Non Laboratory Data
**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลต์ 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)
23/01/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : Casting***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 01209917 : Class 2

SAMPLE NO. : 01105
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
09:40 - 10:40 ^{/1}	85.3	dB(A)
10:40 - 11:40	78.0	dB(A)
11:40 - 12:40	78.1	dB(A)
12:40 - 13:40	79.1	dB(A)
13:40 - 14:40	79.9	dB(A)
14:40 - 15:40	78.3	dB(A)
15:40 - 16:40	78.6	dB(A)
16:40 - 17:40	78.7	dB(A)
17:40 - 18:40	79.1	dB(A)
18:40 - 19:40	78.3	dB(A)
19:40 - 20:40	79.8	dB(A)
20:40 - 21:40	82.5	dB(A)
21:40 - 22:40	79.1	dB(A)
22:40 - 23:40	79.2	dB(A)
23:40 - 00:40	82.2	dB(A)
00:40 - 01:40	80.2	dB(A)
01:40 - 02:40	78.5	dB(A)
02:40 - 03:40	79.1	dB(A)
03:40 - 04:40	79.1	dB(A)
04:40 - 05:40	80.8	dB(A)
05:40 - 06:40	78.8	dB(A)
06:40 - 07:40	78.9	dB(A)
07:40 - 08:40	78.9	dB(A)
08:40 - 09:40	82.5	dB(A)
L_{eq} 24 hr.	80.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:40 - 17:40 μ . = 80 17:40 - 01:40 μ . = 80 01:40 - 09:40 μ . = 79	dB(A)
L_{eq} 8 hr. (TWA) ^{***/2}	09:40 - 17:40 μ . = 79 17:40 - 01:40 μ . = 80 01:40 - 09:40 μ . = 79	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018

^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** These Data are Non Laboratory Data

**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Casting
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
 DETERMINATION METHOD : ISO 11202:2010
 INSTRUMENT : Integrated Sound Level Meter ;
 S/N 00322748 : Class 2

SAMPLE NO. : 03006
 MEASURING DATE : 06-07/03/2024
 RECEIVED DATE : 14/03/2024
 REPORTED DATE : 20/03/2024

TIME \ DATE	06-07/03/2024 (L_{eq})	UNIT
09:15 - 10:15 ^{/3}	82.6	dB(A)
10:15 - 11:15	80.0	dB(A)
11:15 - 12:15	82.4	dB(A)
12:15 - 13:15	79.3	dB(A)
13:15 - 14:15	79.4	dB(A)
14:15 - 15:15	81.8	dB(A)
15:15 - 16:15	82.9	dB(A)
16:15 - 17:15	78.8	dB(A)
17:15 - 18:15	80.5	dB(A)
18:15 - 19:15	83.1	dB(A)
19:15 - 20:15	81.5	dB(A)
20:15 - 21:15	78.3	dB(A)
21:15 - 22:15	81.5	dB(A)
22:15 - 23:15	84.6	dB(A)
23:15 - 00:15	81.9	dB(A)
00:15 - 01:15	80.2	dB(A)
01:15 - 02:15	83.5	dB(A)
02:15 - 03:15	85.5	dB(A)
03:15 - 04:15	79.5	dB(A)
04:15 - 05:15	80.3	dB(A)
05:15 - 06:15	81.8	dB(A)
06:15 - 07:15	82.9	dB(A)
07:15 - 08:15	77.3	dB(A)
08:15 - 09:15	80.3	dB(A)
L_{eq} 24 hr.	81.7	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	09:15 - 17:15 น. = 81 17:15 - 01:15 น. = 81 01:15 - 09:15 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	09:15 - 17:15 น. = 81 17:15 - 01:15 น. = 81 01:15 - 09:15 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
 (Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
 (MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 08560
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230	MEASURING DATE	: 11-12/04/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 12/04/2024
SAMPLE POINT	: Casting	REPORTED DATE	: 23/04/2024
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010		
INSTRUMENT	: Integrated Sound Level Meter :		
	S/N 00310456 : Class 2		

TIME \ DATE	11-12/04/2024	UNIT
	(L_{eq})	
09:00 - 10:00 ^{/3}	79.2	dB(A)
10:00 - 11:00	79.6	dB(A)
11:00 - 12:00	80.4	dB(A)
12:00 - 13:00	80.4	dB(A)
13:00 - 14:00	78.7	dB(A)
14:00 - 15:00	80.4	dB(A)
15:00 - 16:00	80.3	dB(A)
16:00 - 17:00	80.7	dB(A)
17:00 - 18:00	79.8	dB(A)
18:00 - 19:00	80.6	dB(A)
19:00 - 20:00	81.5	dB(A)
20:00 - 21:00	81.3	dB(A)
21:00 - 22:00	80.2	dB(A)
22:00 - 23:00	81.2	dB(A)
23:00 - 00:00	82.5	dB(A)
00:00 - 01:00	79.8	dB(A)
01:00 - 02:00	80.1	dB(A)
02:00 - 03:00	80.7	dB(A)
03:00 - 04:00	81.5	dB(A)
04:00 - 05:00	79.6	dB(A)
05:00 - 06:00	80.4	dB(A)
06:00 - 07:00	80.9	dB(A)
07:00 - 08:00	79.6	dB(A)
08:00 - 09:00	81.2	dB(A)
L_{eq} 24 hr.	80.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:00 - 17:00 น. = 79 17:00 - 01:00 น. = 80 01:00 - 09:00 น. = 80	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:00 - 17:00 น. = 79 17:00 - 01:00 น. = 80 01:00 - 09:00 น. = 80	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

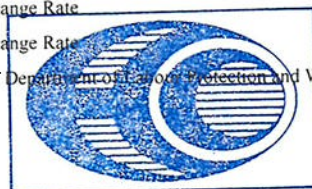
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By: 
(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

COPY

Request No. LA67-R05122

Report No. R6705-3572

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Casting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 01209917 : Class 2

SAMPLE NO. : 14110
MEASURING DATE : 16-17/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	16-17/05/2024 (L_{eq})	UNIT
08:50 - 09:50 ^{1/3}	83.6	dB(A)
09:50 - 10:50	82.5	dB(A)
10:50 - 11:50	81.8	dB(A)
11:50 - 12:50	83.0	dB(A)
12:50 - 13:50	83.6	dB(A)
13:50 - 14:50	83.6	dB(A)
14:50 - 15:50	82.8	dB(A)
15:50 - 16:50	83.0	dB(A)
16:50 - 17:50	85.7	dB(A)
17:50 - 18:50	85.5	dB(A)
18:50 - 19:50	83.3	dB(A)
19:50 - 20:50	83.3	dB(A)
20:50 - 21:50	83.7	dB(A)
21:50 - 22:50	82.8	dB(A)
22:50 - 23:50	83.5	dB(A)
23:50 - 00:50	82.3	dB(A)
00:50 - 01:50	83.0	dB(A)
01:50 - 02:50	82.5	dB(A)
02:50 - 03:50	81.6	dB(A)
03:50 - 04:50	80.9	dB(A)
04:50 - 05:50	80.8	dB(A)
05:50 - 06:50	82.2	dB(A)
06:50 - 07:50	80.8	dB(A)
07:50 - 08:50	80.6	dB(A)
L_{eq} 24 hr.	83.0	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:50 - 16:50 น. = 83 16:50 - 00:50 น. = 83 00:50 - 08:50 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:50 - 16:50 น. = 83 16:50 - 00:50 น. = 83 00:50 - 08:50 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/1} , 90 ^{2/2}	dB(A)

REMARK : ^{1/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

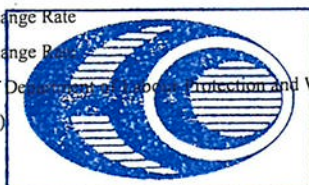
^{1/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{1/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Casting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr. SAMPLE NO. : 19179
DETERMINATION METHOD : ISO 11202:2010 MEASURING DATE : 06-07/06/2024
INSTRUMENT : Integrated Sound Level Meter ; RECEIVED DATE : 12/06/2024
S/N 00322746 : Class 2 REPORTED DATE : 27/06/2024

TIME \ DATE	06-07/06/2024 (L_{eq})	UNIT
09:15 - 10:15 ³	83.2	dB(A)
10:15 - 11:15	85.2	dB(A)
11:15 - 12:15	83.6	dB(A)
12:15 - 13:15	83.0	dB(A)
13:15 - 14:15	84.1	dB(A)
14:15 - 15:15	84.9	dB(A)
15:15 - 16:15	84.2	dB(A)
16:15 - 17:15	83.8	dB(A)
17:15 - 18:15	85.1	dB(A)
18:15 - 19:15	83.1	dB(A)
19:15 - 20:15	82.7	dB(A)
20:15 - 21:15	83.2	dB(A)
21:15 - 22:15	84.8	dB(A)
22:15 - 23:15	83.0	dB(A)
23:15 - 00:15	83.6	dB(A)
00:15 - 01:15	82.0	dB(A)
01:15 - 02:15	83.5	dB(A)
02:15 - 03:15	83.0	dB(A)
03:15 - 04:15	84.5	dB(A)
04:15 - 05:15	83.3	dB(A)
05:15 - 06:15	83.1	dB(A)
06:15 - 07:15	84.9	dB(A)
07:15 - 08:15	84.4	dB(A)
08:15 - 09:15	84.0	dB(A)
L_{eq} 24 hr.	83.8	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:15 - 17:15 น. = 84 17:15 - 01:15 น. = 83 01:15 - 09:15 น. = 83	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:15 - 17:15 น. = 84 17:15 - 01:15 น. = 83 01:15 - 09:15 น. = 83	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

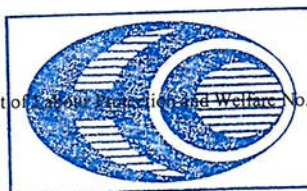
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By 
(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : RM01***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222592 : Class 2

SAMPLE NO. : 00580
MEASURING DATE : 16-17/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	16-17/01/2024 (L_{eq})	UNIT
09:15 - 10:15 ^{/3}	82.1	dB(A)
10:15 - 11:15	82.3	dB(A)
11:15 - 12:15	82.1	dB(A)
12:15 - 13:15	82.7	dB(A)
13:15 - 14:15	82.4	dB(A)
14:15 - 15:15	82.4	dB(A)
15:15 - 16:15	82.2	dB(A)
16:15 - 17:15	81.7	dB(A)
17:15 - 18:15	82.0	dB(A)
18:15 - 19:15	82.3	dB(A)
19:15 - 20:15	82.2	dB(A)
20:15 - 21:15	82.7	dB(A)
21:15 - 22:15	83.2	dB(A)
22:15 - 23:15	83.2	dB(A)
23:15 - 00:15	82.7	dB(A)
00:15 - 01:15	82.6	dB(A)
01:15 - 02:15	82.8	dB(A)
02:15 - 03:15	83.2	dB(A)
03:15 - 04:15	82.8	dB(A)
04:15 - 05:15	82.6	dB(A)
05:15 - 06:15	82.6	dB(A)
06:15 - 07:15	83.5	dB(A)
07:15 - 08:15	83.3	dB(A)
08:15 - 09:15	83.5	dB(A)
L_{eq} 24 hr.	82.7	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:15 - 17:15 น. = 82 17:15 - 01:15 น. = 82 01:15 - 09:15 น. = 83	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:15 - 17:15 น. = 82 17:15 - 01:15 น. = 82 01:15 - 09:15 น. = 83	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018

^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** These Data are Non Laboratory Data

**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By 
(MRS. WANPEN LHAOCHINDAWAT)
23/01/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : RM01***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322754 : Class 2


SAMPLE NO. : 01107
MEASURING DATE : 07-08/02/2024
RECEIVED DATE : 08/02/2024
REPORTED DATE : 12/02/2024

TIME \ DATE	07-08/02/2024 (L_{eq})	UNIT
09:10 - 10:10 ^{/3}	84.1	dB(A)
10:10 - 11:10	82.3	dB(A)
11:10 - 12:10	82.4	dB(A)
12:10 - 13:10	82.6	dB(A)
13:10 - 14:10	82.5	dB(A)
14:10 - 15:10	82.5	dB(A)
15:10 - 16:10	82.6	dB(A)
16:10 - 17:10	82.2	dB(A)
17:10 - 18:10	83.7	dB(A)
18:10 - 19:10	83.6	dB(A)
19:10 - 20:10	83.3	dB(A)
20:10 - 21:10	83.9	dB(A)
21:10 - 22:10	83.7	dB(A)
22:10 - 23:10	83.6	dB(A)
23:10 - 00:10	83.3	dB(A)
00:10 - 01:10	83.7	dB(A)
01:10 - 02:10	84.0	dB(A)
02:10 - 03:10	82.8	dB(A)
03:10 - 04:10	82.9	dB(A)
04:10 - 05:10	81.0	dB(A)
05:10 - 06:10	82.6	dB(A)
06:10 - 07:10	83.5	dB(A)
07:10 - 08:10	83.2	dB(A)
08:10 - 09:10	83.3	dB(A)
L_{eq} 24 hr.	83.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	09:10 - 17:10 μ . = 82 17:10 - 01:10 μ . = 83 01:10 - 09:10 μ . = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	09:10 - 17:10 μ . = 82 17:10 - 01:10 μ . = 83 01:10 - 09:10 μ . = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018
^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
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^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
* Based on Criteria 85 dB(A); 3 dB Exchange Rate
** Based on Criteria 90 dB(A); 5 dB Exchange Rate
*** These Data are Non Laboratory Data
**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsonon is Section Head, Ms. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By 
(MRS. WANPEN LHAOCHINDAWAT)
12/02/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322754 : Class 2

SAMPLE NO. : 03007
MEASURING DATE : 09-10/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	09-10/03/2024 (L_{eq})	UNIT
08:50 - 09:50 ^{/3}	82.5	dB(A)
09:50 - 10:50	82.7	dB(A)
10:50 - 11:50	81.7	dB(A)
11:50 - 12:50	82.4	dB(A)
12:50 - 13:50	82.6	dB(A)
13:50 - 14:50	82.1	dB(A)
14:50 - 15:50	82.3	dB(A)
15:50 - 16:50	82.7	dB(A)
16:50 - 17:50	81.1	dB(A)
17:50 - 18:50	82.5	dB(A)
18:50 - 19:50	83.0	dB(A)
19:50 - 20:50	82.3	dB(A)
20:50 - 21:50	83.2	dB(A)
21:50 - 22:50	82.9	dB(A)
22:50 - 23:50	81.0	dB(A)
23:50 - 00:50	81.6	dB(A)
00:50 - 01:50	82.9	dB(A)
01:50 - 02:50	82.7	dB(A)
02:50 - 03:50	82.1	dB(A)
03:50 - 04:50	81.7	dB(A)
04:50 - 05:50	82.7	dB(A)
05:50 - 06:50	83.1	dB(A)
06:50 - 07:50	83.1	dB(A)
07:50 - 08:50	82.4	dB(A)
L_{eq} 24 hr.	82.4	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:50 - 16:50 L_{eq} = 82 16:50 - 00:50 L_{eq} = 82 00:50 - 08:50 L_{eq} = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:50 - 16:50 L_{eq} = 82 16:50 - 00:50 L_{eq} = 82 00:50 - 08:50 L_{eq} = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

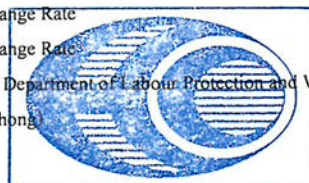
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 01147300 : Class 2

SAMPLE NO. : 08562
MEASURING DATE : 11-12/04/2024
RECEIVED DATE : 12/04/2024
REPORTED DATE : 23/04/2024

TIME \ DATE	11-12/04/2024 (L_{eq})	UNIT
09:00 - 10:00 ¹⁾	82.6	dB(A)
10:00 - 11:00	80.7	dB(A)
11:00 - 12:00	82.3	dB(A)
12:00 - 13:00	79.7	dB(A)
13:00 - 14:00	81.0	dB(A)
14:00 - 15:00	82.0	dB(A)
15:00 - 16:00	81.0	dB(A)
16:00 - 17:00	81.4	dB(A)
17:00 - 18:00	81.7	dB(A)
18:00 - 19:00	79.4	dB(A)
19:00 - 20:00	82.2	dB(A)
20:00 - 21:00	81.9	dB(A)
21:00 - 22:00	81.8	dB(A)
22:00 - 23:00	80.9	dB(A)
23:00 - 00:00	82.4	dB(A)
00:00 - 01:00	83.0	dB(A)
01:00 - 02:00	82.0	dB(A)
02:00 - 03:00	77.6	dB(A)
03:00 - 04:00	79.9	dB(A)
04:00 - 05:00	81.4	dB(A)
05:00 - 06:00	82.2	dB(A)
06:00 - 07:00	80.0	dB(A)
07:00 - 08:00	81.1	dB(A)
08:00 - 09:00	79.8	dB(A)
L_{eq} 24 hr.	81.3	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1)}	09:00 - 17:00 น. = 81 17:00 - 01:00 น. = 81 01:00 - 09:00 น. = 80	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2)}	09:00 - 17:00 น. = 81 17:00 - 01:00 น. = 81 01:00 - 09:00 น. = 80	dB(A)
Standard L_{eq} 8 hr.	85 ¹⁾ , 90 ²⁾	dB(A)

REMARK : ¹⁾ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

²⁾ Notification of The Ministry of Industry B.E. 2546 (2003)

³⁾ Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 01209914 : Class 2

SAMPLE NO. : 14108
MEASURING DATE : 15-16/05/2024
RECEIVED DATE : 17/05/2024
REPORTED DATE : 30/05/2024

TIME \ DATE	15-16/05/2024 (L_{eq})	UNIT
08:40 - 09:40 ^{/3}	80.9	dB(A)
09:40 - 10:40	82.1	dB(A)
10:40 - 11:40	81.3	dB(A)
11:40 - 12:40	81.8	dB(A)
12:40 - 13:40	82.1	dB(A)
13:40 - 14:40	82.0	dB(A)
14:40 - 15:40	80.6	dB(A)
15:40 - 16:40	80.2	dB(A)
16:40 - 17:40	80.5	dB(A)
17:40 - 18:40	81.3	dB(A)
18:40 - 19:40	82.1	dB(A)
19:40 - 20:40	82.0	dB(A)
20:40 - 21:40	82.7	dB(A)
21:40 - 22:40	82.1	dB(A)
22:40 - 23:40	81.2	dB(A)
23:40 - 00:40	82.6	dB(A)
00:40 - 01:40	83.1	dB(A)
01:40 - 02:40	82.5	dB(A)
02:40 - 03:40	81.8	dB(A)
03:40 - 04:40	80.7	dB(A)
04:40 - 05:40	82.6	dB(A)
05:40 - 06:40	82.6	dB(A)
06:40 - 07:40	82.9	dB(A)
07:40 - 08:40	82.4	dB(A)
L_{eq} 24 hr.	81.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:40 - 16:40 น. = 81 16:40 - 00:40 น. = 81 00:40 - 08:40 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:40 - 16:40 น. = 81 16:40 - 00:40 น. = 81 00:40 - 08:40 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

