

ภาคผนวกที่ 3

ใบรายงานผลการวิเคราะห์จากห้องปฏิบัติการ

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวดยุคที่ 2
Sampling Source : Ambient Air Quality
Sampling Point : โรงเรียนบ้านเขาหิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสัตร์ราชา จังหวัดชลบุรี
 (เดิมชื่อโรงเรียนบ้านเขาหินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727595 E, 1444309 N
Sampling Date : September 15-22, 2025
Sampling Time : 12:04
Sampling Method : U.S. EPA 40 CFR Part 50
Sampling By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014
Received Date : September 24, 2025
Analytical Date : September 24-October 2, 2025
Report No. : 2025-RAAX636
Report Date : October 3, 2025

Parameter	Unit	Method of Analysis	Result							Standard ^{1'}
			Sep 15-16, 25	Sep 16-17, 25	Sep 17-18, 25	Sep 18-19, 25	Sep 19-20, 25	Sep 20-21, 25	Sep 21-22, 25	
Total Suspended Particulate (TSP) 24 Hours Average	mg/m ³	High-Volume, United States Environment Protection Agency (Exclude sampling)	0.041	0.036	0.037	0.038	0.026	0.030	0.031	0.330

Remark : ^{1'} Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995) and Notification No.24, B.E.2547 (2004), published in the Royal Government Gazette No.121 Special Part 104D dated September 22, B.E.2547 (2004), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

Nat S
(Ms.Natnicha Sermmatiwong)
Laboratory Reviewer



Ramita
(Ms.Ramita Taengthai)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวอด ระยะที่ 2
Sampling Source : Ambient Air Quality
Sampling Point : โรงเรียนบ้านปอวิน (ลี้ขีดราษฎร์บำรุง) ตำบลปอวิน อำเภอสรีราชา จังหวัดชลบุรี
GPS. Coordinate : UTM (WGS84) 47P 0724010 E, 1443488 N
Quotation No. : MR2025-00258
Sampling Date : September 15-22, 2025
Analysis No. : 2025-AF014
Sampling Time : 12:51
Received Date : September 24, 2025
Sampling Method : U.S. EPA 40 CFR Part 50
Analytical Date : September 24-October 2, 2025
Sampling By : Mr.Akarawat Kochobog
Report No. : 2025-RAAX640
Analyzed By : Environment Research & Technology Co., Ltd.
Report Date : October 3, 2025

Parameter	Unit	Method of Analysis	Result							Standard ^{1'}
			Sep 15-16, 25	Sep 16-17, 25	Sep 17-18, 25	Sep 18-19, 25	Sep 19-20, 25	Sep 20-21, 25	Sep 21-22, 25	
Total Suspended Particulate (TSP) 24 Hours Average	mg/m ³	High-Volume, United States Environment Protection Agency (Exclude sampling)	0.018	0.016	0.020	0.022	0.012	0.013	0.015	0.330

Remark : ^{1'} Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995) and Notification No.24, B.E.2547 (2004), published in the Royal Government Gazette No.121 Special Part 104D dated September 22, B.E.2547 (2004), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

Ncl
(Ms.Natnicha Sermmatiwong)
Laboratory Reviewer



R
(Ms.Ramita Taengthai)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Sampling Source : Ambient Air Quality
Sampling Point : วัดพื้นเสด็จนอก ตำบลเขาคันทรง อำเภอศรีราชา จังหวัดชลบุรี
GPS. Coordinate : UTM (WGS84) 47P 0729607 E, 1447635 N
Quotation No. : MR2025-00258
Sampling Date : September 15-22, 2025
Analysis No. : 2025-AF014
Sampling Time : 10:57
Received Date : September 24, 2025
Sampling Method : U.S. EPA 40 CFR Part 50
Analytical Date : September 24-October 2, 2025
Sampling By : Mr.Akarawat Kochobog
Report No. : 2025-RAAX641
Analyzed By : Environment Research & Technology Co., Ltd.
Report Date : October 3, 2025

Parameter	Unit	Method of Analysis	Result							Standard ^{1'}
			Sep 15-16, 25	Sep 16-17, 25	Sep 17-18, 25	Sep 18-20, 25	Sep 19-20, 25	Sep 20-21, 25	Sep 21-22, 25	
Total Suspended Particulate (TSP) 24 Hours Average	mg/m ³	High-Volume, United States Environment Protection Agency (Exclude sampling)	0.033	0.026	0.029	0.024	0.029	0.030	0.032	0.330

Remark : ^{1'} Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995) and Notification No.24, B.E.2547 (2004), published in the Royal Government Gazette No.121 Special Part 104D dated September 22, B.E.2547 (2004), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

Nat. S
(Ms.Natnicha Sermmatiwong)
Laboratory Reviewer



R
(Ms.Ramita Taengthai)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : โรงเรียนบ้านเขาหิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสรีราชา จังหวัดชลบุรี
 (เดิมชื่อโรงเรียนบ้านเขาหินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727595 E, 1444309 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : SO₂ UV-Fluorescence Analyzer Thermo Model 43C Serial Number 64389-343/2

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-001
Report No. : 2025-RAAX707
Report Date : October 7, 2025

Interval Time	Result SO ₂ (ppm)							Standard
	Sep 15-16, 25	Sep 16-17, 25	Sep 17-18, 25	Sep 18-19, 25	Sep 19-20, 25	Sep 20-21, 25	Sep 21-22, 25	
12:00-13:00	0.0013	0.0017	0.0021	0.0022	0.0015	0.0019	0.0014	
13:00-14:00	0.0013	0.0018	0.0021	0.0023	0.0017	0.0018	0.0014	
14:00-15:00	0.0013	0.0015	0.0014	0.0020	0.0016	0.0018	0.0017	
15:00-16:00	0.0013	0.0018	0.0015	0.0017	0.0016	0.0019	0.0017	
16:00-17:00	0.0013	0.0018	0.0015	0.0020	0.0017	0.0020	0.0015	
17:00-18:00	0.0019	0.0018	0.0021	0.0022	0.0018	0.0022	0.0016	
18:00-19:00	0.0019	0.0017	0.0021	0.0021	0.0023	0.0021	0.0017	
19:00-20:00	0.0016	0.0017	0.0020	0.0021	0.0023	0.0017	0.0017	
20:00-21:00	0.0020	0.0017	0.0020	0.0021	0.0018	0.0017	0.0018	
21:00-22:00	0.0013	0.0017	0.0020	0.0019	0.0016	0.0017	0.0016	
22:00-23:00	0.0015	0.0016	0.0020	0.0020	0.0015	0.0016	0.0018	
23:00-00:00	0.0013	0.0016	0.0020	0.0018	0.0016	0.0013	0.0016	
00:00-01:00	0.0014	0.0016	0.0020	0.0018	0.0015	0.0015	0.0018	
01:00-02:00	0.0016	0.0016	0.0020	0.0017	0.0016	0.0014	0.0018	
02:00-03:00	0.0013	0.0016	0.0018	0.0018	0.0016	0.0014	0.0016	
03:00-04:00	0.0013	0.0016	0.0015	0.0018	0.0017	0.0015	0.0018	
04:00-05:00	0.0015	0.0016	0.0020	0.0017	0.0016	0.0013	0.0017	
05:00-06:00	0.0015	0.0016	0.0020	0.0018	0.0015	0.0015	0.0017	
06:00-07:00	0.0015	0.0015	0.0019	0.0018	0.0018	0.0016	0.0017	
07:00-08:00	0.0015	0.0015	0.0020	0.0018	0.0017	0.0013	0.0019	
08:00-09:00	0.0015	0.0014	0.0019	0.0018	0.0016	0.0015	0.0019	
09:00-10:00	0.0014	0.0013	0.0019	0.0017	0.0015	0.0013	0.0020	
10:00-11:00	0.0015	0.0014	0.0019	0.0017	0.0016	0.0015	0.0019	
11:00-12:00	0.0014	0.0014	0.0019	0.0017	0.0017	0.0013	0.0019	
24 Hours Average	0.0015	0.0016	0.0019	0.0019	0.0017	0.0016	0.0017	0.12^{1'}
1 Hour Maximum	0.0020	0.0018	0.0021	0.0023	0.0023	0.0022	0.0020	0.30^{2'}

Remark : ^{1'} Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995) and Notification No.24, B.E.2547 (2004), published in the Royal Government Gazette No.121 Special Part 104D dated September 22, B.E.2547 (2004), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).
^{2'} Notification of National Environmental Board, No.12, B.E.2538 (1995), published in the Royal Government Gazette No.112 Special Part 27D dated July 13, B.E.2538 (1995) and Notification No.21, B.E.2544 (2001), published in the Royal Government Gazette No.118 Special Part 39D dated April 30, B.E.2544 (2001), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

(Ms.Piyatida Pradangkho)
Laboratory Reviewer



(Ms.Panicha Promchai)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถวด ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : โรงเรียนบ้านเขานิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสรรพยา จังหวัดชัยภูมิ
(เดิมชื่อโรงเรียนบ้านเขานินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727595 E, 1444309 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : NOx Chemiluminescence Analyzer API Model 200A Serial Number 068

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-001
Report No. : 2025-RAAX706
Report Date : October 7, 2025

Interval Time	Result NO ₂ (ppm)							Standard ¹⁾
	Sep 15-16, 25	Sep 16-17, 25	Sep 17-18, 25	Sep 18-19, 25	Sep 19-20, 25	Sep 20-21, 25	Sep 21-22, 25	
12:00-13:00	0.0106	0.0074	0.0084	0.0075	0.0127	0.0120	0.0074	
13:00-14:00	0.0127	0.0089	0.0078	0.0073	0.0070	0.0079	0.0078	
14:00-15:00	0.0103	0.0098	0.0078	0.0076	0.0070	0.0080	0.0076	
15:00-16:00	0.0146	0.0106	0.0075	0.0074	0.0069	0.0083	0.0076	
16:00-17:00	0.0122	0.0108	0.0078	0.0077	0.0075	0.0079	0.0089	
17:00-18:00	0.0131	0.0121	0.0090	0.0074	0.0068	0.0078	0.0085	
18:00-19:00	0.0153	0.0087	0.0076	0.0071	0.0067	0.0071	0.0077	
19:00-20:00	0.0057	0.0081	0.0079	0.0075	0.0066	0.0070	0.0070	
20:00-21:00	0.0100	0.0056	0.0076	0.0115	0.0066	0.0068	0.0068	
21:00-22:00	0.0081	0.0104	0.0073	0.0111	0.0065	0.0071	0.0063	
22:00-23:00	0.0047	0.0123	0.0075	0.0110	0.0066	0.0073	0.0063	
23:00-00:00	0.0077	0.0086	0.0074	0.0096	0.0065	0.0074	0.0064	
00:00-01:00	0.0084	0.0066	0.0074	0.0091	0.0063	0.0068	0.0061	
01:00-02:00	0.0046	0.0063	0.0075	0.0079	0.0067	0.0066	0.0062	
02:00-03:00	0.0031	0.0064	0.0075	0.0066	0.0064	0.0068	0.0061	
03:00-04:00	0.0034	0.0061	0.0077	0.0072	0.0062	0.0069	0.0061	
04:00-05:00	0.0071	0.0063	0.0078	0.0073	0.0061	0.0067	0.0062	
05:00-06:00	0.0033	0.0064	0.0075	0.0073	0.0061	0.0064	0.0065	
06:00-07:00	0.0033	0.0064	0.0072	0.0067	0.0067	0.0067	0.0062	
07:00-08:00	0.0047	0.0062	0.0071	0.0089	0.0075	0.0067	0.0063	
08:00-09:00	0.0123	0.0063	0.0074	0.0105	0.0098	0.0071	0.0065	
09:00-10:00	0.0097	0.0068	0.0075	0.0110	0.0116	0.0074	0.0066	
10:00-11:00	0.0063	0.0072	0.0075	0.0107	0.0155	0.0080	0.0067	
11:00-12:00	0.0105	0.0075	0.0082	0.0104	0.0173	0.0077	0.0073	
24 Hours Average	0.0084	0.0080	0.0077	0.0086	0.0081	0.0074	0.0069	-
1 Hour Maximum	0.0153	0.0123	0.0090	0.0115	0.0173	0.0120	0.0089	0.17

Remark : ¹⁾ Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995), Notification No.28, B.E.2550 (2007), published in the Royal Government Gazette No.124 Special Part 58D dated May 14, B.E.2550 (2007) and Notification No.33, B.E.2552 (2009), published in the Royal Government Gazette No.126 Special Part 114D dated August 14, B.E.2552 (2009), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

(Ms.Piyatida Pradangkho)
Laboratory Reviewer



(Ms.Panicha Promchai)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : โรงเรียนบ้านเขานิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสรรพยา จังหวัดชัยภูมิ
 (เดิมชื่อโรงเรียนบ้านเขานินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727595 E, 1444309 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : CO NDIR Analyzer Thermo Model 48C Serial Number 0415406563

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-001
Report No. : 2025-RAAX708
Report Date : October 7, 2025