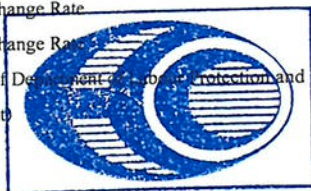
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksageth)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322752 : Class 2

SAMPLE NO. : 19182
MEASURING DATE : 10-11/06/2024
RECEIVED DATE : 12/06/2024
REPORTED DATE : 27/06/2024

TIME \ DATE	10-11/06/2024 (L_{eq})	UNIT
08:50 - 09:50 ¹	84.6	dB(A)
09:50 - 10:50	84.3	dB(A)
10:50 - 11:50	83.1	dB(A)
11:50 - 12:50	83.9	dB(A)
12:50 - 13:50	84.6	dB(A)
13:50 - 14:50	84.6	dB(A)
14:50 - 15:50	84.4	dB(A)
15:50 - 16:50	84.6	dB(A)
16:50 - 17:50	83.6	dB(A)
17:50 - 18:50	84.4	dB(A)
18:50 - 19:50	83.8	dB(A)
19:50 - 20:50	83.9	dB(A)
20:50 - 21:50	84.2	dB(A)
21:50 - 22:50	84.1	dB(A)
22:50 - 23:50	83.8	dB(A)
23:50 - 00:50	84.0	dB(A)
00:50 - 01:50	83.9	dB(A)
01:50 - 02:50	84.2	dB(A)
02:50 - 03:50	83.9	dB(A)
03:50 - 04:50	83.6	dB(A)
04:50 - 05:50	83.7	dB(A)
05:50 - 06:50	83.3	dB(A)
06:50 - 07:50	82.9	dB(A)
07:50 - 08:50	83.1	dB(A)
L_{eq} 24 hr.	84.0	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	08:50 - 16:50 น. = 84 16:50 - 00:50 น. = 83 00:50 - 08:50 น. = 83	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	08:50 - 16:50 น. = 84 16:50 - 00:50 น. = 83 00:50 - 08:50 น. = 83	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

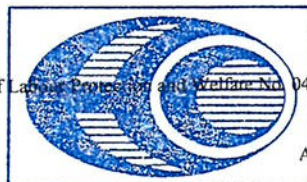
² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : BK06***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322751 : Class 2

SAMPLE NO. : 00582
MEASURING DATE : 18-19/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	18-19/01/2024 (L_{eq})	UNIT
08:45 - 09:45 ³	84.9	dB(A)
09:45 - 10:45	88.1	dB(A)
10:45 - 11:45	85.2	dB(A)
11:45 - 12:45	74.7	dB(A)
12:45 - 13:45	84.5	dB(A)
13:45 - 14:45	88.0	dB(A)
14:45 - 15:45	86.2	dB(A)
15:45 - 16:45	88.6	dB(A)
16:45 - 17:45	80.5	dB(A)
17:45 - 18:45	86.7	dB(A)
18:45 - 19:45	77.6	dB(A)
19:45 - 20:45	85.2	dB(A)
20:45 - 21:45	88.1	dB(A)
21:45 - 22:45	86.3	dB(A)
22:45 - 23:45	79.8	dB(A)
23:45 - 00:45	76.5	dB(A)
00:45 - 01:45	76.8	dB(A)
01:45 - 02:45	78.1	dB(A)
02:45 - 03:45	77.2	dB(A)
03:45 - 04:45	76.8	dB(A)
04:45 - 05:45	79.7	dB(A)
05:45 - 06:45	83.7	dB(A)
06:45 - 07:45	76.7	dB(A)
07:45 - 08:45	87.7	dB(A)
L_{eq} 24 hr.	84.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:45 - 16:45 L_{eq} = 86 16:45 - 00:45 L_{eq} = 84 00:45 - 08:45 L_{eq} = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:45 - 16:45 L_{eq} = 85 16:45 - 00:45 L_{eq} = 83 00:45 - 08:45 L_{eq} = 80	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018

¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** These Data are Non Laboratory Data

**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

23/01/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : BK01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222592 : Class 2

SAMPLE NO. : 03008
MEASURING DATE : 11-12/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	11-12/03/2024 (L_{eq})	UNIT
09:50 - 10:50 ^{/3}	81.2	dB(A)
10:50 - 11:50	81.6	dB(A)
11:50 - 12:50	85.3	dB(A)
12:50 - 13:50	87.6	dB(A)
13:50 - 14:50	87.4	dB(A)
14:50 - 15:50	87.7	dB(A)
15:50 - 16:50	87.1	dB(A)
16:50 - 17:50	83.4	dB(A)
17:50 - 18:50	85.7	dB(A)
18:50 - 19:50	77.3	dB(A)
19:50 - 20:50	85.8	dB(A)
20:50 - 21:50	88.2	dB(A)
21:50 - 22:50	86.9	dB(A)
22:50 - 23:50	87.9	dB(A)
23:50 - 00:50	87.7	dB(A)
00:50 - 01:50	88.2	dB(A)
01:50 - 02:50	87.1	dB(A)
02:50 - 03:50	78.3	dB(A)
03:50 - 04:50	77.0	dB(A)
04:50 - 05:50	77.2	dB(A)
05:50 - 06:50	80.0	dB(A)
06:50 - 07:50	78.6	dB(A)
07:50 - 08:50	79.3	dB(A)
08:50 - 09:50	79.9	dB(A)
L_{eq} 24 hr.	85.2	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	09:50 - 17:50 น. = 85 17:50 - 01:50 น. = 86 01:50 - 09:50 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	09:50 - 17:50 น. = 85 17:50 - 01:50 น. = 86 01:50 - 09:50 น. = 80	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : BK01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222592 : Class 2

SAMPLE NO. : 03009
MEASURING DATE : 12-13/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	12-13/03/2024 (L_{eq})	UNIT
09:50 - 10:50 ¹	79.5	dB(A)
10:50 - 11:50	82.2	dB(A)
11:50 - 12:50	87.1	dB(A)
12:50 - 13:50	87.5	dB(A)
13:50 - 14:50	88.5	dB(A)
14:50 - 15:50	88.0	dB(A)
15:50 - 16:50	88.6	dB(A)
16:50 - 17:50	84.8	dB(A)
17:50 - 18:50	88.6	dB(A)
18:50 - 19:50	78.1	dB(A)
19:50 - 20:50	87.1	dB(A)
20:50 - 21:50	88.7	dB(A)
21:50 - 22:50	87.8	dB(A)
22:50 - 23:50	88.3	dB(A)
23:50 - 00:50	88.0	dB(A)
00:50 - 01:50	86.9	dB(A)
01:50 - 02:50	87.9	dB(A)
02:50 - 03:50	77.3	dB(A)
03:50 - 04:50	76.9	dB(A)
04:50 - 05:50	80.4	dB(A)
05:50 - 06:50	85.8	dB(A)
06:50 - 07:50	74.7	dB(A)
07:50 - 08:50	78.2	dB(A)
08:50 - 09:50	78.1	dB(A)
L_{eq} 24 hr.	86.0	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	09:50 - 17:50 L_{eq} = 86 17:50 - 01:50 L_{eq} = 87 01:50 - 09:50 L_{eq} = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	09:50 - 17:50 L_{eq} = 86 17:50 - 01:50 L_{eq} = 87 01:50 - 09:50 L_{eq} = 81	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

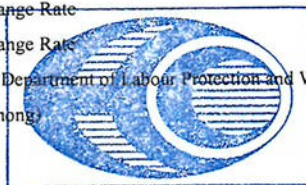
² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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COPY

TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 10834
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230	MEASURING DATE	: 24-25/04/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 25/04/2024
SAMPLE POINT	: BK11	REPORTED DATE	: 03/05/2024
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010		
INSTRUMENT	: Integrated Sound Level Meter ;		
	S/N 01209917 : Class 2		

TIME \ DATE	24-25/04/2024 (L_{eq})	UNIT
13:40 - 14:30 ³	81.0	dB(A)
14:40 - 15:40	79.4	dB(A)
15:40 - 16:40	78.7	dB(A)
16:40 - 17:40	79.8	dB(A)
17:40 - 18:40	75.4	dB(A)
18:40 - 19:40	79.3	dB(A)
19:40 - 20:40	82.0	dB(A)
20:40 - 21:40	82.0	dB(A)
21:40 - 22:40	82.1	dB(A)
22:40 - 23:40	81.7	dB(A)
23:40 - 00:40	81.8	dB(A)
00:40 - 01:40	80.0	dB(A)
01:40 - 02:40	77.7	dB(A)
02:40 - 03:40	75.3	dB(A)
03:40 - 04:40	75.5	dB(A)
04:40 - 05:40	80.1	dB(A)
05:40 - 06:40	77.6	dB(A)
06:40 - 07:40	80.6	dB(A)
07:40 - 08:40	82.7	dB(A)
08:40 - 09:40	83.0	dB(A)
09:40 - 10:40	81.7	dB(A)
10:40 - 11:40	77.4	dB(A)
11:40 - 12:40	82.2	dB(A)
12:40 - 13:40	82.4	dB(A)
L_{eq} 24 hr.	80.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	13:40 - 21:40 น. = 80 21:40 - 05:40 น. = 79 05:40 - 13:40 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	13:40 - 21:40 น. = 79 21:40 - 05:40 น. = 79 05:40 - 13:40 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

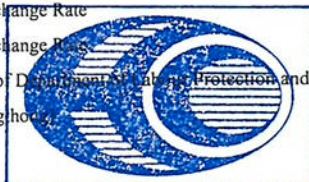
² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungkhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

03/05/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 19181
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230	MEASURING DATE	: 06-07/06/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 12/06/2024
SAMPLE POINT	: BK06	REPORTED DATE	: 27/06/2024
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010		
INSTRUMENT	: Integrated Sound Level Meter ;		
	S/N 00322755 : Class 2		

TIME \ DATE	06-07/06/2024 (L_{eq})	UNIT
13:00 - 14:00 ¹	88.0	dB(A)
14:00 - 15:00	88.7	dB(A)
15:00 - 16:00	87.7	dB(A)
16:00 - 17:00	86.4	dB(A)
17:00 - 18:00	85.4	dB(A)
18:00 - 19:00	85.4	dB(A)
19:00 - 20:00	76.3	dB(A)
20:00 - 21:00	76.1	dB(A)
21:00 - 22:00	76.5	dB(A)
22:00 - 23:00	76.6	dB(A)
23:00 - 00:00	76.2	dB(A)
00:00 - 01:00	76.9	dB(A)
01:00 - 02:00	76.6	dB(A)
02:00 - 03:00	76.9	dB(A)
03:00 - 04:00	76.2	dB(A)
04:00 - 05:00	76.0	dB(A)
05:00 - 06:00	76.4	dB(A)
06:00 - 07:00	75.7	dB(A)
07:00 - 08:00	82.9	dB(A)
08:00 - 09:00	88.1	dB(A)
09:00 - 10:00	88.3	dB(A)
10:00 - 11:00	87.2	dB(A)
11:00 - 12:00	77.4	dB(A)
12:00 - 13:00	85.6	dB(A)
L_{eq} 24 hr.	84.0	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	13:00 - 21:00 น. = 85 21:00 - 05:00 น. = 76 05:00 - 13:00 น. = 85	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	13:00 - 21:00 น. = 85 21:00 - 05:00 น. = 76 05:00 - 13:00 น. = 84	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.***
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230***
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.***
SAMPLE POINT : PK07***
PARAMETER**** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010##
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322751 : Class 2

SAMPLE NO. : 00581
MEASURING DATE : 17-18/01/2024
RECEIVED DATE : 19/01/2024
REPORTED DATE : 23/01/2024

TIME \ DATE	17-18/01/2024 (L_{eq})	UNIT
08:45 - 09:45 ³	87.9	dB(A)
09:45 - 10:45	87.8	dB(A)
10:45 - 11:45	88.0	dB(A)
11:45 - 12:45	87.8	dB(A)
12:45 - 13:45	86.2	dB(A)
13:45 - 14:45	87.9	dB(A)
14:45 - 15:45	88.0	dB(A)
15:45 - 16:45	87.9	dB(A)
16:45 - 17:45	87.9	dB(A)
17:45 - 18:45	86.2	dB(A)
18:45 - 19:45	88.1	dB(A)
19:45 - 20:45	87.5	dB(A)
20:45 - 21:45	87.1	dB(A)
21:45 - 22:45	88.5	dB(A)
22:45 - 23:45	88.4	dB(A)
23:45 - 00:45	88.4	dB(A)
00:45 - 01:45	87.9	dB(A)
01:45 - 02:45	88.3	dB(A)
02:45 - 03:45	88.1	dB(A)
03:45 - 04:45	85.7	dB(A)
04:45 - 05:45	81.3	dB(A)
05:45 - 06:45	82.4	dB(A)
06:45 - 07:45	88.2	dB(A)
07:45 - 08:45	88.3	dB(A)
L_{eq} 24 hr.	87.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	08:45 - 16:45 L_{eq} = 87 16:45 - 00:45 L_{eq} = 87 00:45 - 08:45 L_{eq} = 86	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	08:45 - 16:45 L_{eq} = 87 16:45 - 00:45 L_{eq} = 87 00:45 - 08:45 L_{eq} = 86	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ## ISO 11202:2010, Notification of The Ministry of Industry B.E. 2546 (2003) on The Safety Protection Measures in Factory Regarding Working Area Environment, Dated November 6, 2003, Notification of The Department of Labour Protection and Welfare on The Standard of Noise Level That Employee are Allowed to Receive in Average Period of Work Each Day, Dated December 13, 2017, Notification of The Department of Labour Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, Dated February 8, 2018

¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** These Data are Non Laboratory Data

**** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Ms. Thanatporn Klinsoon is Section Head, Ms. Wanpen Lhaochindawat is Technical Management)
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)
23/01/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : PK05

PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.

DETERMINATION METHOD : ISO 11202:2010

INSTRUMENT : Integrated Sound Level Meter ;

S/N 00322754 : Class 2

SAMPLE NO. : 03010

MEASURING DATE : 12-13/03/2024

RECEIVED DATE : 14/03/2024

REPORTED DATE : 20/03/2024

TIME \ DATE	12-13/03/2024 (L_{eq})	UNIT
09:00 - 10:00 ¹⁾	89.1	dB(A)
10:00 - 11:00	89.1	dB(A)
11:00 - 12:00	89.0	dB(A)
12:00 - 13:00	88.8	dB(A)
13:00 - 14:00	88.8	dB(A)
14:00 - 15:00	88.4	dB(A)
15:00 - 16:00	88.4	dB(A)
16:00 - 17:00	87.2	dB(A)
17:00 - 18:00	88.3	dB(A)
18:00 - 19:00	88.0	dB(A)
19:00 - 20:00	84.5	dB(A)
20:00 - 21:00	89.0	dB(A)
21:00 - 22:00	88.9	dB(A)
22:00 - 23:00	89.1	dB(A)
23:00 - 00:00	88.6	dB(A)
00:00 - 01:00	88.6	dB(A)
01:00 - 02:00	86.6	dB(A)
02:00 - 03:00	88.2	dB(A)
03:00 - 04:00	81.3	dB(A)
04:00 - 05:00	81.2	dB(A)
05:00 - 06:00	81.4	dB(A)
06:00 - 07:00	83.1	dB(A)
07:00 - 08:00	87.2	dB(A)
08:00 - 09:00	88.9	dB(A)
L_{eq} 24 hr.	87.7	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1)}	09:00 - 17:00 L_{eq} = 88 17:00 - 01:00 L_{eq} = 88 01:00 - 09:00 L_{eq} = 85	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2)}	09:00 - 17:00 L_{eq} = 88 17:00 - 01:00 L_{eq} = 88 01:00 - 09:00 L_{eq} = 85	dB(A)
Standard L_{eq} 8 hr.	85 ¹⁾ , 90 ²⁾	dB(A)

REMARK : ¹⁾ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

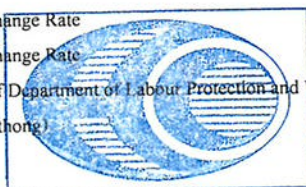
²⁾ Notification of The Ministry of Industry B.E. 2546 (2003)

³⁾ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



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20/03/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : PK05
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322754 : Class 2

SAMPLE NO. : 03011
MEASURING DATE : 13-14/03/2024
RECEIVED DATE : 14/03/2024
REPORTED DATE : 20/03/2024

TIME \ DATE	13-14/03/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{1/3}	88.1	dB(A)
10:00 - 11:00	88.1	dB(A)
11:00 - 12:00	88.9	dB(A)
12:00 - 13:00	88.8	dB(A)
13:00 - 14:00	85.6	dB(A)
14:00 - 15:00	86.3	dB(A)
15:00 - 16:00	86.1	dB(A)
16:00 - 17:00	87.1	dB(A)
17:00 - 18:00	88.0	dB(A)
18:00 - 19:00	82.4	dB(A)
19:00 - 20:00	81.8	dB(A)
20:00 - 21:00	88.0	dB(A)
21:00 - 22:00	87.9	dB(A)
22:00 - 23:00	87.8	dB(A)
23:00 - 00:00	88.0	dB(A)
00:00 - 01:00	88.1	dB(A)
01:00 - 02:00	88.4	dB(A)
02:00 - 03:00	88.2	dB(A)
03:00 - 04:00	84.7	dB(A)
04:00 - 05:00	81.1	dB(A)
05:00 - 06:00	81.2	dB(A)
06:00 - 07:00	81.9	dB(A)
07:00 - 08:00	86.0	dB(A)
08:00 - 09:00	88.4	dB(A)
L_{eq} 24 hr.	86.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1/}	09:00 - 17:00 L_{eq} = 87 17:00 - 01:00 L_{eq} = 87 01:00 - 09:00 L_{eq} = 85	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2/}	09:00 - 17:00 L_{eq} = 87 17:00 - 01:00 L_{eq} = 86 01:00 - 09:00 L_{eq} = 85	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

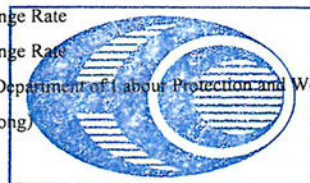
^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)

^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



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20/03/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : PK05
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00443357 : Class 2

SAMPLE NO. : 10835
MEASURING DATE : 24-25/04/2024
RECEIVED DATE : 25/04/2024
REPORTED DATE : 03/05/2024

TIME \ DATE	24-25/04/2024 (L_{eq})	UNIT
13:40 - 14:30 ¹	87.6	dB(A)
14:40 - 15:40	86.8	dB(A)
15:40 - 16:40	87.3	dB(A)
16:40 - 17:40	87.6	dB(A)
17:40 - 18:40	85.3	dB(A)
18:40 - 19:40	88.3	dB(A)
19:40 - 20:40	88.0	dB(A)
20:40 - 21:40	86.2	dB(A)
21:40 - 22:40	87.8	dB(A)
22:40 - 23:40	87.8	dB(A)
23:40 - 00:40	87.8	dB(A)
00:40 - 01:40	88.0	dB(A)
01:40 - 02:40	87.7	dB(A)
02:40 - 03:40	81.4	dB(A)
03:40 - 04:40	81.4	dB(A)
04:40 - 05:40	83.0	dB(A)
05:40 - 06:40	88.0	dB(A)
06:40 - 07:40	85.8	dB(A)
07:40 - 08:40	86.0	dB(A)
08:40 - 09:40	87.7	dB(A)
09:40 - 10:40	86.0	dB(A)
10:40 - 11:40	88.3	dB(A)
11:40 - 12:40	88.5	dB(A)
12:40 - 13:40	88.3	dB(A)
L_{eq} 24 hr.	87.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	13:40 - 21:40 L_{eq} = 87 21:40 - 05:40 L_{eq} = 86 05:40 - 13:40 L_{eq} = 87	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	13:40 - 21:40 L_{eq} = 87 21:40 - 05:40 L_{eq} = 86 05:40 - 13:40 L_{eq} = 87	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

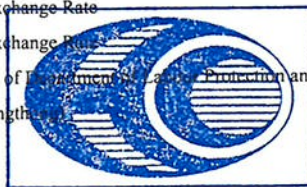
² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Priyaporn Sunthavong)



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03/05/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : PK05

PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.

DETERMINATION METHOD : ISO 11202:2010

INSTRUMENT : Integrated Sound Level Meter ;

S/N 00222593 : Class 2

SAMPLE NO. : 19183

MEASURING DATE : 10-11/06/2024

RECEIVED DATE : 12/06/2024

REPORTED DATE : 27/06/2024

TIME \ DATE	10-11/06/2024 (L_{eq})	UNIT
09:40 - 10:40 ^{1/3}	75.0	dB(A)
10:40 - 11:40	74.5	dB(A)
11:40 - 12:40	73.7	dB(A)
12:40 - 13:40	74.6	dB(A)
13:40 - 14:40	75.1	dB(A)
14:40 - 15:40	75.6	dB(A)
15:40 - 16:40	74.6	dB(A)
16:40 - 17:40	74.5	dB(A)
17:40 - 18:40	74.6	dB(A)
18:40 - 19:40	74.5	dB(A)
19:40 - 20:40	73.9	dB(A)
20:40 - 21:40	74.5	dB(A)
21:40 - 22:40	74.6	dB(A)
22:40 - 23:40	74.8	dB(A)
23:40 - 00:40	74.4	dB(A)
00:40 - 01:40	74.6	dB(A)
01:40 - 02:40	74.6	dB(A)
02:40 - 03:40	74.4	dB(A)
03:40 - 04:40	73.9	dB(A)
04:40 - 05:40	73.6	dB(A)
05:40 - 06:40	73.3	dB(A)
06:40 - 07:40	72.2	dB(A)
07:40 - 08:40	81.5	dB(A)
08:40 - 09:40	86.2	dB(A)
L_{eq} 24 hr.	76.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1/}	09:40 - 17:40 น. = 74 17:40 - 01:40 น. = 74 01:40 - 09:40 น. = 79	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2/}	09:40 - 17:40 น. = 74 17:40 - 01:40 น. = 74 01:40 - 09:40 น. = 78	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : PK05
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222593 : Class 2

SAMPLE NO. : 19184
MEASURING DATE : 11-12/06/2024
RECEIVED DATE : 12/06/2024
REPORTED DATE : 27/06/2024

TIME \ DATE	11-12/06/2024 (L_{eq})	UNIT
09:40 - 10:40 ¹	86.5	dB(A)
10:40 - 11:40	86.2	dB(A)
11:40 - 12:40	86.1	dB(A)
12:40 - 13:40	86.0	dB(A)
13:40 - 14:40	86.2	dB(A)
14:40 - 15:40	85.8	dB(A)
15:40 - 16:40	86.5	dB(A)
16:40 - 17:40	85.5	dB(A)
17:40 - 18:40	79.1	dB(A)
18:40 - 19:40	77.5	dB(A)
19:40 - 20:40	73.5	dB(A)
20:40 - 21:40	73.0	dB(A)
21:40 - 22:40	74.3	dB(A)
22:40 - 23:40	74.5	dB(A)
23:40 - 00:40	74.5	dB(A)
00:40 - 01:40	74.5	dB(A)
01:40 - 02:40	74.6	dB(A)
02:40 - 03:40	74.5	dB(A)
03:40 - 04:40	74.2	dB(A)
04:40 - 05:40	73.9	dB(A)
05:40 - 06:40	74.6	dB(A)
06:40 - 07:40	79.2	dB(A)
07:40 - 08:40	85.6	dB(A)
08:40 - 09:40	88.7	dB(A)
L_{eq} 24 hr.	83.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	09:40 - 17:40 น. = 86 17:40 - 01:40 น. = 75 01:40 - 09:40 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	09:40 - 17:40 น. = 86 17:40 - 01:40 น. = 75 01:40 - 09:40 น. = 80	dB(A)
Standard L_{eq} 8 hr.	$85^{1,1}$, $90^{2,2}$	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. B403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

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27/06/2024

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Request No. ATR6701019

Report No. 6701-0172

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 16/01/2024 SAMPLE NO. : A67010172
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 09:10-10:10
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 23/01/2024-24/01/2024
Serial No. 218383 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

29/01/2024



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Approved By

(Mr. Kawee Suthasub)

29/01/2024

COPY

Request No. ATR6702019

Report No. 6702-0267

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 07/02/2024 SAMPLE NO. : A67020267
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:30-10:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 12/02/2024-14/02/2024
Serial No. 218383 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

15/02/2024



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Approved By

(Mr. Kawee Suthasub)

15/02/2024

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Request No. ATR6703031

Report No. 6703-0558

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungasukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 07/03/2024 SAMPLE NO. : A67030558
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 09:05-10:05
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218444 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

22/03/2024



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Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6704040

Report No. 6704-0789

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 11/04/2024 SAMPLE NO. : A67040789
RECEIVED DATE : 19/04/2024 SAMPLING TIME : 09:30-10:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 19/04/2024-20/04/2024
Serial No. 218388 REPORTED DATE : 26/04/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsohon)

26/04/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

26/04/2024

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Request No. ATR6705067

Report No. 6705-1179

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 15/05/2024 SAMPLE NO. : A67051179
RECEIVED DATE : 20/05/2024 SAMPLING TIME : 08:35-09:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/05/2024-24/05/2024
Serial No. 218411 REPORTED DATE : 05/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

05/06/2024



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

05/06/2024

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Request No. ATR6706043

Report No. 6706-0798

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 06/06/2024 SAMPLE NO. : A67060798
RECEIVED DATE : 17/06/2024 SAMPLING TIME : 09:50-10:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 17/06/2024-18/06/2024
Serial No. 218408 REPORTED DATE : 20/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

20/06/2024



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Approved By

(Mr. Kawee Suthasub)

20/06/2024

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Request No. ATR6701019

Report No. 6701-0174

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 16/01/2024 SAMPLE NO. : A67010174
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 09:15-10:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 23/01/2024-24/01/2024
Serial No. 218403 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

29/01/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

29/01/2024

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Request No. ATR6702019

Report No. 6702-0270

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 08/02/2024 SAMPLE NO. : A67020270
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:12-10:12
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 12/02/2024-14/02/2024
Serial No. 20180903080 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

15/02/2024



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Approved By

(Mr. Kawee Suthasub)

15/02/2024

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Request No. ATR6703032

Report No. 6703-0564

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 15/03/2024 SAMPLE NO. : A67030564
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 13:35-14:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218413 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹⁾	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:¹⁾ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

22/03/2024



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Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6704075

Report No. 6704-1355

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 24/04/2024 SAMPLE NO. : A67041355
RECEIVED DATE : 30/04/2024 SAMPLING TIME : 13:50-14:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 30/04/2024-03/05/2024
Serial No. 218408 REPORTED DATE : 07/05/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

07/05/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

07/05/2024

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Request No. ATR6706001

Report No. 6706-0001

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 30/05/2024 SAMPLE NO. : A67060001
RECEIVED DATE : 04/06/2024 SAMPLING TIME : 13:30-14:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 04/06/2024-11/06/2024
Serial No. 20180903082 REPORTED DATE : 12/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanaporn Klinsopon)

12/06/2024



Approved By

(Mr. Kawee Suthasub)

12/06/2024

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Request No. ATR6706063

Report No. 6706-1424

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 19/06/2024 SAMPLE NO. : A67061424
RECEIVED DATE : 21/06/2024 SAMPLING TIME : 08:40-09:40
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 21/06/2024-26/06/2024
Serial No. 218388 REPORTED DATE : 26/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	0.158	1.00	mg/m ³
		0.039	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

26/06/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

26/06/2024

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Request No. ATR6701019

Report No. 6701-0175

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 16/01/2024 SAMPLE NO. : A67010175
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 09:15-10:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 23/01/2024-24/01/2024
Serial No. 218403 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID	0.274	5	mg/m ³
	165sg)	0.106	2	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

29/01/2024



Approved By

(Mr. Kawee Suthasub)

29/01/2024

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Request No. ATR6702019

Report No. 6702-0271

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 08/02/2024 SAMPLE NO. : A67020271
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:12-10:12
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 12/02/2024-14/02/2024
Serial No. 20180903080 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	0.031	5	mg/m ³
		0.012	2	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

15/02/2024



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

15/02/2024

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Request No. ATR6703032

Report No. 6703-0563

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 15/03/2024 SAMPLE NO. : A67030563
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 13:35-14:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218445 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	0.285	5	mg/m ³
		0.111	2	ppm

REMARK:^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

22/03/2024



Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6704075

Report No. 6704-1356

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 24/04/2024 SAMPLE NO. : A67041356
RECEIVED DATE : 30/04/2024 SAMPLING TIME : 13:50-14:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 30/04/2024-03/05/2024
Serial No. 218408 REPORTED DATE : 07/05/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.026	5	mg/m ³
		< 0.010	2	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

07/05/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By

(Mr. Kawee Suthasub)

07/05/2024

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Request No. ATR6706001

Report No. 6706-0002

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 30/05/2024 SAMPLE NO. : A67060002
RECEIVED DATE : 04/06/2024 SAMPLING TIME : 13:30-14:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 04/06/2024-11/06/2024
Serial No. 20180903082 REPORTED DATE : 12/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.026	5	mg/m ³
		< 0.010	2	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

12/06/2024



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

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Approved By

(Mr. Kawee Suthasub)

12/06/2024

COPY

Request No. ATR6706063

Report No. 6706-1425

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 19/06/2024 SAMPLE NO. : A67061425
RECEIVED DATE : 21/06/2024 SAMPLING TIME : 08:40-09:40
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 21/06/2024-26/06/2024
Serial No. 218411 REPORTED DATE : 26/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	0.120	5	mg/m ³
		0.047	2	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

26/06/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

26/06/2024

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Request No. ATR6701019

Report No. 6701-0176

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK05
SAMPLING DATE : 17/01/2024 SAMPLE NO. : A67010176
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 08:50-09:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 23/01/2024-24/01/2024
Serial No. 218402 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

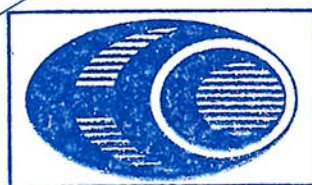
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsopon)

29/01/2024



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

29/01/2024

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COPY

Request No. ATR6703031

Report No. 6703-0561

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungskula A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK07
SAMPLING DATE : 12/03/2024 SAMPLE NO. : A67030561
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218385 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

22/03/2024



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Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6703031

Report No. 6703-0562

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK07
SAMPLING DATE : 12/03/2024 SAMPLE NO. : A67030562
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 10:05-11:05
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218402 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

22/03/2024



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Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6706001

Report No. 6706-0003

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK07
SAMPLING DATE : 30/05/2024 SAMPLE NO. : A67060003
RECEIVED DATE : 04/06/2024 SAMPLING TIME : 13:35-14:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 04/06/2024-11/06/2024
Serial No. 20200403080 REPORTED DATE : 12/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	0.208	1.00	mg/m ³
		0.052	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanaporn Klinsopon)

12/06/2024



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Approved By

(Mr. Kawee Suthasub)

12/06/2024

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Request No. ATR6706043

Report No. 6706-0802

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungasukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK05
SAMPLING DATE : 10/06/2024 SAMPLE NO. : A67060802
RECEIVED DATE : 17/06/2024 SAMPLING TIME : 09:40-10:40
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 17/06/2024-18/06/2024
Serial No. 218432 REPORTED DATE : 20/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

20/06/2024



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Approved By

(Mr. Kawee Suthasub)

20/06/2024

COPY

Request No. ATR6701019

Report No. 6701-0173

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : AP02
SAMPLING DATE : 16/01/2024 SAMPLE NO. : A67010173
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 09:10-10:10
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 23/01/2024-24/01/2024
Serial No. 218408 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanaporn Klinsoon)

29/01/2024



Approved By

(Mr. Kawee Suthasub)

29/01/2024

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Request No. ATR6702019

Report No. 6702-0268

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : AP02
SAMPLING DATE : 07/02/2024 SAMPLE NO. : A67020268
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:35-10:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 12/02/2024-14/02/2024
Serial No. 218385 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

15/02/2024



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

15/02/2024

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Request No. ATR6703031

Report No. 6703-0559

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : AP02
SAMPLING DATE : 07/03/2024 SAMPLE NO. : A67030559
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 09:06-10:06
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218391 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

22/03/2024



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6704040

Report No. 6704-0790

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : AP02
SAMPLING DATE : 11/04/2024 SAMPLE NO. : A67040790
RECEIVED DATE : 19/04/2024 SAMPLING TIME : 09:30-10:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 19/04/2024-20/04/2024
Serial No. 218391 REPORTED DATE : 26/04/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

26/04/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

26/04/2024

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Request No. ATR6705067

Report No. 6705-1180

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : AP02
SAMPLING DATE : 15/05/2024 SAMPLE NO. : A67051180
RECEIVED DATE : 20/05/2024 SAMPLING TIME : 08:38-09:38
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/05/2024-24/05/2024
Serial No. 218388 REPORTED DATE : 05/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanaporn Klinsopon)

05/06/2024



Approved By

(Mr. Kawee Suthasub)

05/06/2024

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Request No. ATR6706043

Report No. 6706-0799

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : AP02
SAMPLING DATE : 06/06/2024 SAMPLE NO. : A67060799
RECEIVED DATE : 17/06/2024 SAMPLING TIME : 09:55-10:55
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 17/06/2024-18/06/2024
Serial No. 218412 REPORTED DATE : 20/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

20/06/2024



Approved By

(Mr. Kawee Suthasub)

20/06/2024

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Request No. ATR6701019

Report No. 6701-0171

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 16/01/2024 SAMPLE NO. : A67010171
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 08:55-09:55
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 23/01/2024-24/01/2024
Serial No. 218402 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoon)

29/01/2024



Approved By

(Mr. Kawee Suthasub)

29/01/2024

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Request No. ATR6702019

Report No. 6702-0269

TEST REPORT

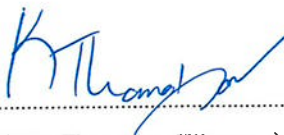
CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 07/02/2024 SAMPLE NO. : A67020269
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:15-10:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 12/02/2024-14/02/2024
Serial No. 218388 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm


REMARK:^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By 
(Miss Thanatporn Klinsopon)

15/02/2024

Approved By 
(Mr. Kawee Suthasub)

15/02/2024

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COPY

Request No. ATR6703031

Report No. 6703-0560

TEST REPORT


CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 09/03/2024 SAMPLE NO. : A67030560
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/03/2024-19/03/2024
Serial No. 218402 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.