Interval Time	Result CO (ppm)							
	Sep 15-16, 25		Sep 16-17, 25		Sep 17-18, 25		Sep 18-19, 25	
	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg
12:00-13:00	0.5	-	0.6	0.5	0.7	0.6	0.3	0.5
13:00-14:00	0.5	-	0.5	0.5	0.5	0.6	0.3	0.5
14:00-15:00	0.5	-	0.4	0.5	0.4	0.6	0.3	0.5
15:00-16:00	0.5	-	0.6	0.5	0.4	0.6	0.3	0.4
16:00-17:00	0.4	-	0.6	0.5	0.7	0.6	0.4	0.4
17:00-18:00	0.4	-	0.8	0.6	0.6	0.6	0.4	0.4
18:00-19:00	0.4	-	0.5	0.6	0.5	0.6	0.5	0.4
19:00-20:00	0.3	0.4	0.6	0.6	0.7	0.6	0.4	0.4
20:00-21:00	0.3	0.4	0.5	0.6	0.6	0.6	0.4	0.4
21:00-22:00	0.3	0.4	0.7	0.6	0.6	0.6	0.3	0.4
22:00-23:00	0.3	0.4	0.7	0.6	0.3	0.6	0.4	0.4
23:00-00:00	0.4	0.4	0.7	0.6	0.5	0.6	0.4	0.4
00:00-01:00	0.5	0.4	0.6	0.6	0.6	0.6	0.4	0.4
01:00-02:00	0.5	0.4	0.7	0.6	0.7	0.6	0.4	0.4
02:00-03:00	0.4	0.4	0.6	0.6	0.7	0.6	0.4	0.4
03:00-04:00	0.5	0.4	0.6	0.6	0.7	0.6	0.4	0.4
04:00-05:00	0.6	0.4	0.7	0.7	0.5	0.6	0.4	0.4
05:00-06:00	0.6	0.5	0.5	0.6	0.5	0.6	0.4	0.4
06:00-07:00	0.5	0.5	0.5	0.6	0.5	0.6	0.4	0.4
07:00-08:00	0.6	0.5	0.6	0.6	0.6	0.6	0.4	0.4
08:00-09:00	0.6	0.5	0.7	0.6	0.7	0.6	0.4	0.4
09:00-10:00	0.5	0.5	0.6	0.6	0.5	0.6	0.3	0.4
10:00-11:00	0.5	0.6	0.6	0.6	0.5	0.6	0.3	0.4
11:00-12:00	0.4	0.5	0.8	0.6	0.5	0.5	0.3	0.4
24 Hours Average	0.5	-	0.6	-	0.6	-	0.4	-
1 Hour Maximum	0.6	-	0.8	-	0.7	-	0.5	-
8 Hours Maximum	-	0.6	-	0.7	-	0.6	-	0.5

Remark : ¹ Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

(Ms.Piyatida Pradangkho)
Laboratory Reviewer



(Ms.Panicha Promchai)
Laboratory Supervisor


ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : โรงเรียนบ้านเขานิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสรรพยา จังหวัดชัยภูมิ
 (เดิมชื่อโรงเรียนบ้านเขานินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727595 E, 1444309 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : CO NDIR Analyzer Thermo Model 48C Serial Number 0415406563

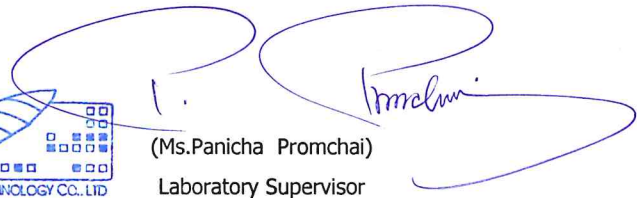
Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-001
Report No. : 2025-RAAX708
Report Date : October 7, 2025

Interval Time	Result CO (ppm)						Standard ^{1'}
	Sep 19-20, 25		Sep 20-21, 25		Sep 21-22, 25		
	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	
12:00-13:00	0.5	0.4	0.3	0.4	0.4	0.4	
13:00-14:00	0.6	0.4	0.4	0.4	0.4	0.4	
14:00-15:00	0.5	0.4	0.3	0.4	0.4	0.4	
15:00-16:00	0.4	0.4	0.3	0.3	0.4	0.4	
16:00-17:00	0.5	0.4	0.2	0.3	0.3	0.4	
17:00-18:00	0.5	0.4	0.4	0.3	0.4	0.4	
18:00-19:00	0.5	0.5	0.2	0.3	0.3	0.4	
19:00-20:00	0.4	0.5	0.4	0.3	0.3	0.4	
20:00-21:00	0.4	0.5	0.3	0.3	0.3	0.4	
21:00-22:00	0.3	0.4	0.3	0.3	0.3	0.3	
22:00-23:00	0.4	0.4	0.4	0.3	0.3	0.3	
23:00-00:00	0.4	0.4	0.5	0.3	0.3	0.3	
00:00-01:00	0.4	0.4	0.4	0.4	0.4	0.3	
01:00-02:00	0.4	0.4	0.4	0.4	0.4	0.3	
02:00-03:00	0.5	0.4	0.3	0.4	0.4	0.3	
03:00-04:00	0.4	0.4	0.3	0.4	0.3	0.3	
04:00-05:00	0.4	0.4	0.4	0.4	0.5	0.4	
05:00-06:00	0.4	0.4	0.4	0.4	0.5	0.4	
06:00-07:00	0.3	0.4	0.5	0.4	0.2	0.4	
07:00-08:00	0.5	0.4	0.3	0.4	0.4	0.4	
08:00-09:00	0.3	0.4	0.3	0.4	0.6	0.4	
09:00-10:00	0.4	0.4	0.3	0.4	0.3	0.4	
10:00-11:00	0.4	0.4	0.3	0.4	0.3	0.4	
11:00-12:00	0.3	0.4	0.4	0.4	0.2	0.4	
24 Hours Average	0.4	-	0.3	-	0.4	-	-
1 Hour Maximum	0.6	-	0.5	-	0.6	-	30
8 Hours Maximum	-	0.5	-	0.4	-	0.4	9

Remark : ^{1'} Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).


 (Ms.Piyatida Pradangkho)
 Laboratory Reviewer


 ENVIRONMENT RESEARCH & TECHNOLOGY CO., LTD.


 (Ms.Panicha Promchai)
 Laboratory Supervisor


ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : วัดพื้นเสด็จนอก ตำบลเขาคันทรง อำเภอศรีราชา จังหวัดชลบุรี
GPS. Coordinate : UTM (WGS84) 47P 0729607 E, 1447635 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : CO NDIR Analyzer Horiba Model APMA-370 Serial Number XRP3Y7LA


Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-015
Report No. : 2025-RAAX714
Report Date : October 7, 2025

Interval Time	Result CO (ppm)							
	Sep 15-16, 25		Sep 16-17, 25		Sep 17-18, 25		Sep 18-19, 25	
	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg
11:00-12:00	0.4	-	0.5	0.4	0.6	0.5	0.5	0.7
12:00-13:00	0.4	-	0.4	0.4	0.5	0.5	0.5	0.7
13:00-14:00	0.4	-	0.3	0.4	0.4	0.5	0.5	0.7
14:00-15:00	0.3	-	0.3	0.4	0.4	0.5	0.5	0.6
15:00-16:00	0.4	-	0.3	0.4	0.4	0.5	0.4	0.6
16:00-17:00	0.4	-	0.3	0.4	0.5	0.4	0.5	0.5
17:00-18:00	0.6	-	0.3	0.4	0.5	0.5	0.5	0.5
18:00-19:00	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
19:00-20:00	0.4	0.4	0.4	0.3	0.7	0.5	0.5	0.5
20:00-21:00	0.3	0.4	0.4	0.3	0.8	0.5	0.6	0.5
21:00-22:00	0.4	0.4	0.6	0.4	0.6	0.6	0.5	0.5
22:00-23:00	0.3	0.4	0.6	0.4	0.6	0.6	0.4	0.5
23:00-00:00	0.3	0.4	0.7	0.5	0.4	0.6	0.4	0.5
00:00-01:00	0.4	0.4	0.6	0.5	0.4	0.6	0.4	0.5
01:00-02:00	0.3	0.4	0.6	0.5	0.5	0.6	0.4	0.5
02:00-03:00	0.4	0.4	0.5	0.6	0.6	0.6	0.4	0.4
03:00-04:00	0.4	0.4	0.5	0.6	0.7	0.6	0.4	0.4
04:00-05:00	0.4	0.4	0.5	0.6	0.6	0.6	0.4	0.4
05:00-06:00	0.5	0.4	0.5	0.6	0.6	0.6	0.5	0.4
06:00-07:00	0.3	0.4	0.5	0.6	0.8	0.6	0.6	0.4
07:00-08:00	0.3	0.4	0.5	0.5	0.9	0.6	0.7	0.5
08:00-09:00	0.5	0.4	0.6	0.5	0.9	0.7	0.7	0.5
09:00-10:00	0.4	0.4	0.4	0.5	0.8	0.7	0.6	0.5
10:00-11:00	0.4	0.4	0.4	0.5	0.5	0.7	0.5	0.6
24 Hours Average	0.4	-	0.5	-	0.6	-	0.5	-
1 Hour Maximum	0.6	-	0.7	-	0.9	-	0.7	-
8 Hours Maximum	-	0.4	-	0.6	-	0.7	-	0.7

Remark : ¹ Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).


 (Ms.Piyatida Pradangkho)
 Laboratory Reviewer




 (Ms.Panicha Promchai)
 Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : วัดพื้นเสด็จนอก ตำบลเขาคันทรง อำเภอศรีราชา จังหวัดชลบุรี
GPS. Coordinate : UTM (WGS84) 47P 0729607 E, 1447635 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : CO NDIR Analyzer Horiba Model APMA-370 Serial Number XRP3Y7LA

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-015
Report No. : 2025-RAAX714
Report Date : October 7, 2025

Interval Time	Result CO (ppm)						Standard ^{1'}
	Sep 19-20, 25		Sep 20-21, 25		Sep 21-22, 25		
	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	1 hr Avg	8 hr Avg	
11:00-12:00	0.3	0.5	0.4	0.5	0.4	0.5	
12:00-13:00	0.3	0.5	0.4	0.5	0.4	0.4	
13:00-14:00	0.3	0.5	0.3	0.5	0.4	0.4	
14:00-15:00	0.3	0.5	0.3	0.4	0.3	0.4	
15:00-16:00	0.3	0.4	0.3	0.4	0.4	0.4	
16:00-17:00	0.4	0.4	0.3	0.4	0.4	0.4	
17:00-18:00	0.4	0.4	0.3	0.4	0.4	0.4	
18:00-19:00	0.5	0.4	0.4	0.3	0.4	0.4	
19:00-20:00	0.6	0.4	0.4	0.3	0.5	0.4	
20:00-21:00	0.6	0.4	0.5	0.4	0.5	0.4	
21:00-22:00	0.4	0.4	0.5	0.4	0.5	0.4	
22:00-23:00	0.4	0.4	0.5	0.4	0.4	0.4	
23:00-00:00	0.4	0.5	0.5	0.4	0.4	0.4	
00:00-01:00	0.4	0.5	0.5	0.4	0.4	0.4	
01:00-02:00	0.4	0.5	0.4	0.5	0.4	0.4	
02:00-03:00	0.4	0.4	0.4	0.5	0.4	0.4	
03:00-04:00	0.4	0.4	0.4	0.5	0.4	0.4	
04:00-05:00	0.4	0.4	0.5	0.5	0.4	0.4	
05:00-06:00	0.4	0.4	0.4	0.4	0.4	0.4	
06:00-07:00	0.4	0.4	0.4	0.4	0.4	0.4	
07:00-08:00	0.5	0.4	0.4	0.4	0.8	0.4	
08:00-09:00	0.6	0.4	0.6	0.4	0.8	0.5	
09:00-10:00	0.5	0.4	0.5	0.4	0.6	0.5	
10:00-11:00	0.6	0.5	0.5	0.5	0.4	0.5	
24 Hours Average	0.4	-	0.4	-	0.5	-	-
1 Hour Maximum	0.6	-	0.6	-	0.8	-	30
8 Hours Maximum	-	0.5	-	0.5	-	0.5	9

Remark : ^{1'} Notification of National Environmental Board, No.10, B.E.2538 (1995), published in the Royal Government Gazette No.112 Part 42D dated May 25, B.E.2538 (1995), under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992).

(Ms.Piyatida Pradangkho)

Laboratory Reviewer



(Ms.Panicha Promchai)

Laboratory Supervisor


ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : พื้นที่โครงการ (สำนักงานนิคม)
GPS. Coordinate : UTM (WGS84) 47P 0726886 E, 1443660 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.

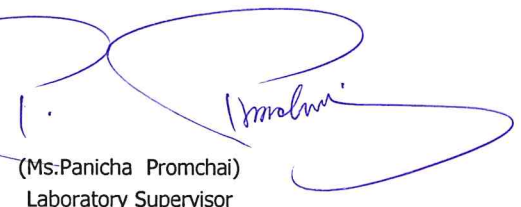
Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-022
Report No. : 2025-RAAX721
Report Date : October 7, 2025