(Sampling By Mr. Suttha Songthaninai)

Examined By 
(Miss Thanaporn Klinsopon)

22/03/2024



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(Mr. Kawee Suthasub)

22/03/2024

COPY

Request No. ATR6704040

Report No. 6704-0791

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 11/04/2024 SAMPLE NO. : A67040791
RECEIVED DATE : 19/04/2024 SAMPLING TIME : 09:17-10:17
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 19/04/2024-20/04/2024
Serial No. 218391 REPORTED DATE : 26/04/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

26/04/2024



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Approved By

(Mr. Kawee Suthasub)

26/04/2024

COPY

Request No. ATR6705067

Report No. 6705-1181

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 15/05/2024 SAMPLE NO. : A67051181
RECEIVED DATE : 20/05/2024 SAMPLING TIME : 08:47-09:47
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/05/2024-24/05/2024
Serial No. 218385 REPORTED DATE : 05/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

05/06/2024



Approved By

(Mr. Kawee Suthasub)

05/06/2024

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Request No. ATR6706043

Report No. 6706-0797

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 06/06/2024 SAMPLE NO. : A67060797
RECEIVED DATE : 17/06/2024 SAMPLING TIME : 09:45-10:45
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 17/06/2024-18/06/2024
Serial No. 218385 REPORTED DATE : 20/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	0.107	1.00	mg/m ³
		0.027	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

20/06/2024



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Approved By

(Mr. Kawee Suthasub)

20/06/2024

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Request No. ATR6701019

Report No. 6701-0178

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 17/01/2024 SAMPLE NO. : A67010178
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 08:50-09:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 23/01/2024-26/01/2024
Serial No. 20181001042 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.55	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsopon)

29/01/2024



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Approved By

(Mr. Kawee Suthasub)

29/01/2024

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Request No. ATR6702019

Report No. 6702-0266

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 07/02/2024 SAMPLE NO. : A67020266
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:40-10:40
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 12/02/2024-12/02/2024
Serial No. 20150302002 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	< 0.01	5	mg/m ³

REMARK:^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

15/02/2024



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Approved By

(Mr. Kawee Suthasub)

15/02/2024

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Request No. ATR6703031

Report No. 6703-0549

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 06/03/2024 SAMPLE NO. : A67030549
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 09:35-10:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 18/03/2024-20/03/2024
Serial No. 20211102097 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.41	5	mg/m ³

REMARK:^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

22/03/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6704040

Report No. 6704-0793

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 11/04/2024 SAMPLE NO. : A67040793
RECEIVED DATE : 19/04/2024 SAMPLING TIME : 09:15-10:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 19/04/2024-22/04/2024
Serial No. 20180903084 REPORTED DATE : 26/04/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.07	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoyon)

26/04/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

26/04/2024

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Request No. ATR6705067

Report No. 6705-1183

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 16/05/2024 SAMPLE NO. : A67051183
RECEIVED DATE : 20/05/2024 SAMPLING TIME : 08:50-09:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 20/05/2024-01/06/2024
Serial No. 20180903084 REPORTED DATE : 05/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.097	5	mg/m ³

REMARK:¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

05/06/2024



Approved By

(Mr. Kawee Suthasub)

05/06/2024

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Request No. ATR6706043

Report No. 6706-0801

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 06/06/2024 SAMPLE NO. : A67060801
RECEIVED DATE : 17/06/2024 SAMPLING TIME : 09:50-10:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 17/06/2024-18/06/2024
Serial No. 20211102103 REPORTED DATE : 20/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.205	5	mg/m ³

REMARK:^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

20/06/2024



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Approved By

(Mr. Kawee Suthasub)

20/06/2024

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Request No. ATR6701019

Report No. 6701-0177

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 17/01/2024 SAMPLE NO. : A67010177
RECEIVED DATE : 23/01/2024 SAMPLING TIME : 08:46-09:46
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 23/01/2024-26/01/2024
Serial No. 20211102125 REPORTED DATE : 29/01/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.17	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

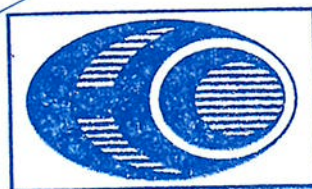
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanaporn Klinsoon)

29/01/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

29/01/2024

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Request No. ATR6702019

Report No. 6702-0265

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 07/02/2024 SAMPLE NO. : A67020265
RECEIVED DATE : 12/02/2024 SAMPLING TIME : 09:20-10:20
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 12/02/2024-12/02/2024
Serial No. 20211103003 REPORTED DATE : 15/02/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹⁾	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.03	5	mg/m ³

REMARK:¹⁾ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

15/02/2024



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Approved By

(Mr. Kawee Suthasub)

15/02/2024

COPY

Request No. ATR6703031

Report No. 6703-0548

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 06/03/2024 SAMPLE NO. : A67030548
RECEIVED DATE : 18/03/2024 SAMPLING TIME : 09:30-10:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 18/03/2024-20/03/2024
Serial No. 20180903076 REPORTED DATE : 22/03/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.17	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanaporn Klinsoon)

22/03/2024



Approved By

(Mr. Kawee Suthasub)

22/03/2024

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Request No. ATR6704040

Report No. 6704-0792

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 11/04/2024 SAMPLE NO. : A67040792
RECEIVED DATE : 19/04/2024 SAMPLING TIME : 11:15-12:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 19/04/2024-22/04/2024
Serial No. 20180903084 REPORTED DATE : 26/04/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.07	5	mg/m ³

REMARK:¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

26/04/2024



Approved By

(Mr. Kawee Suthasub)

26/04/2024

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
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Request No. ATR6705067

Report No. 6705-1182

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tung Sukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 16/05/2024 SAMPLE NO. : A67051182
RECEIVED DATE : 20/05/2024 SAMPLING TIME : 08:40-09:40
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 20/05/2024-01/06/2024
Serial No. 20211103024 REPORTED DATE : 05/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.166	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

05/06/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

05/06/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6706043

Report No. 6706-0800

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 06/06/2024 SAMPLE NO. : A67060800
RECEIVED DATE : 17/06/2024 SAMPLING TIME : 09:45-10:45
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 17/06/2024-18/06/2024
Serial No. 20180903084 REPORTED DATE : 20/06/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.032	5	mg/m ³

REMARK:^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

20/06/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

20/06/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R0126

Report No. R6701-0568 - R6701-0570

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Melting SAMPLE NO. : 00571-00573
MEASURING DATE : 17/01/2024 RECEIVED DATE : 19/01/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/01/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080011, TEU080013, TEU080014

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:30-11:30	28.5	28.7	28.6	27.9	28.4
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:30-11:30	27.1	27.6	27.5	27.4	27.4
Heat Stress (Melting) (ห้องพักพนักงาน)	09:30-11:30	20.3	21.5	20.8	20.5	20.8
WBGT AVERAGE	09:30-11:30	-	-	-	-	24.4
STANDARD		-	-	-	-	32.0 ^{1,2}

REMARK :

Work Load = 209.61 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

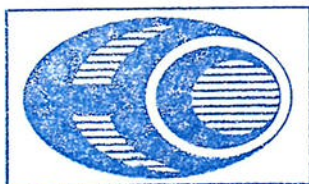
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. LA67-R0223

Report No. R6702-0283 - R6702-0285

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Melting SAMPLE NO. : 01095-01097
MEASURING DATE : 07/02/2024 RECEIVED DATE : 08/02/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 12/02/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080014, TEU080013, TPL060040

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:30-11:30	29.1	29.1	28.8	29.3	29.1
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:30-11:30	29.6	29.3	29.3	29.4	29.4
Heat Stress (Melting) (ห้องพักพนักงาน)	09:30-11:30	22.9	22.3	22.4	22.5	22.5
WBGT AVERAGE	09:30-11:30	-	-	-	-	25.9
STANDARD		-	-	-	-	32.0 ^{1,2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

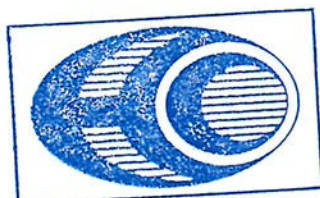
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R0333

Report No. R6703-0733 - R6703-0735

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Melting SAMPLE NO. : 02989-02991
MEASURING DATE : 06/03/2024 RECEIVED DATE : 14/03/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 20/03/2024
Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080015, TEU080014

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:00-11:00	29.7	29.7	30.1	30.0	29.9
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:00-11:00	30.1	29.8	30.2	30.5	30.1
Heat Stress (Melting) (ห้องพักพนักงาน)	09:00-11:00	24.0	24.1	23.8	23.0	23.7
WBGT AVERAGE	09:00-11:00	-	-	-	-	26.8
STANDARD		-	-	-	-	32.0 ^{1,2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

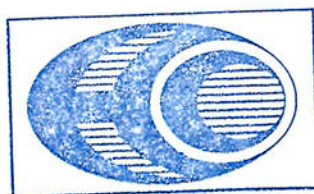
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R0470

Report No. R6704-2604 - R6704-2606

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Melting SAMPLE NO. : 08554-08556
MEASURING DATE : 11/04/2024 RECEIVED DATE : 12/04/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/04/2024
Wet Bulb Globe Temperature (WBGT) : Serial No. TPI050069, 22004319, 22004320

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	11:30-13:30	29.4	31.1	31.4	31.4	30.8
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	11:30-13:30	31.2	31.5	31.1	31.4	31.3
Heat Stress (Melting) (ห้องพักพนักงาน)	11:30-13:30	27.9	28.1	27.9	28.3	28.0
WBGT AVERAGE	11:30-13:30	-	-	-	-	29.5
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

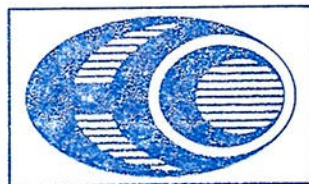
NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

COPY

Request No. LA67-R06111

Report No. R6706-4659 - R6706-4661

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting SAMPLE NO. : 20044-20046
MEASURING DATE : 19/06/2024 RECEIVED DATE : 19/06/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 25/06/2024
Wet Bulb Globe Temperature (WBGT) : Serial No. TPL060039, TEU080014, TEU080015

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:00 - 11:00	30.8	30.8	31.2	31.1	30.9
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:00 - 11:00	30.1	30.4	30.7	30.8	30.5
Heat Stress (Melting) (ห้องพักพนักงาน)	09:00 - 11:00	24.3	23.8	23.3	22.6	23.5
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	27.1
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

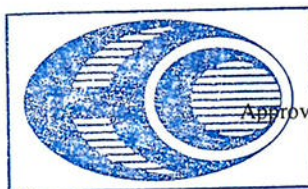
NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

25/06/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R0692

Report No. R6706-3490 - R6706-3492

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting SAMPLE NO. : 19166-19168
MEASURING DATE : 06/06/2024 RECEIVED DATE : 12/06/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 27/06/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. 22004320, 22004319, 22004318

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:00 - 11:00	30.3	31.0	31.1	31.3	30.9
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:00 - 11:00	30.0	30.2	30.2	30.5	30.2
Heat Stress (Melting) (ห้องพักพนักงาน)	09:00 - 11:00	20.7	20.0	20.0	20.2	20.2
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	25.4
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

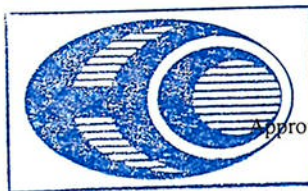
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Request No. LA67-R0126

Report No. R6701-0562 - R6701-0564

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Casting SAMPLE NO. : 00565-00567
MEASURING DATE : 16/01/2024 RECEIVED DATE : 19/01/2023
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/01/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080014, TEU080015, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:00-11:00	26.6	27.5	27.6	28.2	27.4
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:00-11:00	25.2	26.0	26.2	26.2	25.9
Heat Stress (Casting) (ห้องพักพนักงาน)	09:00-11:00	22.6	21.5	21.1	20.4	21.4
WBGT AVERAGE	09:00-11:00	-	-	-	-	24.2
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{1/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{1/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/01/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. LA67-R0223

Report No. R6702-0280 - R6702-0282

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Casting SAMPLE NO. : 01092-01094
MEASURING DATE : 07/02/2024 RECEIVED DATE : 08/02/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 12/02/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080014, TEU080015, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:00-11:00	29.8	29.7	29.8	29.5	29.7
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:00-11:00	28.8	29.5	28.8	28.7	29.0
Heat Stress (Casting) (ห้องพักพนักงาน)	09:00-11:00	23.3	23.1	23.3	23.8	23.4
WBGT AVERAGE	09:00-11:00	-	-	-	-	26.4
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Request No. LA67-R0333

Report No. R6703-0730 - R6703-0732

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Casting SAMPLE NO. : 02986-02988
MEASURING DATE : 06/03/2024 RECEIVED DATE : 14/03/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 20/03/2024
Wet Bulb Globe Temperature (WBGT) : Serial No. TPQ030024, TEU080013, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:00-11:00	31.0	31.4	31.2	31.3	31.2
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:00-11:00	30.5	30.7	31.0	31.1	30.8
Heat Stress (Casting) (ห้องพักพนักงาน)	09:00-11:00	23.6	23.3	22.6	22.8	23.1
WBGT AVERAGE	09:00-11:00	-	-	-	-	27.1
STANDARD		-	-	-	-	32.0 ^{1/1,2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

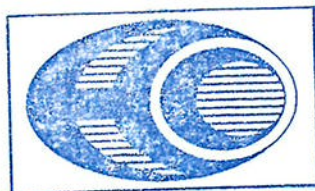
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R0470

Report No. R6704-2601 - R6704-2603

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : Casting SAMPLE NO. : 08551-08553
MEASURING DATE : 11/04/2024 RECEIVED DATE : 12/04/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/04/2024
Wet Bulb Globe Temperature (WBGT) : Serial No. TPL090016, TPL090017, TPL060039

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	11:30-13:30	30.6	30.8	31.8	32.1	31.3
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	11:30-13:30	30.5	30.4	30.9	31.3	30.8
Heat Stress (Casting) (ห้องพักพนักงาน)	11:30-13:30	23.3	24.3	23.1	23.4	23.5
WBGT AVERAGE	11:30-13:30	-	-	-	-	27.3
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

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Request No. LA67-R05122

Report No. R6705-3563 - R6705-3565

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Casting SAMPLE NO. : 14101-14103
 MEASURING DATE : 16/05/2024 RECEIVED DATE : 17/05/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 30/05/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TPI050069, TPH060001

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:10 - 11:10	32.0	31.8	32.0	31.1	31.7
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:10 - 11:10	30.4	30.2	30.7	30.4	30.4
Heat Stress (Casting) (ห้องพักพนักงาน)	09:10 - 11:10	24.5	25.4	25.7	26.0	25.4
WBGT AVERAGE	09:10 - 11:10	-	-	-	-	28.3
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{1/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{1/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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Request No. LA67-R0692

Report No. R6706-3493 - R6706-3795

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Casting SAMPLE NO. : 19169-19171
MEASURING DATE : 06/06/2024 RECEIVED DATE : 12/06/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 27/06/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TPL060040, TPH060001, TPL060039

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:30 - 11:30	30.8	31.3	30.9	30.9	31.0
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:30 - 11:30	30.2	30.2	30.9	30.8	30.5
Heat Stress (Casting) (ห้องพักพนักงาน)	09:30 - 11:30	19.7	20.9	20.3	19.6	20.1
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	25.5
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{1/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{2/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

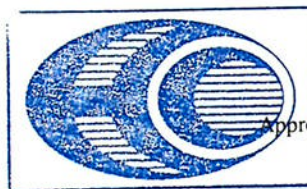
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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Request No. LA67-R0126

Report No. R6701-0565 - R6701-0567

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 00568-00570
MEASURING DATE : 16/01/2024 RECEIVED DATE : 19/01/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/01/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080013, TEU080011, TPL060039

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00-11:00	26.7	26.4	26.1	26.2	26.4
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00-11:00	27.3	27.0	27.4	27.7	27.3
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00-11:00	28.0	28.2	28.5	28.5	28.3
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00-11:00	-	-	-	-	27.1
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 132.60 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/01/2024

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Request No. LA67-R0223

Report No. R6702-0286 - R6702-0288

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 01098-01100
MEASURING DATE : 07/02/2024 RECEIVED DATE : 08/02/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 12/02/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080015, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00-11:00	21.1	22.3	20.9	21.3	21.4
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00-11:00	29.2	29.5	30.3	30.2	29.8
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00-11:00	32.6	33.0	33.7	33.8	33.3
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00-11:00	-	-	-	-	26.8
STANDARD		-	-	-	-	34.0 ^{1,2}

REMARK :

Work Load = 132.60 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Priyaporn Sungthong)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

12/02/2024

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Request No. LA67-R0333

Report No. R6703-0738 - R6703-0740

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 02994-02996
MEASURING DATE : 09/03/2024 RECEIVED DATE : 14/03/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 20/03/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TPL090016, TEU080012, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00-11:00	26.0	26.1	26.3	26.0	26.1
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00-11:00	31.2	30.6	30.7	31.0	30.9
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00-11:00	31.5	31.2	31.5	31.1	31.3
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00-11:00	-	-	-	-	28.8
STANDARD		-	-	-	-	34.0 ^{/1,2}

REMARK :

Work Load = 132.60 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

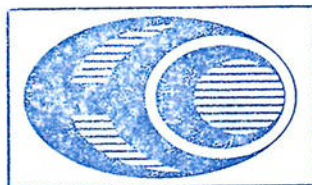
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Priyaporn Sungthong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/03/2024

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Request No. LA67-R0470

Report No. R6704-2607 - R6704-2609

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd. ADDRESS : 38/14 Moo 5 T. Tungsukla
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd. A. Sriracha, Chonburi 20230
SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 08557-08559
MEASURING DATE : 11/04/2024 RECEIVED DATE : 12/04/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/04/2024
Wet Bulb Globe Temperature (WBGT) : Serial No. TPL090016, TPL090039, TPL090017

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00-11:00	23.2	23.3	23.6	23.6	23.4
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00-11:00	32.5	32.7	33.2	33.2	32.9
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00-11:00	34.3	34.7	35.5	35.4	35.0
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00-11:00	-	-	-	-	29.1
STANDARD		-	-	-	-	34.0 ^{/1,2}

REMARK :

Work Load = 132.60 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Yonlada Pale)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/04/2024

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Request No. LA67-R05122

Report No. R6705-3557 - R6705-3559

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : เตารีดขนาด (Hot Rolling)

SAMPLE NO. : 14095-14097

MEASURING DATE : 15/05/2024

RECEIVED DATE : 17/05/2024

SAMPLING INSTRUMENT : Heat Stress ;

REPORTED DATE : 30/05/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080015, TPQ030023

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	22.8	23.0	22.7	22.5	22.7
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00 - 11:00	31.9	31.7	31.5	31.2	31.6
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00 - 11:00	31.5	31.9	32.0	31.5	31.7
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	27.6
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 132.60 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

30/05/2024

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Request No. LA67-R0692

Report No. R6706-3496 - R6706-3498

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 19172-19174
 MEASURING DATE : 10/06/2024 RECEIVED DATE : 12/06/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 27/06/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. 22004320, 22004318, 22004319

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	22.7	22.5	22.2	23.2	22.6
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00 - 11:00	29.0	29.1	29.0	29.0	29.0
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00 - 11:00	31.3	30.6	30.8	31.9	31.2
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	26.6
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 132.60 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
 (Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

27/06/2024

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ภาคผนวกที่ 2

เอกสารชี้แนะทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

ที่ อก ๐๓๒๐/๑๑๓๔๒



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๗ กรกฎาคม ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

อ้างถึง คำขอต่ออายุของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๗ มิถุนายน ๒๕๖๖

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย
๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย
๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๙๒ รายการ จำนวน ๑๙ แผ่น

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๐๐๓ สถานที่ตั้งเลขที่ ๖๘๓ หมู่ที่ ๑๑ ถนนสุขุมวิท ๘ ตำบลหนองขาม อำเภอสรีราชา จังหวัดชลบุรี ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

- ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย ตามสิ่งที่ส่งมาด้วย ๑
- ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย ตามสิ่งที่ส่งมาด้วย ๒
- ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๗ รายการ อากาศเสีย (ปล่องระบาย) จำนวน ๒๑ รายการ น้ำใต้ดิน จำนวน ๑๑๑ รายการ สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน ๑๘ รายการ และดิน จำนวน ๙๕ รายการ รวมทั้งสิ้นจำนวน ๒๙๒ รายการ ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๕ กรกฎาคม ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรม ภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

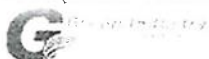
(นายทวี อำพาพันธ์)

ผู้อำนวยการศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๕ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eirw@diw.mail.go.th



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”

COPY



เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท อีสเทิร์น ไทย คอนซัลตติ้ง ๑๙๙๒ จำกัด เลขทะเบียน ว-๐๐๓

ที่ อก ๐๓๒๐/๑๑๓๔๒

ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย

๑) นางสาวมาลีเกษ เลขะวัจกุล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๑
๒) นายวัฒนา โคตรหล้า	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๒
๓) นางวรรณเพ็ญ เหลาจินดาวัฒน์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๓
๔) นายกะวีร์ สุธาทรัพย์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๔
๕) นางสาวนันท์ณภัส แปะขุนทด	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๕
๖) นางสาวพรนภา หลงคำหงษ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๖
๗) นางสาวอภิรดี ชื่นอารมย์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๗
๘) นางสาวอัจฉรี จิตตะยโสธร	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๘
๙) นางสาวจิรพร ปานคง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๙
๑๐) นายสุทธา สองธนี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๐
๑๑) นางสาวนันประภา อูยสูงเนิน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๑
๑๒) นายธงไชย บุญศักดิ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๒
๑๓) นางสาวธนาพร กลิ่นโสภณ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๓
๑๔) นายธีระพงษ์ นวลอินทร์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๔
๑๕) นางสาวแพรว พลแสน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๕
๑๖) นายทรงพล ผิวอ้วน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๖
๑๗) นายภาคภูมิ บัวสวัสดิ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๗
๑๘) นางสาวจันทน์ สายพันธ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๘
๑๙) นายภาณุพงศ์ บำรุงรส	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๙
๒๐) นางสาวปภาณิน จันตะสอน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๐
๒๑) นายวรกร ไวทยะเสวี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๑
๒๒) นางสาววรรณภา ไชยศิริ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๒
๒๓) นางสาวพรพิมล ภูมิคอนสาร	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๓
๒๔) นางสาวธมลวรรณ ผลอ้อ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๔
๒๕) นางสาวบุญเรือง บุญถม	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๕
๒๖) นางสาวกสณันท์ ป้อมน้อย	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๖
๒๗) นายชานูวัฒน์ โชติวงค์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๗
๒๘) นางสาวพจณี งามวิสัย	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๘
๒๙) นายวิญญ์วัล สิงห์โต	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๙
๓๐) นางสาวนุกูล อารศรี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๐
๓๑) นายศุภฤกษ์ พาดกลาง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๑
๓๒) นายณิชาพล ทองหล่อ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๒
๓๓) นายธรรมรัตน์ โพธิ์ตันคำ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๓
๓๔) นายโอชา ขวัญศิริมงคล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๔
๓๕) นายเมธี สุขประเสริฐ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๕

COPY

๓๖) นางสาวพรพินันท์...

๓๖) นางสาวพรพินันท์ วิริยกุลกุล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๖
๓๗) นางสาวอาภาภรณ์ เสริมสนธิ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๗
๓๘) นางสาวนภัทร์ธมณต์ ประดิษฐ์นุช	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๘
๓๙) นางสาวสุนิษา เอ็งเส้ง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๙
๔๐) นางสาวระพิน อ้นชั้น	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๔๐

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย

๑) นางสาวดวงกมล เนื้อทอง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๑
๒) นางสาววัชรภรณ์ อินทสุข	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๒
๓) นางสาวกัญจน์ถวิกา จันทร์ชอดแก้ว	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๓
๔) นางสาวฉัตรสุดา มงคลโกชนัน	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๔
๕) นางสาวณัฐวดี อำมาตย์ทัศน์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๕
๖) นางสาวนิอรอุมา ปาระ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๖
๗) นางสาวธัญลักษณ์ ชันโต	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๗
๘) นางสาวสุทธิดา สร้างแก้ว	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๘
๙) นายอุดมทรัพย์ เจนจบจริง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๙
๑๐) นายณราธิป สงวนศิลป์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๐
๑๑) นายวีระชัย พอใจ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๑
๑๒) นายอัญชลี ทะพงษ์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๒
๑๓) นางสาวสุมลิตรา มีแก่น	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๓
๑๔) นางสาวสวรรณยา เพชรประไพ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๔
๑๕) นางสาวจุฑามาศ เจริญพรหม	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๕
๑๖) นางสาวนิภาพร คำขมภู	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๖
๑๗) นางสาวอรชา พันธุ์เมือง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๗
๑๘) นายกิตติ ไพโรจน์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๘
๑๙) นายชาญณรงค์ ตั้งธรรมรักษ์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๙
๒๐) นางสาวปวีศา เอสันเทียะ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๐
๒๑) นางสาวจุฑาทิพย์ กิจดี	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๑
๒๒) นางสาวสุภาวดี ศรีละออง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๒
๒๓) นางสาวณัฐชยา บรรพบุตร	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๓
๒๔) นางสาวณัฐนิช นนตานอก	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๔
๒๕) นางสาวดวงสุดา แสนวันดี	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๕

COPY

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด เลขทะเบียน ว-๐๐๓

ที่ อก ๐๓๒๐/๑๑๓๔๒

ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๙๒ รายการ

น้ำเสีย จำนวน 47 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
2	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
3	Barium	Digestion, Inductively Coupled Plasma Method ^[4]
4	α -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
5	β -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
6	δ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
7	γ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Membrane Electrode Method ^[4] 2) 5-Day BOD Test, Azide Modification Method ^[4]
9	Cadmium	Digestion, Inductively Coupled Plasma Method ^[4]
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ^[4]
11	cis-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
12	trans-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
13	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]

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ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
14	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[4]
15	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
16	Cyanide	Distillation, Colorimetric Method ^[4]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
19	DDT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
23	Endosulfan sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
24	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
25	Endrin aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
26	Endrin ketone	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
27	Formaldehyde	Distillation, Colorimetric Method ^[3]
28	Free Chlorine	1) Iodometric Method ^[4] 2) Colorimetric Method ^[4]

COPY

29 Heptachlor...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
29	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
30	Heptachlor Epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
31	Hexavalent Chromium	Filtration, Colorimetric Method ^[4]
32	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
33	Manganese	Digestion, Inductively Coupled Plasma Method ^[4]
34	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
35	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
36	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
37	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[4]
38	pH	Electrometric Method ^[4]
39	Phenols	Distillation, Direct Photometric Method ^[4]
40	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
41	Sulfide	ZnS Precipitation, Iodometric Method ^[4]
42	Temperature	Field Method ^[4]
43	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[4]
44	Total Dissolved Solids	Dried at 180 °C ^[4]
45	Total Kjeldahl Nitrogen	Macro Kjeldahl Method ^[4]
46	Total Suspended Solids	Dried at 103-105 °C ^[4]
47	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

COPY

อากาศเสีย...

อากาศเสีย (ปล่องระบาย) จำนวน 21 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
2	Arsenic	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
3	Cadmium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
4	Carbon Monoxide	1) Bag, Non-Dispersive Infrared Method ^[5] 2) Instrumental Analyzer Method ^[5]
5	Chromium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
6	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
7	Copper	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
8	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]
9	Lead	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
10	Manganese	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
11	Mercury	Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[5]
12	Nickel	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
13	Opacity	Ringelmann's Method ^[1,5]
14	Oxides of Nitrogen	1) Absorption Sampling, Phenoldisulfonic Acid Method ^[8] 2) Instrumental Analyzer Method ^[7]
15	Selenium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
16	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Method ^[5] 2) Instrumental Analyzer Method ^[5]
17	Sulfuric Acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[6]
18	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]

COPY

19 Total Suspended Particulate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Total Suspended Particulate	Isokinetic Sampling, Gravimetric Method ^[6]
20	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
21	Xylene	Adsorption Sampling, Gas Chromatographic Method ^[6]

น้ำใต้ดิน จำนวน 111 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
5	Antimony	Digestion, Inductively Coupled Plasma Method ^[4]
6	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
7	Barium	Digestion, Inductively Coupled Plasma Method ^[4]
8	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
9	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
10	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
11	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
12	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
13	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
14	Beryllium	Digestion, Inductively Coupled Plasma Method ^[4]

COPY

15 Bis(2-chloroethyl)ether...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
16	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
17	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
18	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
19	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
20	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
21	Cadmium	Digestion, Inductively Coupled Plasma Method ^[4]
22	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
23	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
24	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
25	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
26	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
27	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
28	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
29	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
30	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
31	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
32	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[4]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
33	Chromium (VI)	Filtration, Colorimetric Method ^[4]
34	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
35	Cyanide	Distillation, Colorimetric Method ^[4]
36	DDD	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
37	DDE	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
38	DDT	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
39	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
40	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
41	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
42	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
43	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
44	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
45	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
46	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
47	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
48	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
49	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
50	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
51	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]



COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
52	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
53	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
54	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
55	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
56	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
57	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
58	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
59	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
60	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
61	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
62	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
63	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
64	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
65	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
66	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
67	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
68	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
69	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

70 γ -HCH...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
70	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
71	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
72	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
73	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
74	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
75	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
76	Manganese	Digestion, Inductively Coupled Plasma Method ^[4]
77	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
78	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
79	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
80	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
81	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
82	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
83	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
84	Nickel	Digestion, Inductively Coupled Plasma Method ^[4]
85	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
86	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
87	pH	Electrometric Method ^[4]
88	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

89 Phenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
89	Phenol	1) Distillation, Direct Photometric Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
91	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
92	Silver	Digestion, Inductively Coupled Plasma Method ^[4]
93	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
94	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
95	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
97	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
101	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
102	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
103	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Vanadium	Digestion, Inductively Coupled Plasma Method ^[4]
105	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
106	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

107 m-Xylene...

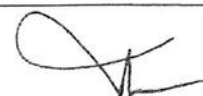
ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
107	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
108	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
109	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 18 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Digestion, Inductively Coupled Plasma Method ^[9,10]
2	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]
3	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]
4	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]
5	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]
6	Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]
7	Chromium (VI)	1) Waste Extraction, Digestion, Colorimetric Method ^[2,13]
		2) Alkaline Digestion, Colorimetric Method ^[9,13]
8	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]
9	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10]
		2) Digestion, Inductively Coupled Plasma Method ^[9,10]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
11	Mercury	1) Waste Extraction, Digestion, Cold Vapor Atomic Absorption Spectrometric Method ^[2,11] 2) Digestion, Cold vapor Atomic Absorption Spectrometric Method ^[9,11]
12	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
13	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
14	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
15	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
16	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
17	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
18	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]



COPY

ดิน...

ดิน จำนวน 95 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
3	Anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
4	Antimony	Digestion, Inductively Coupled Plasma Method ^[9,10]
5	Arsenic	Digestion, Inductively Coupled Plasma Method ^[9,10]
6	Barium	Digestion, Inductively Coupled Plasma Method ^[9,10]
7	Benz(a)anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
8	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
9	Benzo(b)fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
10	Benzo(k)fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
11	Benzo(a)pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
12	Benzo[g,h,i]perylene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
13	Beryllium	Digestion, Inductively Coupled Plasma Method ^[9,10]
14	Bis(2-chloroethyl)ether	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
15	Bis(2-ethylhexyl)phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
16	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
17	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
18	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

19 Butyl benzyl phthalate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Butyl benzyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
20	Cadmium	Digestion, Inductively Coupled Plasma Method ^[9,10]
21	Carbazole	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
22	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
23	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
24	p-Chloroaniline	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
25	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
26	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
27	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
28	2-Chlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
29	Chromium	Digestion, Inductively Coupled Plasma Method ^[9,10]
30	Chromium (III)	Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[9,10]
31	Chromium (VI)	Alkaline Digestion, Colorimetric Method ^[12,13]
32	Chrysene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
33	Dibenz(a,h)anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
34	Di-n-butyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
35	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
36	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
37	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

38 1,1-Dichloroethane...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
38	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
39	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
40	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
41	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
42	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
43	2,4-Dichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
44	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
45	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
46	Diethyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
47	2,4-Dimethylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
48	2,4-Dinitrotoluene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
49	2,6-Dinitrotoluene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
50	Di-n-octyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
51	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
52	Fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
53	Fluorene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
54	Hexachlorobenzene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
55	Hexachloro-1,3-butadiene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
56	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
57	Hexachlorocyclopentadiene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
58	Hexachloroethane	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
59	Indeno(1,2,3-cd)pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
60	Isophorone	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
61	Lead	Digestion, Inductively Coupled Plasma Method ^[9,10]
62	Manganese	Digestion, Inductively Coupled Plasma Method ^[9,10]
63	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[9,11]
64	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
65	2-Methylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
66	2-Methylnaphthalene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
67	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
68	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
69	Nickel	Digestion, Inductively Coupled Plasma Method ^[9,10]
70	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
71	N-Nitrosodi-n-propylamine	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
72	Phenanthrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
73	Phenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
74	Pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]

COPY


ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
75	Selenium	Digestion, Inductively Coupled Plasma Method ^[9,10]
76	Silver	Digestion, Inductively Coupled Plasma Method ^[9,10]
77	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
78	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
79	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
80	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
81	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
82	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
83	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
84	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
85	2,4,5-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
86	2,4,6-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
87	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
88	Vanadium	Digestion, Inductively Coupled Plasma Method ^[9,10]
89	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
90	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
91	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
92	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
93	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
94	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
95	Zinc	Digestion, Inductively Coupled Plasma Method ^[9,10]

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ที่ อก ๐๓๒๐/ ๕๖๐๕ 1



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๕๐๐

๑๕ พฤษภาคม ๒๕๖๗

เรื่อง เปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร
ของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๕ มีนาคม ๒๕๖๗

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ และเปลี่ยนแปลง
สารมลพิษบริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด จำนวน ๑๒ แผ่น

ตามคำขอฯ ที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ห้องปฏิบัติการวิเคราะห์
เอกชน เลขทะเบียน ว-๐๐๓ สถานที่ตั้งเลขที่ ๖๘๓ หมู่ที่ ๑๑ ถนนสุขาภิบาล ๘ ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี แจ้งขอเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษในน้ำเสีย น้ำใต้ดิน
เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว มีความเห็นดังนี้

๑. ให้ยกเลิกผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ ราย

นายวัฒนา โคตรหล้า ทะเบียนเลขที่ ว-๐๐๓-ค-๐๐๐๒

๒. ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓ ราย

๑) นางสาวอัญชลี ทะพงษ์ ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๑๒

๒) นางสาวจุฑามาศ เจริญพรหม ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๑๕

๓) นางสาวณัฐนิช นนตานอก ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๒๔

๓. ให้ยกเลิกขอบข่ายรายการสารมลพิษในน้ำเสีย และน้ำใต้ดินตามรายการเอกสารแนบท้าย
หนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชนที่ อก ๐๓๒๐/๑๑๓๔๒ ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

๔. ให้วิเคราะห์สารมลพิษตามขอบข่ายที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๗ รายการ
และน้ำใต้ดิน จำนวน ๑๑๑ รายการ รวมทั้งสิ้นจำนวน ๑๕๘ รายการ ตามเอกสารแนบท้ายหนังสือเปลี่ยนแปลง
เอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร ดังสิ่งที่ส่งมาด้วย

๕. ให้วิเคราะห์สารมลพิษตามขอบข่ายที่ได้รับขึ้นทะเบียนให้วิเคราะห์เพิ่มเติมในดิน จำนวน
๑๒ รายการ ตามเอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษเปลี่ยนแปลงสารมลพิษ
ในดิน และเปลี่ยนแปลงบุคลากร ดังสิ่งที่ส่งมาด้วย

อนึ่ง หนังสือ

COPY



อนึ่ง หนังสือฉบับนี้จะหมดอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์
เอกชนในวันที่ ๕ กรกฎาคม ๒๕๖๙

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ



(นายพรศ กลั่นกรอง)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๙ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eirw@diw.mail.go.th

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“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”



เอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

เลขทะเบียน ว-๐๐๓

ที่ ออก ๐๓๒๐/

ลงวันที่

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๑๗๐ รายการ

น้ำเสีย จำนวน 47 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
2	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
3	Barium	Digestion, Inductively Coupled Plasma Method ^[1]
4	α -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
5	β -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
6	δ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
7	γ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Membrane Electrode Method ^[1] 2) 5-Day BOD Test, Azide Modification Method ^[1]
9	Cadmium	Digestion, Inductively Coupled Plasma Method ^[1]
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ^[1]
11	cis-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]

COPY

12 trans-Chlordane ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
12	trans-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
13	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
14	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[1]
15	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
16	Cyanide	Distillation, Colorimetric Method ^[1]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
19	DDT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
23	Endosulfan sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
24	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]

COPY

25 Endrin aldehyde ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
25	Endrin aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
26	Endrin ketone	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
27	Formaldehyde	Distillation, Colorimetric Method ^[4]
28	Free Chlorine	1) Iodometric Method ^[1] 2) Colorimetric Method ^[1]
29	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
30	Heptachlor Epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
31	Hexavalent Chromium	Filtration, Colorimetric Method ^[1]
32	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
33	Manganese	Digestion, Inductively Coupled Plasma Method ^[1]
34	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1]
35	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
36	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
37	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[1]
38	pH	Electrometric Method ^[1]
39	Phenols	Distillation, Direct Photometric Method ^[1]
40	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[1]

COPY

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
41	Sulfide	ZnS Precipitation, Iodometric Method ^[1]
42	Temperature	Field Method ^[1]
43	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[1] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[1]
44	Total Dissolved Solids	Dried at 180 °C ^[1]
45	Total Kjeldahl Nitrogen	Macro Kjeldahl Method ^[1]
46	Total Suspended Solids	Dried at 103-105 °C ^[1]
47	Zinc	Digestion, Inductively Coupled Plasma Method ^[1]

น้ำใต้ดิน จำนวน 111 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
5	Antimony	Digestion, Inductively Coupled Plasma Method ^[1]
6	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
7	Barium	Digestion, Inductively Coupled Plasma Method ^[1]
8	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
9	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
10	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
11	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
12	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
13	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
14	Beryllium	Digestion, Inductively Coupled Plasma Method ^[1]
15	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
16	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
17	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
18	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
19	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
20	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
21	Cadmium	Digestion, Inductively Coupled Plasma Method ^[1]
22	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
23	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
24	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

25 Chlordane ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
25	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
26	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
27	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
28	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
29	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
30	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
31	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
32	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[1] 2) Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[1]
33	Chromium (VI)	Filtration, Colorimetric Method ^[1]
34	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
35	Cyanide	Distillation, Colorimetric Method ^[1]
36	DDD	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
37	DDE	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
38	DDT	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
39	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

40 Di-n-butyl phthalate ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
40	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
41	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
42	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
43	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
44	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
45	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
46	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
47	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
48	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
49	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
50	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
51	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
52	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
53	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
54	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