Date/Time	Sep 15-16, 25		Sep 16-17, 25		Sep 17-18, 25		Sep 18-19, 25		Sep 19-20, 25		Sep 20-21, 25		Sep 21-22, 25	
	WS	WD	WS	WD	WS	WD	WS	WD	WS	WD	WS	WD	WS	WD
10:00-11:00	1.3	SSW	1.3	SE	1.3	N	2.2	SW	2.7	SSW	1.3	SW	3.1	SSW
11:00-12:00	1.3	SSW	2.2	SW	0.4	N	2.7	SW	4.0	SSW	2.7	SSW	3.6	SSW
12:00-13:00	0.9	N	1.8	SSW	0.9	SW	3.1	WSW	4.9	SSW	4.0	SSW	3.6	SSW
13:00-14:00	3.1	SW	3.1	SW	2.2	SW	4.0	SW	4.9	SSW	3.6	SW	3.1	SSW
14:00-15:00	1.8	WNW	2.7	WSW	2.2	SW	4.0	SW	4.9	SSW	4.0	SW	4.0	WSW
15:00-16:00	0.9	W	3.1	SW	1.3	SSW	4.0	SW	4.5	SSW	3.6	SW	4.0	SW
16:00-17:00	0.9	WNW	2.7	SW	1.8	SSW	2.7	SW	4.0	SSW	3.1	SSW	3.1	SW
17:00-18:00	0.4	N	2.7	SW	2.2	SSW	2.2	SSW	2.7	SSW	3.6	SSW	2.7	SSW
18:00-19:00	0.9	N	2.7	SW	0.9	SSW	2.2	SW	2.2	S	1.8	S	2.2	SSW
19:00-20:00	1.3	S	1.8	SW	1.3	SSW	1.8	SSW	1.8	S	1.3	S	1.3	SSW
20:00-21:00	0.9	SE	0.9	SE	1.3	S	0.9	S	1.3	SE	0.9	S	1.3	SE
21:00-22:00	1.3	SE	1.3	SE	0.9	S	2.2	SSW	0.9	S	1.3	SE	1.3	S
22:00-23:00	0.9	SE	0.4	SSW	1.8	SW	2.2	SSW	0.9	S	1.3	SE	0.9	S
23:00-00:00	0.4	N	0.4	ENE	4.0	SW	2.7	SSW	0.9	S	1.3	SSW	1.3	SSW
00:00-01:00	0.4	NNE	0.4	NE	0.9	SSW	2.7	SSW	0.9	SSW	0.9	S	0.9	E
01:00-02:00	0.4	NE	0.9	ESE	0.4	W	4.0	SSW	0.9	SSW	0.9	S	0.4	NE
02:00-03:00	0.4	N	0.4	ENE	0.4	W	4.5	SSW	0.4	S	2.2	SSW	0.4	ENE
03:00-04:00	2.7	WSW	0.9	SSW	0.4	N	4.0	SSW	0.9	S	2.2	SSW	<0.4	Calm
04:00-05:00	1.8	SW	0.9	SW	0.4	S	4.0	SSW	0.9	S	0.9	SSW	0.4	NE
05:00-06:00	0.4	NNE	0.9	SW	0.4	ENE	2.2	SW	1.8	SE	0.9	S	<0.4	Calm
06:00-07:00	0.4	E	0.4	SE	0.4	ESE	1.8	SW	0.9	S	0.9	SSW	<0.4	Calm
07:00-08:00	0.4	ENE	0.4	SE	0.4	ESE	1.3	SSW	1.8	SE	1.8	SSW	0.4	ESE
08:00-09:00	0.9	NE	1.3	SSW	0.4	ESE	0.9	S	0.9	S	1.8	SSW	0.9	ESE
09:00-10:00	0.9	E	2.7	SW	1.3	SW	1.8	SSW	0.9	S	3.1	SSW	0.9	S

Remark : WS = Wind Speed (m/s)
WD = Wind Direction
Height of wind vane and anemometer above ground 10 meters.


(Ms.Piyatida Pradangkho)
Laboratory Reviewer




(Ms.Panicha Promchai)
Laboratory Supervisor

ANALYSIS REPORT

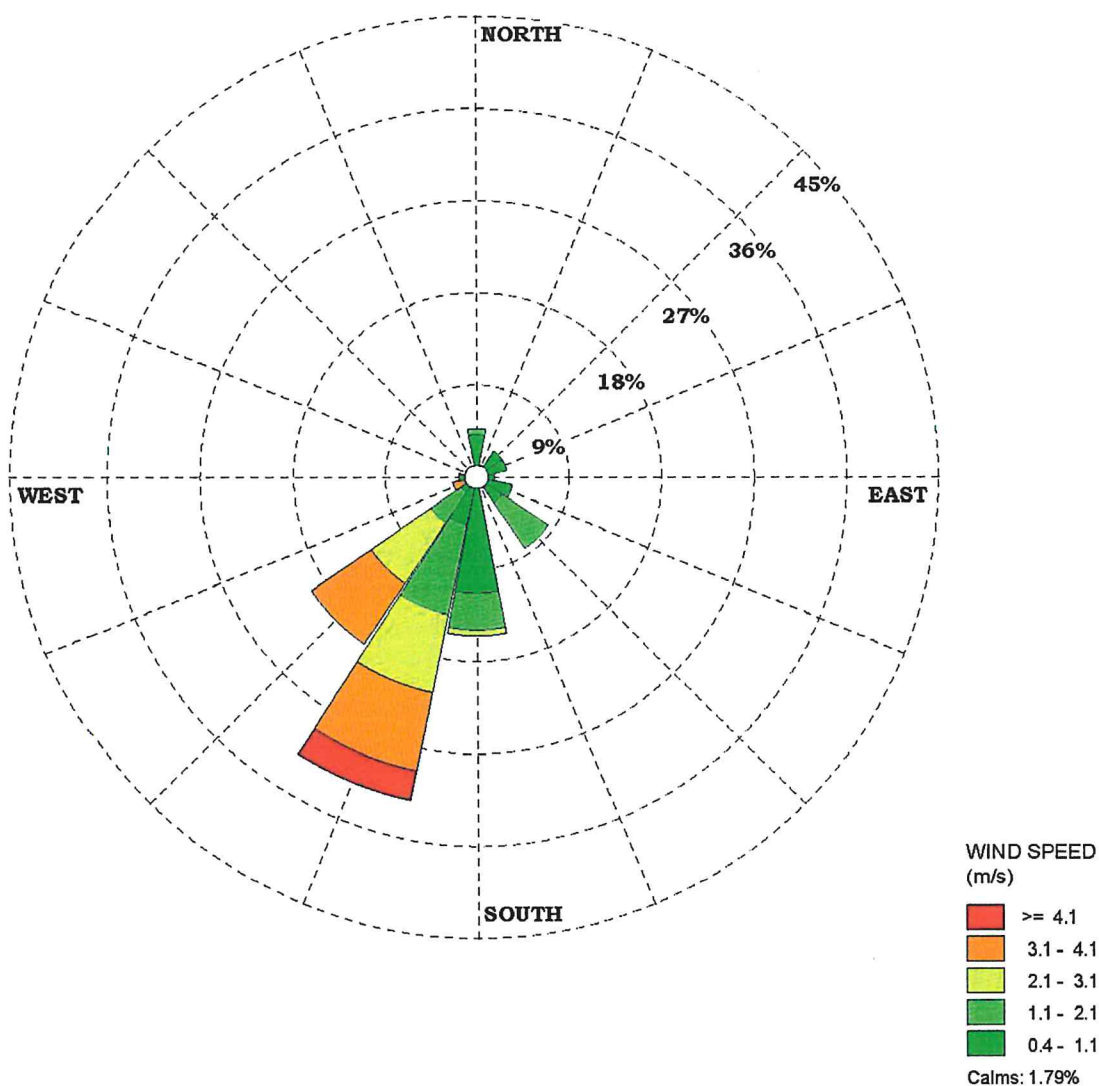
Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวุด ระยะที่ 2
Measured Source : Ambient Air Quality
Measured Point : พื้นที่โครงการ (สำนักงานนิคม)
GPS. Coordinate : UTM (WGS84) 47P 0726886 E, 1443660 N
Measured Date : September 15-22, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-022
Report No. : 2025-RAAX721
Report Date : October 7, 2025