55 2,4-Dinitrotoluene ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
55	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
56	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
57	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
58	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
59	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
60	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
61	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
62	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
63	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
64	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
65	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
66	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
67	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
68	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
69	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
70	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
71	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
72	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
73	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
74	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
75	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
76	Manganese	Digestion, Inductively Coupled Plasma Method ^[1]
77	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1]
78	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
79	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
80	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
81	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
82	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
83	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
84	Nickel	Digestion, Inductively Coupled Plasma Method ^[1]
85	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
86	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
87	pH	Electrometric Method ^[4]
88	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
89	Phenol	1) Distillation, Direct Photometric Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
91	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
92	Silver	Digestion, Inductively Coupled Plasma Method ^[4]
93	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
94	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
95	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
97	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
101	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
102	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
103	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Vanadium	Digestion, Inductively Coupled Plasma Method ^[4]
105	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
106	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
107	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
108	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
109	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

ดิน จำนวน 12 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	α -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
2	β -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
3	γ -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
4	Heptachlor	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]

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ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
5	Aldrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
6	Heptachlor epoxide	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
7	Chlordane	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
8	Dieldrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
9	Endrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
10	DDD	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
11	DDT	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
12	Methoxychlor	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]

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COPY

ภาคผนวกที่ 3

ใบรับรองความสามารถห้องปฏิบัติการวิเคราะห์



ที่ อว 0303/18183

ใบรับรองความสามารถห้องปฏิบัติการทดสอบ

ใบรับรองฉบับนี้ให้ไว้เพื่อแสดงว่า

ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอสรีราชา จังหวัดชลบุรี 20230

ได้ผ่านการประเมินความสามารถห้องปฏิบัติการทดสอบตามมาตรฐาน ISO/IEC 17025 : 2017
และข้อกำหนด กฎระเบียบ และเงื่อนไขการรับรองความสามารถห้องปฏิบัติการทดสอบ
ของกองบริหารและรับรองห้องปฏิบัติการ กรมวิทยาศาสตร์บริการ
หมายเลขการรับรองระบบงานที่ ทดสอบ - 0159

รายละเอียดการรับรองดังขอบข่ายการรับรองแนบท้าย

ออกให้ ณ วันที่ : 7 พฤศจิกายน 2566

หมดอายุ วันที่ : 6 พฤศจิกายน 2570

ลงชื่อ : 

(นางจันทรัตน์ วรสรรพวิทย)

นักวิทยาศาสตร์ชำนาญการพิเศษ

รักษาราชการแทน ผู้อำนวยการกองบริหารและรับรองห้องปฏิบัติการ

กองบริหารและรับรองห้องปฏิบัติการ กรมวิทยาศาสตร์บริการ
กระทรวงการอุดมศึกษา วิทยาศาสตร์ วิจัย และนวัตกรรม

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตัง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
1	น้ำ	- ซีโอดี 40 mg/L ถึง 5 000 mg/L - โปรท 0.001 mg/L ถึง 0.02 mg/L - บีโอดี 2 mg/L ถึง 5 000 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 3112 B Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5210 B

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตติ้ง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ ชั่วคราว ☐ เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
1 (ต่อ)	น้ำ	- สารที่ละลายได้ทั้งหมด ที่อุณหภูมิ 180 °C 25 mg/L ถึง 10 000 mg/L - สารแขวนลอยทั้งหมด ที่อุณหภูมิ 103 °C ถึง 105 °C 5 mg/L ถึง 2 000 mg/L - ฟลูออไรด์ 0.5 mg/L ถึง 10 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 D Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-F C

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตัง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
2	น้ำเสีย	- ซีโอดี 40 mg/L ถึง 5 000 mg/L - โปรท 0.001 mg/L ถึง 0.02 mg/L - บีโอดี 2 mg/L ถึง 5 000 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 3112 B Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5210 B

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตัง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

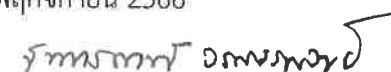
หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ ชั่วคราว ☐ เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
2 (ต่อ)	น้ำเสีย	<p>- สารที่ละลายได้ทั้งหมด ที่อุณหภูมิ 180 °C 25 mg/L ถึง 10 000 mg/L</p> <p>- สารแขวนลอยทั้งหมด ที่อุณหภูมิ 103 °C ถึง 105 °C 5 mg/L ถึง 2 000 mg/L</p> <p>- ฟลูออไรด์ 0.5 mg/L ถึง 10 mg/L</p>	<p>Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C</p> <p>Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D</p> <p>Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F C</p>

ออกให้ ณ วันที่ : 7 พฤศจิกายน 2566

ลงชื่อ :



(นางจันทน์ วรสรพวิทย์)

นักวิทยาศาสตร์ชำนาญการพิเศษ

รักษาราชการแทน ผู้อำนวยการกองบริหารและรับรองห้องปฏิบัติการ

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4



ใบรับรองเลขที่ 23-LB0251
(Certificate No.)

ใบรับรองระบบงาน (Certificate of Accreditation)

อาศัยอำนาจตามความในพระราชบัญญัติการมาตรฐานแห่งชาติ พ.ศ. ๒๕๕๑
(By Virtue of National Standardization Act B.E. 2551 (2008))

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Secretary-General, Thai Industrial Standards Institute)

ออกใบรับรองฉบับนี้ให้
(Issues this certificate to)

บริษัท อีสเทิร์น ไทย คอนซัลติง 1992 จำกัด
(Eastern Thai Consulting 1992 Co., Ltd.)

ตั้งอยู่เลขที่
(Address)

๖๘๓ หมู่ที่ ๑๑ ถนนสุขาภิบาล ๘ ตำบลหนองขาม อำเภอสรีราชา จังหวัดชลบุรี
(683 Moo 11, Sukhapibarn 8 Road, Nongkham, Sriracha, Chonburi)

ได้รับการรับรองความสามารถ
(Certificate of competence)

ตามมาตรฐานเลขที่ มอก. ๑๗๐๒๕ - ๒๕๖๑
(Standard No. TIS 17025-2561 (2018) (ISO/IEC 17025: 2017))

ข้อกำหนดทั่วไปว่าด้วยความสามารถของ ห้องปฏิบัติการทดสอบและห้องปฏิบัติการสอบเทียบ
(General requirements for the competence of testing and calibration laboratories)

หมายเลขการรับรองที่ ทดสอบ ๑๗๑๒
(Accreditation No. Testing 1712)

โดยมีรายละเอียดสาขาและขอบข่ายที่ได้ใบรับรอง แสดงไว้ใน QR CODE และ www.tisi.go.th
(Details of the scheme and scope of the certificate are shown in QR CODE and www.tisi.go.th)

ออกให้ ณ วันที่ ๒๓ สิงหาคม พ.ศ. ๒๕๖๖
(Issue date : 23 August B.E. 2566 (2023))

(นายเอกนิติ รมยานนท์)

รองเลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

ปฏิบัติราชการแทน

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม



c88f6993



รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ชื่อห้องปฏิบัติการ

(Laboratory Name)

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

(Eastern Thai Consulting 1992 Co.,Ltd.)

หมายเลขการรับรองที่

(Accreditation No.)

ทดสอบ 1712

(Testing 1712)

ฉบับที่ 01

(Issue No.01)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566

(Valid from) (17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571

(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ ถาวร

(Permanent)

☐ นอกสถานที่

(Site)

☐ชั่วคราว

(Temporary)

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสังแวดล้อม (Environmental field)</p> <p>1. น้ำ (Water)</p>	<p>- โลหะหนัก (Heavy metal)</p> <ul style="list-style-type: none"> โครเมียม (Cr) 0.03 mg/L to 2.00 mg/L ทองแดง (Cu) 0.03 mg/L to 2.00 mg/L เหล็ก (Fe) 0.03 mg/L to 2.00 mg/L ตะกั่ว (Pb) 0.01 mg/L to 1.00 mg/L นิกเกิล (Ni) 0.03 mg/L to 2.00 mg/L อลูมิเนียม (Al) 0.10 mg/L to 2.00 mg/L แบเรียม (Ba) 0.03 mg/L to 2.00 mg/L แคดเมียม (Cd) 0.003 mg/L to 1.00 mg/L แมงกานีส (Mn) 0.03 mg/L to 2.00 mg/L เงิน (Ag) 0.05 mg/L to 2.00 mg/L สังกะสี (Zn) 0.03 mg/L to 2.00 mg/L 	<p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 3030 F and 3120 B</p>

กระทรวงอุตสาหกรรมสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

(Ministry of Industry, Thai Industrial Standards Institute)

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ฉบับที่ 01

(Issue No.)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566

(Valid from)

(17 July B.E.2566 (2023))

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(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (Environmental field)</p> <p>1. น้ำ (ต่อ) (Water) (cont.)</p> <p>2. น้ำเสีย (Wastewater)</p>	<p>- ไขมันและน้ำมัน (Oil & Grease) 3.0 mg/L - 20.0 mg/L</p> <p>- โลหะหนัก (Heavy metal)</p> <ul style="list-style-type: none"> โครเมียม (Cr) 0.03 mg/L to 2.00 mg/L ทองแดง (Cu) 0.03 mg/L to 2.00 mg/L เหล็ก (Fe) 0.03 mg/L to 2.00 mg/L ตะกั่ว (Pb) 0.03 mg/L to 2.00 mg/L นิกเกิล (Ni) 0.03 mg/L to 2.00 mg/L อลูมิเนียม (Al) 0.10 mg/L to 2.00 mg/L แบเรียม (Ba) 0.03 mg/L to 2.00 mg/L แคดเมียม (Cd) 0.03 mg/L to 2.00 mg/L 	<p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 5520 B</p> <p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 3030 F and 3120 B</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ฉบับที่ 01

(Issue No.01)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566

(Valid from)

(17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571

(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ ถาวร

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(Site)

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☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสังแวดล้อม (Environmental field)</p> <p>2. น้ำเสีย (ต่อ) (Wastewater) (cont.)</p>	<p>- โลหะหนัก (ต่อ) (Heavy metal) (cont.)</p> <ul style="list-style-type: none"> • แมงกานีส (Mn) 0.03 mg/L to 2.00 mg/L • เงิน (Ag) 0.05 mg/L to 2.00 mg/L • สังกะสี (Zn) 0.03 mg/L to 2.00 mg/L <p>- ไขมันและน้ำมัน (Oil & Grease) 3.0 mg/L - 20.0 mg/L</p>	<p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 3030 F and 3120 B</p> <p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 5520 B</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ฉบับที่ 01
(Issue No.)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566
(Valid from) (17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571
(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ
(Laboratory status)

☐ ถาวร

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(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสีงแวดล้อม (Environmental field)</p> <p>3.พื้นที่การทำงาน (Workplace)</p>	<p>- ระดับเสียง (Sound Level)</p> <ul style="list-style-type: none"> ระดับเสียงเฉลี่ย L_{eqT} ช่วง 30 - 130 dB(A) ระดับเสียงสูงสุด L_{max} ช่วง 30 - 130 dB(A) 	<p>- ISO 11202:2010</p> <p>- ประกาศกระทรวงอุตสาหกรรม เรื่องมาตรการคุ้มครองความปลอดภัยในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.2546 ลงวันที่ 6 พ.ย. 2546 (Notification of The Ministry of Industry B.E. 2546 (2003) on the Safety Protection Measures in Factory Regarding Working Area Environment, dated November 6, 2003)</p> <p>- ประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องมาตรฐานระดับเสียงที่ยอมให้ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานในแต่ละวัน ลงวันที่ 13 ธ.ค. 2560 (Notification of the Department of Labor Protection and Welfare on the standard of noise level that employees are allowed to receive in average period of work each day, dated December 13, 2017.)</p> <p>- ประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องหลักเกณฑ์ วิธีการตรวจวัดและการวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ ลงวันที่ 8 ก.พ. 2561 (Notification of the Department of Labor Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, dated February 8, 2018.)</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ฉบับที่ 01

(Issue No.)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566

(Valid from)

(17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571

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สถานภาพห้องปฏิบัติการ

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(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (Environmental field)</p> <p>4. บรรยากาศ (Ambient)</p>	<p>- ระดับเสียง (Sound Level)</p> <ul style="list-style-type: none"> ระดับเสียงเฉลี่ย LeqT ช่วง 30.0 - 130.0 dB(A) ระดับเสียงสูงสุด Lmax ช่วง 30.0 - 130.0 dB(A) 	<p>- ISO 1996 - 1 : 2016</p> <p>- ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (2540) เรื่องกำหนด มาตรฐาน ระดับเสียงโดยทั่วไป ลงวันที่ 12 มี.ค. 2540 (Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on the general noise level standards, dated March 12, 1997)</p> <p>- ประกาศกรมควบคุมมลพิษ เรื่อง การ คำนวณค่าระดับเสียง ลงวันที่ 11 ส.ค. 2540 (Notification of the Pollution Control Department on the calculation of the noise level, dated August 11, 1997.)</p> <p>- ประกาศกรมโรงงานอุตสาหกรรม เรื่อง วิธีการตรวจวัดระดับเสียงการรบกวน ระดับ เสียงเฉลี่ย 24 ชั่วโมง และระดับเสียงสูงสุดที่ เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2553 ลงวันที่ 20 ธ.ค. 2553 (Notification of the Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Levels 24-Hour Average and Maximum Noise Level from Factory B.E. 2553, dated December 20, 2010.)</p>

ภาคผนวกที่ 4

สรุปเอกสารการสอบเทียบอุปกรณ์เครื่องมือ

การสอบเทียบเครื่องมือหลักที่ใช้ในการตรวจวัดตามมาตรฐานการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม (มกราคม-มิถุนายน 2567)

ชนิดของมลพิษ	รายการทดสอบ	วิธีทดสอบ	เครื่องมือ	รุ่น	หมายเลขเครื่องมือ	ความถี่ในการสอบเทียบ	การสอบเทียบครั้งล่าสุด	ผลการสอบเทียบ
ปล่อยระบาย	1. NO ₂	- Chemical Absorption, Colorimetric	1. Spectrophotometer	UV-1800	A11635101643	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
	2. SO ₂	- Absorption Barium Thorin Titrimetric	1. Certified Glass ware	-	-	10 % Glass ware Class A	-	PASS
	3. TSP	- Isokinetic, Gravimetric	1. Analytical Balance	XS205DU	B344940005	1 ครั้ง / ปี (EC)	22 ธ.ค. 66	PASS
			2. Hot air oven	UFE 500	g.511.0182	1 ครั้ง / ปี (EC)	22 ธ.ค. 66	PASS
			3. Dry Gas Meter	XC-572V	0504003	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
	4. H ₂ SO ₄	- Isokinetic, Titrimetric	1. Certified Glass ware	-	-	10 % Glass ware Class A	-	PASS
	5. Zn	- Isokinetic-ICP-AES	1. Atomic Absorption Spectrophotometer (AAS)	PinAAcle 900F	PFBS22080801	1 ครั้ง / ปี (ES)	25 เม.ย. 67	PASS
คุณภาพอากาศ ในบรรยากาศ	1. TSP	- Gravimetric	1. Analytical Balance	XS205DU	B344940005	1 ครั้ง / ปี (EC)	22 ธ.ค. 66	PASS
			2. Hot air oven	UFE 500	g.511.0182	1 ครั้ง / ปี (EC)	22 ธ.ค. 66	PASS
			3. High Volume	-	-	on site cal.	-	-
	2. SO ₂	UV Fluorescence Method	1.SO2 Analyzer	API./M100E	3220	1 ครั้ง / ปี (IC)	12 ม.ค. 67	PASS
			2.SO2 Analyzer	API./M100E	640	1 ครั้ง / ปี (IC)	13 ม.ค. 67	PASS
			3.SO2 Analyzer	API./M100E	603	1 ครั้ง / ปี (IC)	9 ม.ค. 67	PASS
			Standard SO ₂ gas	EPA Protocal	CC159599	ตามอายุแก๊ส	-	PASS
	3. NO ₂	Chemiluminescence Method	1.NO2 Analyzer	API./T200	7355	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			2.NO2 Analyzer	API./T200	6756	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			3.NO2 Analyzer	API./M200E	3999	1 ครั้ง / ปี (IC)	11 พ.ย. 66	PASS
			4.NO2 Analyzer	API./T200	7874	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			5.NO2 Analyzer	API./M200E	4084	1 ครั้ง / ปี (IC)	21 ม.ค. 67	PASS
			6.NO2 Analyzer	API./T200	6756	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			7.NO2 Analyzer	API./T200	2004	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			Standard Nox ₂ gas	EPA Protocal	CC159599	ตามอายุแก๊ส	-	PASS
	4. Zn	1. Atomic Absorption Spectrophotometer (AAS)	Spectr AA -240FS	Prodigy 7	P70177	1 ครั้ง / ปี (ES)	13 พ.ค. 67	PASS
		2. High Volume	-	-	on site cal.	-	-	-

การสอบเทียบเครื่องมือหลักที่ใช้ในการตรวจวัดตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม (มกราคม-มิถุนายน 2567)