Wind Direction	Percentage frequency of wind in each speed and direction					Total
	0.4-1.1	1.1-2.1	2.1-3.1	3.1-4.1	≥4.1	
N	4.16667	0.59524	0.00000	0.00000	0.00000	4.76191
NNE	1.19048	0.00000	0.00000	0.00000	0.00000	1.19048
NE	2.97619	0.00000	0.00000	0.00000	0.00000	2.97619
ENE	2.97619	0.00000	0.00000	0.00000	0.00000	2.97619
E	1.78571	0.00000	0.00000	0.00000	0.00000	1.78571
ESE	3.57143	0.00000	0.00000	0.00000	0.00000	3.57143
SE	2.97619	5.35714	0.00000	0.00000	0.00000	8.33333
SSE	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
S	11.30950	3.57143	0.59524	0.00000	0.00000	15.47617
SSW	4.76190	8.92857	7.73810	7.73810	2.97619	32.14286
SW	1.78571	3.57143	7.14286	7.14286	0.00000	19.64286
WSW	0.00000	0.00000	1.19048	1.19048	0.00000	2.38096
W	1.78571	0.00000	0.00000	0.00000	0.00000	1.78571
WNW	0.59524	0.59524	0.00000	0.00000	0.00000	1.19048
NW	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NNW	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Calm	1.78571					

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Point : พื้นที่โครงการ (สำนักงานนิคม)
Measured Date : September 15-22, 2025
Report No. : 2025-RAAX721



ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวอด ระยะที่ 2
Sampling Source : Stack Air Quality
Sampling Point : ปล่องระบายอากาศของโรงหลอม
GPS. Coordinate : UTM (WGS84) 47P 0726478 E, 1443801 N
Sampling Date : September 16, 2025
Sampling Time : 10:10-11:08
Sampling Method : US.EPA. Method 1-4, 5, 6C, 7E, 10
Sampling By : Mr.Wanchana Seehamart, Registration No. ว-099-ค-0004
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory Registration No.ว-099

Quotation No. : MR2025-00258
Analysis No. : 2025-AE878-001
Received Date : September 18, 2025
Analytical Date : September 18-22, 2025
Report No. : 2025-RAAX530
Report Date : October 6, 2025

Item	Description	Method of Analysis	Unit	Result	Standard ^{2'}	Standard ^{3'}	Standard ^{4'}
1	Fuel Type	-	-	Electric	-	-	-
2	Combustion System	-	-	Open	-	-	-
3	Stack Height	Measuring Tape	m	35.00	-	-	-
4	Stack Diameter	Measuring Tape	m	4.50	-	-	-
5	Flue Gas Temperature	Thermocouple	°C	87.58	-	-	-
6	Pressure in Stack	Incline Manometer	mmHg	749.81	-	-	-
7	Oxygen Rate	Electrochemical Sensor	%	20.90	-	-	-
8	Moisture	Condensation Method	%	4.91	-	-	-
9	Air Velocity	Type S Pitot Tube	m/s	15.07	-	-	-
10	Volumetric Flow Rate	Calculate	Nm ³ /hr	669,079	-	-	-
11	Volumetric Flow Rate	Calculate	m ³ /hr	862,988	-	-	-
12	Sulfur Dioxide (SO ₂) ^{1'}	Instrumental Analyzer Method	ppm	<1.0	800	-	60
13	Sulfur Dioxide (SO ₂) ^{1'}	Instrumental Analyzer Method	mg/m ³	<2.6	2,096	-	157
14	Oxide of Nitrogen (NO _x) ^{1'}	Instrumental Analyzer Method	ppm	7.4	200	-	200
15	Oxide of Nitrogen (NO _x) ^{1'}	Instrumental Analyzer Method	mg/m ³	14	376	-	376
16	Total Suspended Particulate ^{1'}	Isokinetic, Gravimetric	mg/m ³	2.5	240	108	320
17	Carbon Monoxide (CO) ^{1'}	Instrumental Analyzer Method	ppm	27	-	-	690
18	Carbon Monoxide (CO) ^{1'}	Instrumental Analyzer Method	mg/m ³	31	-	-	790

Remark : ^{1'} Reference condition is 25 degree Celsius at 1 Atmosphere and Dry Basis.

^{2'} Notification of the Ministry of Science Technology and Environment dated March 9, B.E.2544 (2001), published in the Royal Government Gazette, Vol.118 Part 37D dated May 8, B.E.2544 (2001). (Existing Source)

^{3'} Standards as Defined in the Environmental Impact Assessment Report dated October 6, B.E.2548 (2005)

^{4'} Notification of the Ministry of Industry B.E.2549 (2006), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 125D dated December 4, B.E.2549 (2006).

Ncl. 0

(Ms.Natnicha Sermmatiwong)

Laboratory Reviewer No. ว-099-ค-0012

Ramita Taengthai

(Ms.Ramita Taengthai)

Laboratory Supervisor No. ว-099-ค-0010

ANALYSIS REPORT

Customer Name	: Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)	Quotation No.	: MR2025-00258
Address	: 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230	Analysis No.	: 2025-AE878-001
Project Name	: โครงการขยายกำลังการผลิตเหล็กถวต ระยะที่ 2	Received Date	: September 18, 2025
Sampling Source	: Stack Air Quality	Analytical Date	: September 18-October 2, 2025
Sampling Point	: ปล่องระบายอากาศของโรงหลอม	Report No.	: 2025-RAAX531
GPS. Coordinate	: UTM (WGS84) 47P 0726478 E, 1443801 N	Report Date	: October 6, 2025
Sampling Date	: September 16, 2025		
Sampling Time	: 10:10-11:08		
Sampling Method	: US.EPA. Method 1-4, 26, 29		
Sampling By	: Mr.Wanchana Seehamart, Registration No. ว-099-ค-0004		
Analyzed By	: Environment Research & Technology Co., Ltd. Laboratory Registration No.ว-099		