ชนิดของมลพิษ	รายการทดสอบ	วิธีทดสอบ	เครื่องมือ	รุ่น	หมายเลขเครื่องมือ	ความถี่ในการสอบเทียบ	การสอบเทียบครั้งล่าสุด	ผลการสอบเทียบ
คุณภาพน้ำ	1. COD	- Close Reflux, Titrimetric	1. Analytical Balance	XS205DU	1126323724	1 ครั้ง / ปี (EC)	6 ก.พ. 66	PASS
	2. Oil & Grease	- Partition Gravimetric	2. Hot air oven	UF110	B418.1243	1 ครั้ง / ปี (EC)	21 ก.พ. 66	PASS
	3. TSS	- Dried at 103-105 °C	3. Standard Weight	Class F1	-	1 ครั้ง / 3 ปี (EC)	30 พ.ค. 66	PASS
	4. Cu	- Direct Aspiration –AAS	1. Inductively Couple Plasma (ICP) หรือ	Prodigy 7	P70177	1 ครั้ง / ปี (ES)	25 พ.ค. 66	PASS
	5. Ni		2. Atomic Absorption	Spectr AA -240FS	EL107053792	1 ครั้ง / ปี (IC)	26 เม.ย. 66	PASS
	6. Zn	- Inductively Couple Plasma	3. Barometer	Barigo	BM001/41	1 ครั้ง / 1 ปี (EC)	25 พ.ค. 66	PASS
			4. Termo & Hygrometer	608-HI	45102164	1 ปี/ครั้ง (EC)	26 เม.ย. 66	PASS
	7. pH	- Electrometric	1. pH Meter	SevenCompact S220	B835349235	1 ครั้ง / ปี (EC)	6 ก.พ. 66	PASS
ระดับเสียงโดยทั่วไป	1. Leq 24 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34302326	1 ครั้ง / ปี (EC)	13 พ.ค. 67	PASS
	2. Leq 24 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34802645	1 ครั้ง / ปี (EC)	12 ต.ค. 66	PASS
ระดับเสียงในพื้นที่ทำงาน	1. Leq 8 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34802645	1 ครั้ง / ปี (EC)	12 ต.ค. 66	PASS
	2. Leq 8 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34302326	1 ครั้ง / ปี (EC)	13 พ.ค. 67	PASS
คุณภาพอากาศ ในพื้นที่ทำงาน	1. H ₂ SO ₄	- Impingment Absorption, Spectrometric	1. Spectrophotometer	UV-1800	A11635101643	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
			2. Personal air sample pump (Rotameter)	SKC / No.4-6	-	1 ครั้ง / ปี (IC)	30 ม.ค. 67	PASS
	2. HNO ₃	- Ion Chromatography	1. Spectrophotometer	UV-1800	A11635101643	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
			2. Personal air sample pump (Rotameter)	SKC / No.4-6	-	1 ครั้ง / ปี (IC)	30 ม.ค. 67	PASS
	3. Zn	- Filtration, ICP-AES	1.Inductively Couple Plasma (ICP)	Prodigy 7	P70177	1 ครั้ง / ปี (ES)	13 พ.ค. 67	PASS
			2. High Volume	-	-	on site cal.	-	-
	4. Heat Stress	- WBGT	1. Certified Thermometer	0-100 °C	TPH060001	1 ครั้ง / ปี (EC)	3 เม.ย. 67	PASS

Remark : EC = External Calibration (สอบเทียบ โดย หน่วยงานภายนอก)

IC = Internal Calibration (สอบเทียบ โดย หน่วยงานภายใน)

ES = External Service (บำรุงรักษา โดย หน่วยงานภายนอก)

พารามิเตอร์อื่นที่ไม่ได้กล่าวถึงบางพารามิเตอร์เป็นงานทดสอบพื้นฐานที่ใช้อุปกรณ์เครื่องแก้วและ/หรือมีการสอบเทียบภายในก่อนการใช้งานในขั้นตอนการทำงานเป็นการเฉพาะ

ภาคผนวกที่ 5

เอกสาร Detection Limit ของรายการทดสอบ

การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)

ตารางที่ 1 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ [ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม](#)

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
แผนปฏิบัติการภาคสนาม									
1	Smoke density (Opacity)	Ringelmann' s method	U.S. EPA Method 9 / Ringelmann' s Chart	-	-	-	%	2	
2	Oxide of Nitrogen	Chemilluminescence Method	U.S. EPA Method 7E / Nitrogen dioxide Analyzer	-	-	0.1 - 100	ppm	1	ใช้ Dilution Probe ร่วมในการตรวจวัด
3	Sulfur Dioxide	UV Fluorescence Method	U.S. EPA Method 6C / Sulfur dioxide Analyzer	-	-	0.4 - 100	ppm	1	ใช้ Dilution Probe ร่วมในการตรวจวัด
4	Carbon Monoxide	Bag,Non-Dispersive Infrared Method	U.S. EPA method 10 / Carbon monoxide analyzer	-	-	0.1 - 100	ppm	1	ใช้ Dilution Probe ร่วมในการตรวจวัด
ส่วนงานทดสอบพื้นฐาน									
1	Hydrogen Sulfide (H ₂ S)	Absorption, Iodometric Method	U.S. EPA Method 11 / Iodometric			8.0 6.0	mg / m ³ ppm	1	
2	Sulfur Dioxide (SO ₂)	Absorption Barium Thorin Titrimetric Method	U.S. EPA Method 6 / Titration	0.03 m ³	Isokinetic (30 min)	3.4 1.3	mg / m ³ ppm	1	
3	Sulfuric acid (H ₂ SO ₄)	Isokinetic, Barium Thorin Titrimetric Method	U.S. EPA Method 8 / Titration	0.9 m ³	Isokinetic (30 min)	0.05 0.01	mg / m ³ ppm	2	
4	Total Particulate Matter (TSP)	Isokinetic, Sampling / Gravimetric Method	U.S. EPA Method 5 / Gravimetric Method	-	-	0.1	mg / m ³	1	
ส่วนงานเครื่องมือทดสอบ									
1	Oxide of Nitrogen (Nitrogen Dioxide ;	Chemical Absorption, Colorimetric Method	U.S. EPA Method 7 / Spectrophotometer	2.0 L	Non-Isokinetic (30 min)	2.0 1.0	mg / m ³ ppm	1	
2	Xylene	Sorbent Adsorption, Gas Chromatography Method	US, EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.05 0.47	mg / m ³ ppm	2	SKC Cat. No. 226-09
3	Vanadium (V)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-OES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
4	Tin (Sn)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-OES	0.9 m ³	Isokinetic (30 min)	0.50	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
5	Selenium (Se)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-OES	0.9 m ³	Isokinetic (30 min)	0.50	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
6	Antimony (Sb)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.50	mg / m ³	2	Advantage MFS Cat No. GC5090 MM

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
7	Arsenic (As)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.50	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
8	Cadmium (Cd)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
9	Chromium (Cr)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
10	Copper (Cu)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
11	Cobalt (Co)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
12	Lead and Inorganic Lead (Pb)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
13	Manganese (Mn)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
14	Nickel (Ni)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
15	Mercury (Hg)	Isokinetic, Sampling,Cold Vapor Technique-AAS Method	U.S. EPA Method 101 / AAS	0.053 m3	Isokinetic (1.5 L/min)	0.0010	mg / m ³	4	Advantage MFS Cat No. GC5090 MM

การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)

ตารางที่ 2 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ที่ไม่ได้ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
	แผนปฏิบัติการภาคสนาม								
1	Sampling and Traverse point	U.S. EPA Recommend (Method 1)	U.S. EPA Method 1 / Calculation	-	-	-	-	-	
2	Velocity and Volumetric Flow rate		U.S. EPA Method 2 / Calculation	-	-	-	-	-	
3	Oxygen	Electrochemical Sensor	Modified U.S. EPA 3 / Electrochemical Sensor	-	-	0-20.9	%	1	
4	Moisture Content		U.S. EPA Method 4 / Calculation	-	-	-	-	2	
5	Carbon dioxide (CO ₂)	Electrochemical Sensor	Modified U.S. EPA 3 / Electrochemical Sensor	-	-	0-20.9	%	2	
	ส่วนงานทดสอบพื้นฐาน								
1	PM10,PM2.5	Isokinetic, Sampling / Gravimetric Method	U.S. EPA Method 201A / Gravimetric Method	-	-	0.1	mg / m ³	1	
	ส่วนงานเครื่องมือทดสอบ								
1	Aluminium (Al)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
2	Barium (Ba)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
3	Calcium (Ca)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	1.00	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
4	Iron (Fe)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
5	Magnesium (Mg)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	1.00	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
6	Nickel (Ni)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
7	Silver (Ag)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
8	Sodium (Na)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	1.00	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
9	Zinc (Zn)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.05	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
10	Acetone	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.88 0.79	mg / m ³ ppm	2	SKC Cat. No. 226-09
11	Benzene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.68 0.52	mg / m ² ppm	2	SKC Cat. No. 226-09
12	Cyclohexanone	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.26 0.56	mg / m ² ppm	2	SKC Cat. No. 226-09
13	Ethanol (Ethyl alcohol)	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.88 1.00	mg / m ² ppm	2	SKC Cat. No. 226-09
14	Ethylbenzene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.07 0.48	mg / m ² ppm	2	SKC Cat. No. 226-09
15	Ethylacetate	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	4.32 1.20	mg / m ² ppm	2	SKC Cat. No. 226-09
16	Hexane	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	4.23 1.20	mg / m ² ppm	2	SKC Cat. No. 226-09
17	Isopropanol (Isopropyl alcohol); IPA	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.87 0.76	mg / m ² ppm	2	SKC Cat. No. 226-09
18	Methanol (Methyl alcohol)	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	0.94 0.72	mg / m ² ppm	2	SKC Cat. No. 226-09
19	Methyl Ethyl Ketone (MEK)	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.92 0.65	mg / m ² ppm	2	SKC Cat. No. 226-09

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
20	Styrene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.16 0.51	mg / m ² ppm	2	SKC Cat. No. 226-09
21	Toluene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.07 0.55	mg / m ² ppm	2	SKC Cat. No. 226-09
22	Methylcyclohexane	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-23 L	0.10 L/min (1 hr)	4.02 1.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
23	Diethyl Ether or Ethyl Ether	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	0.25-3 L	0.01-0.20 L/min (1 hr)	11.88 3.92	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
24	Methyl tert-Butyl Ether (MTBE)	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-96 L	0.01-0.20 L/min (1 hr)	3.08 0.86	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
25	Dichloromethane	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	0.5-2.5 L	0.01-0.20 L/min (1 hr)	3.16 0.91	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
26	1-Butanol /n-butyl alcohol	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	2.31 0.76	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
27	2-Butanol /sec-butyl alcohol	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	2.31 0.76	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
28	Isobutyl alcohol (IBA)	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	2.29 0.76	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
29	Thallium (Tl)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	1.00	mg / m ³	2	Advantage MFS Cat No. GC5090 MM
30	Ketones	Sorbent Adsorption, Gas Chromatography Method	NIOSH2555 (P.1-5) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	1.88 0.79	mg / m ³ ppm	2	SKC Cat. No. 226-09
31	n-Heptane	Sorbent Adsorption, Gas Chromatography Method	NIOSH1500 (P.1-8) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	3.89 0.95	mg / m ³ ppm	2	SKC Cat. No. 226-09
32	n-Butyl acetate	Sorbent Adsorption, Gas Chromatography Method	NIOSH 1450(P.1-6) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	4.75 1.00	mg / m ³ ppm	2	SKC Cat. No. 226-09

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
33	n-Pentane	Sorbent Adsorption, Gas Chromatography Method	NIOSH 1500(P.1-8) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	1.50 0.51	mg / m ³ ppm	2	SKC Cat. No. 226-09
34	Chloroform	Sorbent Adsorption, Gas Chromatography Method	NIOSH1003 (P.1-7) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	2.82 0.58	mg / m ³ ppm	2	SKC Cat. No. 226-09
35	Chlorobenzene	Sorbent Adsorption, Gas Chromatography Method	NIOSH1003 (P.1-7) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	2.64 0.57	mg / m ³ ppm	2	SKC Cat. No. 226-09
36	Formaldehyde	Sorbent Adsorption, Gas Chromatography Method	NIOSH2541 (P.1-5) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	0.31 0.25	mg / m ³ ppm	2	SKC Cat. No. 226-118
37	Hydrogen chloride	Sorbent Adsorption, IC Method	EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.015 0.010	mg / m ³ ppm	3	0.1 N H2SO4 / 0.1 N NaOH
38	Hydrogen fluoride	Sorbent Adsorption, IC Method	EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.012 0.015	mg / m ³ ppm	3	0.1 N H2SO4 / 0.1 N NaOH
39	Nitric	Sorbent Adsorption, IC Method	EPA Method 26A /IC	0.029 m3	1 L/min (30 min)	0.026 0.010	mg / m ³ ppm	3	0.1 N H2SO4 / 0.1 N NaOH
40	Chlorine	Sorbent Adsorption, IC Method	EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.029 0.010	mg / m ³ ppm	3	Milli-Q Water

เอกสารอ้างอิง

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2. NIOSH Manual of Analytical Methods (NMAM)
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6. Compendium of Methods for Determination of Inorganic Compound in Ambient Air, U.S. EPA. , 1999
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การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

(ประเภทตัวอย่าง : อากาศในบริเวณการทำงาน - Workplace Air Quality)									
Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
	แผนปฏิบัติการภาคสนาม								
1	Illumination	Lux Meter	JIS C 1906 / Lux meter		-	0-5000	lux	-	
2	Sound (Leq, Lmin, Lmax, Ldn, Lp)	Integrated Sound Level Method	ISO 11202 / Sound Level Meter		-	40 - 140	dB (A)	1	
3	Noise Octave band	Integrated Sound Level Method	AS/NZS 4476 1997 / Sound Level Meter		-	40 – 140	dB (A)	1	1/3 Octave band หรือ 1/1 Octave band
4	Noise dose	Integrated Sound Level Method	BS6402 / Noise Dosemeter		-	0 - 9999	% Dose	2	
5	Carbon Monoxide (CO)	Non-Dispersive Infrared Photometric Method	U.S. EPA 10 (P.1-5)/ Carbon Monoxide Analyzer		-	0.1 - 100	ppm	1	
6	Ozone (O ₃)	UV Fluorescence Method	U.S. EPA method / Ozone Analyzer		-	0.1 - 100	ppm	2	
7	Heat Stress	WBGT Method	ACGIH / Grove + DI + Thermometer / calculation	-	-	0 - 100	oC	2	
	ส่วนงานทดสอบพื้นฐาน								
1	Total Dust (TD)	Filtration, Gravimetric Method	NIOSH 0500 (P.1-3) / PS pump / Gravimetric	7-133 L	2 L/min (1 hr)	0.8	mg / m ³	1	SKC Cat No. 225-8-01
2	Respirable Dust (RD)	Cyclone - Filtration, Gravimetric Method	NIOSH 0600 (P.1-3) / PS pump cyclone / Gravimetric	20-400 L	1.70 L/min (1 hr)	0.5	mg / m ³	1	SKC Cat No. 225-8-01
3	NaOH	Acid-Base Titrimetric Method	NIOSH 7401(P.1-4) / PS pump / Titration	70-1000 L	1-4 L/min	0.4	mg / m ³	1	SKC Cat No. 225-17-01
4	KOH	Acid-Base Titrimetric Method	NIOSH 7401(P.1-4) / PS pump / Titration	70-1000 L	1-4 L/min	0.6	mg / m ³	1	SKC Cat No. 225-17-01
5	LiOH	Acid-Base Titrimetric Method	NIOSH 7401(P.1-4) / PS pump / Titration	70-1000 L	1-4 L/min	0.2	mg / m ³	1	SKC Cat No. 225-17-01
	ส่วนงานเครื่องมือทดสอบ								
1	Ammonia	Impingement Absorption - Colorimetric Method	Modified NIOSH 6015(P.1-7) / Spectrophotometer	0.1-96 L	1 L/min (1 hr)	0.01	mg / m ³	2	
2	Nitrogen Dioxide	Impingement Absorption, Spectrophotometer Method	APHA 817(P.1-3) / Spectrophotometer	7.5 – 10 L	0.5 L/min (15-20 min)	0.01	ppm	2	
3	Sulfur Dioxide	Impingement Absorption, Titrimetric Method	APHA 823(P.1-3) / Titration	26 L	0.21 L/min (2 hrs)	0.30 0.11	mg / m ³ ppm	2	
4	P,P'-diphenylmethane diisocyanate(MDI) (MDI)	Impingement Absorption, Spectrophotometer Method	APHA 831(P.1-3) / Spectrophotometer	20 L	1 L/min (20 min)	0.002	ppm	2	
5	Aluminum (Al)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-100 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
6	Antimony (Sb)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-2000 L	2 L/min (1 hr)	0.05	mg / m ³	2	SKC Cat No. 225-5

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
7	Arsenic & Compound (as As)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-2000 L	2 L/min (1 hr)	0.05	mg / m ³	2	SKC Cat No. 225-5
8	Barium (Ba)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-2000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
9	Cadmium & Compounds (as Cd)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	25-1500 L	2 L/min (1 hr)	0.002	mg / m ³	3	SKC Cat No. 225-5
10	Calcium & Compounds (as Ca)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	20-400 L	2 L/min (1 hr)	0.50	mg / m ³	2	SKC Cat No. 225-5
11	Chromium & Compounds (as Cr)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
12	Copper (Cu) (Dust & Fume)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-1500 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
13	Iron & Compounds (as Fe)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
14	Lead (Pb)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-2000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
15	Magnesium (Mg)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	6-67 L	2 L/min (1 hr)	0.50	mg / m ³	2	SKC Cat No. 225-5
16	Manganese (Mn)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-200 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
17	Mercury (Hg)	Filtration - AAS Method	NIOSH 6009(P.1-5) / PS pump / AAS	2 – 100 L	0.2 L/min (1 hr)	0.0005	mg / m ³	4	SKC Cat No. 225-5
18	Nickel & Compounds (as Ni)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
19	Selenium (Se)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	13-2000 L	2 L/min (1 hr)	0.05	mg / m ³	2	SKC Cat No. 225-5
20	Silver (Ag)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	250-2000 L	2 L/min (2-17 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
21	Sodium (Na)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	13-2000 L	2 L/min (1 hr)	0.50	mg / m ³	2	SKC Cat No. 225-5
22	Tin (Sn)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.05	mg / m ³	2	SKC Cat No. 225-5
23	Titanium (Ti)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
24	Vanadium (V)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-2000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
25	Zinc & Compounds (Zn)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-2000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
26	Acetone	Sorbent Adsorption, GC Method	NIOSH 1300 (P.1-5)/ PS pump / GC-FID	0.5-3 L	0.10 L/min (30 min)	13.17 5.54	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
27	Benzene	Sorbent Adsorption, GC Method	NIOSH 1501(P.1-7) / PS pump / GC-FID	5-30 L	0.10 L/min (1 hr)	2.93 0.92	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
28	Cyclohexanone	Sorbent Adsorption, GC Method	NIOSH 1300(P.1-5) / PS pump / GC-FID	1-10 L	0.10 L/min (1 hr)	3.96 0.99	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
29	Ethanol (Ethyl alcohol)	Sorbent Adsorption, GC Method	NIOSH 1400(P.1-4) / PS pump / GC-FID	12 L	0.10 L/min (1 hr)	3.29 1.75	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
30	Ethylacetate	Sorbent Adsorption, GC Method	NIOSH 1457 (P.1-4)/ PS pump / GC-FID	0.1-10 L	0.10 L/min (1 hr)	7.21 2.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
31	Ethylbenzene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	1-24 L	0.10 L/min (1 hr)	3.63 0.83	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
32	Hexane	Sorbent Adsorption, GC Method	NIOSH 1500(P.1-8) / PS pump / GC-FID	4 L	0.10 L/min (1 hr)	7.05 2.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
33	Isopropanol (Isopropyl alcohol) ; IPA	Sorbent Adsorption, GC Method	NIOSH 1400(P.1-4) / PS pump / GC-FID	12 L	0.10 L/min (1 hr)	3.28 1.33	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
34	Methanol (Methyl alcohol)	Sorbent Adsorption, GC Method	OSHA 91(P.1-10) / PS pump / GC-FID	1-5 L	0.10 L/min (30 min)	3.96 3.02	mg / m ³ ppm	2	SKC Cat. No. ST 226-82
35	Methyl Ethyl Ketone (MEK)	Sorbent Adsorption, GC Method	OSHA 1004(P.1-27) / PS pump / GC-FID	0.25-12L	0.10 L/min (1 hr)	3.35 1.14	mg / m ³ ppm	2	SKC Cat. No. ST 226-81A
36	Methyl Isobutyl Ketone (MIBK)	Sorbent Adsorption, GC Method	OSHA 1004(P.1-27) / PS pump / GC-FID	0.25-12L	0.10 L/min (1 hr)	3.34 0.81	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
37	Styrene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	1-24 L	0.10 L/min (1 hr)	3.78 0.89	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
38	Toluene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	1-8 L	0.10 L/min (1 hr)	3.63 0.96	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
39	Xylene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	3.58 0.83	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
40	Cumene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	3.60 0.73	mg / m ³ ppm	2	SKC Cat. No. ST 226-01