Item	Description	Method of Analysis	Unit	Result	Standard ^{2'}	Standard ^{3'}	Standard ^{4'}
1	Fuel Type	-	-	Electric	-	-	-
2	Combustion System	-	-	Open	-	-	-
3	Stack Height	Measuring Tape	m	35.00	-	-	-
4	Stack Diameter	Measuring Tape	m	4.50	-	-	-
5	Flue Gas Temperature	Thermocouple	°C	87.58	-	-	-
6	Pressure in Stack	Incline Manometer	mmHg	749.81	-	-	-
7	Oxygen Rate	Electrochemical Sensor	%	20.90	-	-	-
8	Moisture	Condensation Method	%	4.91	-	-	-
9	Air Velocity	Type S Pitot Tube	m/s	15.07	-	-	-
10	Volumetric Flow Rate	Calculate	Nm ³ /hr	669,079	-	-	-
11	Volumetric Flow Rate	Calculate	m ³ /hr	862,988	-	-	-
12	Antimony ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	-	-	16
13	Arsenic ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	-	-	16
14	Copper ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	-	-	24
15	Lead ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	0.012	-	-	24
16	Mercury ^{1'}	Isokinetic, Digestion, Cold-Vapor Atomic Absorption Spectrometry	mg/m ³	<0.005	-	-	2.4
17	Chlorine ^{1'}	Absorption, Ion Chromatography, Conductivity Detection	mg/m ³	0.09	-	-	24
18	Hydrogen Chloride ^{1'}	Absorption, Ion Chromatography, Conductivity Detection	mg/m ³	0.21	-	-	160

Remark : ^{1'} Reference condition is 25 degree Celsius at 1 Atmosphere and Dry Basis.

^{2'} Notification of the Ministry of Science Technology and Environment dated March 9, B.E.2544 (2001), published in the Royal Government Gazette, Vol.118 Part 37D dated May 8, B.E.2544 (2001). (Existing Source)

^{3'} Standards as Defined in the Environmental Impact Assessment Report dated October 6, B.E.2548 (2005)

^{4'} Notification of the Ministry of Industry B.E.2549 (2006), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 125D dated December 4, B.E.2549 (2006).

Not. C

(Ms.Natnicha Sermmatiwong)

Laboratory Reviewer No. ว-099-ค-0012

Ramita

(Ms.Ramita Taengthai)

Laboratory Supervisor No. ว-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวดี ระยะที่ 2
Sampling Source : Stack Air Quality
Sampling Point : ปล่องระบายอากาศของโรงรีด 1
GPS. Coordinate : UTM (WGS84) 47P 0726366 E, 1443869 N
Sampling Date : September 16, 2025
Sampling Time : 14:05-15:03
Sampling Method : US.EPA. Method 1-4, 5, 6C, 7E, 10
Sampling By : Mr.Wanchana Seehamart, Registration No. ว-099-ค-0004
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory Registration No.ว-099

Quotation No. : MR2025-00258
Analysis No. : 2025-AE878-002
Received Date : September 18, 2025
Analytical Date : September 18-22, 2025
Report No. : 2025-RAAX532
Report Date : October 6, 2025

Item	Description	Method of Analysis	Unit	Result		Standard ^{2'}	Standard ^{3'}	Standard ^{4'}
				Actual Condition	Convert to Excess Oxygen 7%			
1	Fuel Type	-	-	Natural Gas		-	-	-
2	Combustion System	-	-	Close		-	-	-
3	Stack Height	Measuring Tape	m	25.00		-	-	-
4	Stack Diameter	Measuring Tape	m	1.90		-	-	-
5	Flue Gas Temperature	Thermocouple	°C	254.58	-	-	-	-
6	Pressure in Stack	Incline Manometer	mmHg	749.77	-	-	-	-
7	Oxygen Rate	Electrochemical Sensor	%	11.29	-	-	-	-
8	Moisture	Condensation Method	%	6.13	-	-	-	-
9	Air Velocity	Type S Pitot Tube	m/s	9.46	-	-	-	-
10	Volumetric Flow Rate ^{1'}	Calculate	Nm ³ /hr	50,501	-	-	-	-
11	Volumetric Flow Rate	Calculate	m ³ /hr	96,548	-	-	-	-
12	Sulfur Dioxide (SO ₂) ^{1'}	Instrumental Analyzer Method	ppm	<1.0	<1.0	800	60	60
13	Sulfur Dioxide (SO ₂) ^{1'}	Instrumental Analyzer Method	mg/m ³	<2.6	<2.6	2,096	157	157
14	Oxide of Nitrogen (NO _x) ^{1'}	Instrumental Analyzer Method	ppm	15	22	200	180	200
15	Oxide of Nitrogen (NO _x) ^{1'}	Instrumental Analyzer Method	mg/m ³	27	39	376	339	376
16	Total Suspended Particulate ^{1'}	Isokinetic, Gravimetric	mg/m ³	4.2	6.1	240	216	320
17	Carbon Monoxide (CO) ^{1'}	Instrumental Analyzer Method	ppm	7.0	10	-	-	690
18	Carbon Monoxide (CO) ^{1'}	Instrumental Analyzer Method	mg/m ³	8.0	12	-	-	790

Remark : ^{1'} Reference condition is 25 degree Celsius at 1 Atmosphere and Dry Basis.

^{2'} Notification of the Ministry of Science Technology and Environment dated March 9, B.E.2544 (2001), published in the Royal Government Gazette, Vol.118 Part 37D dated May 8, B.E.2544 (2001). (Existing Source)

^{3'} Standards as Defined in the Environmental Impact Assessment Report dated October 6, B.E.2548 (2005)

^{4'} Notification of the Ministry of Industry B.E.2549 (2006), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 125D dated December 4, B.E.2549 (2006).

Ncl. S

(Ms.Natnicha Sermmatiwong)

Laboratory Reviewer No. ว-099-ค-0012

Ramita

(Ms.Ramita Taengthai)

Laboratory Supervisor No. ว-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Stack Air Quality
Sampling Point : ปล่องระบายอากาศของโรงรีด 1
GPS. Coordinate : UTM (WGS84) 47P 0726366 E, 1443869 N
Sampling Date : September 16, 2025
Sampling Time : 14:05-15:03
Sampling Method : US.EPA. Method 1-4, 26, 29
Sampling By : Mr.Wanchana Seehamart, Registration No. ๖-099-ค-0004
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory Registration No.๖-099

Quotation No. : MR2025-00258
Analysis No. : 2025-AE878-002
Received Date : September 18, 2025
Analytical Date : September 18-October 2, 2025
Report No. : 2025-RAAX533
Report Date : October 6, 2025