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
41	Methylcyclohexane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	7.23 1.80	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
42	Methyl acetate	Sorbent Adsorption, GC Method	NIOSH 1458 (P.1-8) / PS pump / GC-FID	0.2-10 L	0.10 L/min (1 hr)	9.09 3.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
43	Diethyl Ether or Ethyl Ether	Sorbent Adsorption, GC Method	NIOSH 1610 (P.1-4) / PS pump / GC-FID	0.25-3 L	0.01-0.20 L/min (1 hr)	11.88 3.92	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
44	Methyl tert-Butyl Ether (MTBE)	Sorbent Adsorption, GC Method	NIOSH 1615 (P.1-4) / PS pump / GC-FID	2-96 L	0.01-0.20 L/min (1 hr)	3.08 0.86	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
45	Dichloromethane or Methylene chloride	Sorbent Adsorption, GC Method	NIOSH 1005 (P.1-4) / PS pump / GC-FID	0.5-2.5 L	0.01-0.20 L/min (1 hr)	22.1 6.36	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
46	1-Butanol /n-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	4.86 1.60	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
47	2-Butanol /sec-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	4.86 1.60	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
48	Isobutyl alcohol (IBA)	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	4.81 1.59	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
49	Beryllium (Be)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	1250-2000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
50	Cobalt (Co)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	25-2000 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
51	Molybdenum (Mo)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-67 L	2 L/min (1 hr)	0.01	mg / m ³	2	SKC Cat No. 225-5
52	Thallium (Tl)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	25-2000 L	2 L/min (1 hr)	0.05	mg / m ³	2	SKC Cat No. 225-5
53	Silicon (Si)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.02	mg / m ³	2	SKC Cat No. 225-5
54	Potassium (K)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.50	mg / m ³	2	SKC Cat No. 225-5
55	Ketones	Sorbent Adsorption, GC Method	NIOSH 2555 (P.1-5) / PS pump / GC-FID	0.5-3.0 L	0.01-0.20 L/min (1 hr)	13.17 5.54	mg / m ³ ppm	2	SKC Cat. No. 226-01
56	n-Heptane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	-	0.01-0.20 L/min (1 hr)	6.97 1.70	mg / m ³ ppm	2	SKC Cat. No. 226-01
57	n-Butyl acetate	Sorbent Adsorption, GC Method	NIOSH 1450(P.1-6) / PS pump / GC-FID	1-10 L	0.01-0.20 L/min (1 hr)	8.55 1.80	mg / m ³ ppm	2	SKC Cat. No. 226-01

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
58	n-Pentane	Sorbent Adsorption, GC Method	NIOSH 1500(P.1-8) / PS pump / GC-FID	-	0.01-0.20 L/min (1 hr)	2.63 0.89	mg / m ³ ppm	2	SKC Cat. No. 226-01
59	Chloroform	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1-50 L	0.01-0.20 L/min (1 hr)	4.93 1.01	mg / m ³ ppm	2	SKC Cat. No. 226-01
60	Chlorobenzene	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1.5-40L	0.01-0.20 L/min (1 hr)	4.63 1.00	mg / m ³ ppm	2	SKC Cat. No. 226-01
61	Formaldehyde	Sorbent Adsorption, GC Method	NIOSH 2541 (P.1-5) / PS pump / GC-FID	1-36L	0.01-0.10 L/min (1 hr)	0.12 0.10	mg / m ³ ppm	2	SKC Cat. No. 226-118 เปลี่ยน DL:1/2/24
62	Hydrogen chloride	Sorbent Adsorption, IC Method	OSHA ID-174SG / PS pump / IC	100 L	500 L/min (15 min)	0.015 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
63	Hydrogen Bromide	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	100 L	200 L/min (60min)	0.033 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
64	Sulfuric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC NIOSH 7908 / PS pump / IC	100 L	200 L/min (60min)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03 Fiter (PTFE)
65	Phosphoric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC NIOSH 7908 / PS pump / IC	100 L	200 L/min (60min)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03 Fiter (PTFE)
66	Ammonia (NH ₃)	Sorbent Adsorption, IC Method	NIOSH 6016 / PS pump / IC	12 L	200 L/min (120min)	0.200 0.280	mg / m ³ ppm	3	SKC Cat. No. 226-10-06
67	Nitric	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	100 L	200 L/min (60min)	0.026 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
68	Chlorine	Sorbent Adsorption, IC Method	OSHA ID-202 / PS pump / IC	60 L	200 L/min (60min)	0.029 0.010	mg / m ³ ppm	3	0.02% KI in Buffer solution
69	Hydrogen fluoride	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	60 L	200 L/min (60min)	0.008 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03

เอกสารอ้างอิง

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การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

(ประเภทตัวอย่าง : อากาศในบรรยากาศโดยทั่วไป - Ambient Air Quality)

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
แผนปฏิบัติการภาคสนาม									
1	Sulfur Dioxide (SO ₂)	UV Fluorescence Method	U.S. EPA EQSA-0292-084 / Sulfur Dioxide Analyzer	-	24 hrs (1 hr avg.)	0.001 - 10	ppm	3	
2	Nitrogen Dioxide (NO ₂)	Chemiluminescence Method	U.S. EPA RFCA-0995-108 / Nitrogen Dioxide	-	24 hrs (1 hr avg.)	0.001 - 10	ppm	3	
3	Carbon Monoxide (CO)	Non-Dispersive Infrared Photometric Method	U.S. EPA 40 CFR Part 50 Appendix C / Carbon	-	24 hrs (8 hr avg.)	0.1 - 100	ppm	1	
4	Ozone (O ₃)	UV Fluorescence Method	U.S. EPA 40 CFR Part 50 Appendix D / Ozone	-	24 hrs (1 hr avg.)	0.001 - 10	ppm	3	
5	Sound (Leq, Lmin, Lmax, Ldn, Lp)	Integrated Sound Level Method	ISO 1996-1 / Sound Level meter	-	24 hrs (1 hr avg.)	40 - 140	dB (A)	1	
6	Wind Speed & Wind Direction	Wind Speed & Wind Direction Sensor	ASTM D 4480-93 / WS/WD Equipment	-	-	-	-	-	Wind speed & Wind direction
ส่วนงานทดสอบพื้นฐาน									
1	Total Particulate Matter (TSP)	Gravimetric Method	U.S. EPA Method Part 50 / Gravimetric Method	-	-	-	mg / m ³ ppm	2	
2	PM10	Gravimetric Method	U.S. EPA Method Part 50 / Gravimetric Method	-	-	-	mg / m ³ ppm	2	
3	PM2.5	Gravimetric Method	U.S. EPA Method Part 50 / Gravimetric Method	-	-	200	mg / m ³	-	
ส่วนงานเครื่องมือทดสอบ									
1	Ammonia (NH ₃)	Impingement Absorption, Colorimetric Method	APHA 401 / Spectrophotometer	288 L	0.2 L/min (24 hrs)	0.01	mg / m ³	2	
2	Sulfur Dioxide (SO ₂)	Pararosaniline Method	U.S. EPA 40 CFR Part 50 Appendix A / Spectrophotometer	288 L	0.2 L/min (24 hrs)	0.01	mg / m ³	2	
3	Aluminium (Al)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ³	2	Advantage MFS Cat. No. GA55 8 x 10 "
4	Antimony (Sb)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.05	mg / m ³	2	Advantage MFS Cat. No. GA55 8 x 10 "
5	Arsenic (As)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.05	mg / m ³	2	Advantage MFS Cat. No. GA55 8 x 10 "
6	Barium (Ba)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ³	2	Advantage MFS Cat. No. GA55 8 x 10 "
7	Cadmium (Cd)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ⁴	2	Advantage MFS Cat. No. GA55 8 x 10 "

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
8	Calcium (Ca)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.50	mg / m ⁵	2	Advantage MFS Cat. No. GA55 8 x 10 "
9	Chromium (Cr)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ⁶	2	Advantage MFS Cat. No. GA55 8 x 10 "
10	Copper (Cu)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ⁷	2	Advantage MFS Cat. No. GA55 8 x 10 "
11	Iron (Fe)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ⁸	2	Advantage MFS Cat. No. GA55 8 x 10 "
12	Lead (Pb)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ⁹	2	Advantage MFS Cat. No. GA55 8 x 10 "
13	Magnesium (Mg)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.50	mg / m ¹⁰	2	Advantage MFS Cat. No. GA55 8 x 10 "
14	Manganese (Mn)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ¹¹	2	Advantage MFS Cat. No. GA55 8 x 10 "
15	Mercury (Hg)	Filtration, AAS Method	U.S. EPA Method IO-3.4 / High Volume - AAS	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0005	mg / m ¹²	4	Advantage MFS Cat. No. GA55 8 x 10 "
16	Nickel (Ni)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ¹³	2	Advantage MFS Cat. No. GA55 8 x 10 "
17	Potassium (K)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.50	mg / m ¹⁴	2	Advantage MFS Cat. No. GA55 8 x 10 "
18	Sodium (Na)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.50	mg / m ¹⁵	2	Advantage MFS Cat. No. GA55 8 x 10 "
19	Tin (Sn)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.05	mg / m ¹⁶	2	Advantage MFS Cat. No. GA55 8 x 10 "
20	Titanium (Ti)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ¹⁷	2	Advantage MFS Cat. No. GA55 8 x 10 "
21	Vanadium (V)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ¹⁸	2	Advantage MFS Cat. No. GA55 8 x 10 "
22	Zinc (Zn)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.01	mg / m ¹⁹	2	Advantage MFS Cat. No. GA55 8 x 10 "
23	Selenium (Se)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.05	mg / m ²⁰	2	Advantage MFS Cat. No. GA55 8 x 10 "
24	Acetone	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.14 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
25	Benzene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.12 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-02
26	Cyclohexanone	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.16 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-04
27	Ethanol (Ethyl alcohol)	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	288 L	0.10 L/min (24 hrs)	0.14 0.07	mg / m ³ ppm	2	SKC Cat. No. ST 226-05
28	Ethylacetate	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.32 0.09	mg / m ³ ppm	2	SKC Cat. No. ST 226-06
29	Ethylbenzene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.15 0.03	mg / m ³ ppm	2	SKC Cat. No. ST 226-07
30	Hexane	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.32 0.09	mg / m ³ ppm	2	SKC Cat. No. ST 226-08
31	Isopropanol (Isopropyl alcohol) ; IPA	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	288 L	0.10 L/min (24 hrs)	0.14 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
32	Methanol (Methyl alcohol)	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.07 0.05	mg / m ³ ppm	2	SKC Cat. No. ST 226-10
33	Methyl Ethyl Ketone (MEK)	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.14 0.05	mg / m ³ ppm	2	SKC Cat. No. ST 226-11
34	Styrene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.16 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-12
35	Toluene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.15 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-13
36	Xylene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.15 0.03	mg / m ³ ppm	2	SKC Cat. No. ST 226-14
37	Methylcyclohexane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	0.32 0.08	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
38	Methyl acetate	Sorbent Adsorption, GC Method	NIOSH 1458 (P.1-8) / PS pump / GC-FID	0.2-10 L	0.10 L/min (1 hr)	0.61 0.20	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
39	Diethyl Ether or Ethyl Ether	Sorbent Adsorption, GC Method	NIOSH 1610 (P.1-4) / PS pump / GC-FID	0.25-3 L	0.01-0.20 L/min (1 hr)	0.12 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
40	Methyl tert-Butyl Ether (MTBE)	Sorbent Adsorption, GC Method	NIOSH 1615 (P.1-4) / PS pump / GC-FID	2-96 L	0.01-0.20 L/min (1 hr)	0.13 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
41	Dichloromethane	Sorbent Adsorption, GC Method	NIOSH 1005 (P.1-4) / PS pump / GC-FID	0.5-2.5 L	0.01-0.20 L/min (1 hr)	0.23 0.07	mg / m ³ ppm	2	SKC Cat. No. ST 226-01

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
42	1-Butanol /n-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	0.17 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
43	2-Butanol /sec-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	0.17 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
44	Isobutyl alcohol (IBA)	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	0.17 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
45	Methyl Isobutyl Ketone (MIBK)	Sorbent Adsorption, GC Method	OSHA 1004(P.1-27) / PS pump / GC-FID	0.25-12L	0.10 L/min (1 hr)	0.14 0.03	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
46	Ketones	Sorbent Adsorption, GC Method	NIOSH 2555 (P.1-5) / PS pump / GC-FID	0.5-10L	0.01-0.20 L/min (1 hr)	0.14 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
47	n-Butyl acetate	Sorbent Adsorption, GC Method	NIOSH 1450 (P.1-6) / PS pump / GC-FID	1-10L	0.01-0.20 L/min (1 hr)	0.38 0.08	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
48	n-Pentane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	-	0.01-0.20 L/min (1 hr)	0.11 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
49	Chloroform	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1-50L	0.01-0.20 L/min (1 hr)	0.21 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
50	Chlorobenzene	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1.5-40L	0.01-0.20 L/min (1 hr)	0.19 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
51	Formaldehyde	Sorbent Adsorption, GC Method	NIOSH 2541 (P.1-5) / PS pump / GC-FID	1-36L	0.01-0.10 L/min (1 hr)	0.01 0.01	mg / m ³ ppm	2	SKC Cat. No. 226-118
52	Hydrogen chloric	Sorbent Adsorption, IC Method	OSHA ID-174SG / PS pump / IC	1-7.5 L	0.20 L/min (24 hr)	0.015 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
53	Hydrogen Bromide	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.033 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
54	Sulfuric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC NIOSH 7908 / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03 Fiter (PTFE)
55	Phosphoric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC NIOSH 7908 / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03 Fiter (PTFE)
56	Nitric	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.026 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
57	Chlorine	Sorbent Adsorption, IC Method	OSHA ID-202 / PS pump / IC	14 L	0.20 L/min (24 hr)	0.029 0.010	mg / m ³ ppm	3	0.02% KI in Buffer solution
58	Ammonia (NH ₃)	Sorbent Adsorption, IC Method	NIOSH 6016 / PS pump / IC	12 L	200 L/min (120min)	0.200 0.280	mg / m ³ ppm	3	SKC Cat. No. 226-10-06

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
59	Hydrogen fluoride	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	60 L	200 L/min (60min)	0.008 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03

เอกสารอ้างอิง

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2. NIOSH Manual of Analytical Methods (NMAM)
3. Code of Federal Regulation, U.S. EPA. , 40 CFR Part 50, Part 60, 2000
4. Occupational Health and Safety Management System(OSHA) Analytical Methods Manuel
5. International Standard Organization, ISO 11204:1995
6. Compendium of Methods for Determination of Inorganic Compound in Ambient Air, U.S. EPA. , 1999
7. Annual Book of ASTM Standard, Section 11, 2001

การตรวจวิเคราะห์คุณภาพน้ำ – กากตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 1 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำเสีย(ขึ้นทะเบียนกรมโรงงานฯ), น้ำ,น้ำเพื่ออุปโภค, น้ำประปา, น้ำผิวดิน, น้ำบาดาล และน้ำทะเล)

ส่วนงาน : ส่วนงานทดสอบพื้นฐาน

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1.1	Biochemical Oxygen Demand (BOD ₅)	5-Day BOD Test, Membrane Electrode Method	Standard Method part 5210 B, 4500-O G / DO meter	Plastic	1000	-	2.0	mg/l	1	
1.2	Biochemical Oxygen Demand (BOD ₅)	5-Day BOD Test, Azide Modification Method	Standard Method part 5210 B, 4500-O C / Titration	Plastic	1000	-	2.0	mg/l	1	
2.1	Chemical Oxygen Demand (COD)	In-house Method	Standard Method part 5220 C / Titration	Plastic	100	-	40	mg/l as O ₂	0	
2.2	Chemical Oxygen Demand (COD)	Titrimetric, Closed Reflux Method	Standard Method part 5220 C / Titration	Plastic	100	-	40	mg/l as O ₂	0	
3	Free Chlorine	Iodometric Method	Standard Method part 4500-B / Titration	Plastic	100	-	0.50	mg/l	2	
4	Total Dissolved Solids (TDS)	Dried at 180 °C	Standard Method part 2540 C / Gravimetric	Plastic	200	-	25	mg/l	0	
5.1	Grease&Oil	In-house Method	Standard Method part 5520 B / Gravimetric	Glass	1000	-	3.0	mg/l	1	
5.2	Grease&Oil	Partition Gravimetric Method	Standard Method part 5520 B / Gravimetric	Glass	1001	-	3.0	mg/l	1	
6	Sulfide (S ₂ ⁻)	ZnS Precipitation ,Iodometric Method	Standard Method part 4500-S ₂ ⁻ F / Titration	BOD bottle	300	-	0.50	mg/l as H ₂ S	2	
7	pH	Electrometric Method	Standard Method part 4500 H ⁺ / pH meter	Plastic	50	-	3.0-12.0	-	1	

8	Total Suspended Solids (TSS)	Dried at 103-105 °C	Standard Method part 2540 D / Grvimetric	Plastic	1000	-	5	mg/l	0	
9	Temperature	Laboratory and Field Method	Standard Method part 2550 B / Thermometer	at field		-	1	°C	0	
10	Total Kjeldahl Nitrogen (TKN)	Macro-Kjeldahl Method	Standard Method part 4500-N _{org} / Titration	Plastic	500	-	5	mg/l as NH ₃ -N	0	
11	Hydrogen Sulfide (H ₂ S)	ZnS Precipitation ,Iodometric Method	Standard Method part 4500-S ²⁻ F / Titration	BOD bottle	300	-	0.53	mg/l as H ₂ S	2	