Item	Description	Method of Analysis	Unit	Result		Standard ^{2'}	Standard ^{3'}	Standard ^{4'}
				Actual Condition	Convert to Excess Oxygen 7%			
1	Fuel Type	-	-	Natural Gas		-	-	-
2	Combustion System	-	-	Close		-	-	-
3	Stack Height	Measuring Tape	m	25.00		-	-	-
4	Stack Diameter	Measuring Tape	m	1.90		-	-	-
5	Flue Gas Temperature	Thermocouple	°C	254.58	-	-	-	-
6	Pressure in Stack	Incline Manometer	mmHg	749.77	-	-	-	-
7	Oxygen Rate	Electrochemical Sensor	%	11.29	-	-	-	-
8	Moisture	Condensation Method	%	6.13	-	-	-	-
9	Air Velocity	Type S Pitot Tube	m/s	9.46	-	-	-	-
10	Volumetric Flow Rate ^{1'}	Calculate	Nm ³ /hr	50,501	-	-	-	-
11	Volumetric Flow Rate	Calculate	m ³ /hr	96,548	-	-	-	-
12	Antimony ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	<0.005	-	-	16
13	Arsenic ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	0.007	0.010	-	-	16
14	Copper ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	0.339	0.490	-	-	24
15	Lead ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	0.024	0.035	-	-	24
16	Mercury ^{1'}	Isokinetic, Digestion, Cold-Vapor Atomic Absorption Spectrometry	mg/m ³	<0.005	<0.005	-	-	2.4
17	Chlorine ^{1'}	Absorption, Ion Chromatography, Conductivity Detection	mg/m ³	0.53	0.77	-	-	24
18	Hydrogen Chloride ^{1'}	Absorption, Ion Chromatography, Conductivity Detection	mg/m ³	0.78	1.1	-	-	160

Remark : ^{1'} Reference condition is 25 degree Celsius at 1 Atmosphere and Dry Basis.

^{2'} Notification of the Ministry of Science Technology and Environment dated March 9, B.E.2544 (2001), published in the Royal Government Gazette, Vol.118 Part 37D dated May 8, B.E.2544 (2001). (Existing Source)

^{3'} Standards as Defined in the Environmental Impact Assessment Report dated October 6, B.E.2548 (2005)

^{4'} Notification of the Ministry of Industry B.E.2549 (2006), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 125D dated December 4, B.E.2549 (2006).

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Laboratory Reviewer No. ๖-099-ค-0012

Ramita

(Ms.Ramita Taengthai)

Laboratory Supervisor No. ๖-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กววด ระยะที่ 2
Sampling Source : Stack Air Quality
Sampling Point : ปล่องระบายอากาศของโรงรีด 2
GPS. Coordinate : UTM (WGS84) 47P 0726239 E, 1443865 N
Sampling Date : September 17, 2025
Sampling Time : 14:00-14:58
Sampling Method : US.EPA. Method 1-4, 5, 6C, 7E, 10
Sampling By : Mr.Wanchana Seehamart, Registration No. ว-099-ค-0004
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory Registration No.ว-099

Quotation No. : MR2025-00258
Analysis No. : 2025-AE878-003
Received Date : September 18, 2025
Analytical Date : September 18-22, 2025
Report No. : 2025-RAAX534
Report Date : October 6, 2025

Item	Description	Method of Analysis	Unit	Result		Standard ^{2'}	Standard ^{3'}	Standard ^{4'}
				Actual Condition	Convert to Excess Oxygen 7%			
1	Fuel Type	-	-	Natural Gas		-	-	-
2	Combustion System	-	-	Close		-	-	-
3	Stack Height	Measuring Tape	m	65.00		-	-	-
4	Stack Diameter	Measuring Tape	m	2.30		-	-	-
5	Flue Gas Temperature	Thermocouple	°C	279.58	-	-	-	-
6	Pressure in Stack	Incline Manometer	mmHg	756.24	-	-	-	-
7	Oxygen Rate	Electrochemical Sensor	%	6.45	-	-	-	-
8	Moisture	Condensation Method	%	5.14	-	-	-	-
9	Air Velocity	Type S Pitot Tube	m/s	7.85	-	-	-	-
10	Volumetric Flow Rate ^{1'}	Calculate	Nm ³ /hr	59,798	-	-	-	-
11	Volumetric Flow Rate	Calculate	m ³ /hr	117,478	-	-	-	-
12	Sulfur Dioxide (SO ₂) ^{1'}	Instrumental Analyzer Method	ppm	<1.0	<1.0	800	60	60
13	Sulfur Dioxide (SO ₂) ^{1'}	Instrumental Analyzer Method	mg/m ³	<2.6	<2.6	2,096	157	157
14	Oxide of Nitrogen (NOx) ^{1'}	Instrumental Analyzer Method	ppm	46	44	200	162	200
15	Oxide of Nitrogen (NOx) ^{1'}	Instrumental Analyzer Method	mg/m ³	86	83	376	305	376
16	Total Suspended Particulate ^{1'}	Isokinetic, Gravimetric	mg/m ³	5.6	5.4	240	108	320
17	Carbon Monoxide (CO) ^{1'}	Instrumental Analyzer Method	ppm	5.5	5.3	-	-	690
18	Carbon Monoxide (CO) ^{1'}	Instrumental Analyzer Method	mg/m ³	6.3	6.1	-	-	790

Remark : ^{1'} Reference condition is 25 degree Celsius at 1 Atmosphere and Dry Basis.

^{2'} Notification of the Ministry of Science Technology and Environment dated March 9, B.E.2544 (2001), published in the Royal Government Gazette, Vol.118 Part 37D dated May 8, B.E.2544 (2001). (Existing Source)

^{3'} Standards as Defined in the Environmental Impact Assessment Report dated October 6, B.E.2548 (2005)

^{4'} Notification of the Ministry of Industry B.E.2549 (2006), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 125D dated December 4, B.E.2549 (2006).

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Laboratory Reviewer No. ว-099-ค-0012

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Laboratory Supervisor No. ว-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Stack Air Quality
Sampling Point : ปล่องระบายอากาศของโรงรีด 2
GPS. Coordinate : UTM (WGS84) 47P 0726239 E, 1443865 N
Sampling Date : September 17, 2025
Sampling Time : 14:00-14:58
Sampling Method : US.EPA. Method 1-4, 26, 29
Sampling By : Mr.Wanchana Seehamart, Registration No. ๖-099-๓-0004
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory Registration No.๖-099

Quotation No. : MR2025-00258
Analysis No. : 2025-AE878-003
Received Date : September 18, 2025
Analytical Date : September 18-October 2, 2025
Report No. : 2025-RAAX535
Report Date : October 6, 2025

Item	Description	Method of Analysis	Unit	Result		Standard ^{2'}	Standard ^{3'}	Standard ^{4'}
				Actual Condition	Convert to Excess Oxygen 7%			
1	Fuel Type	-	-	Natural Gas		-	-	-
2	Combustion System	-	-	Close		-	-	-
3	Stack Height	Measuring Tape	m	65.00		-	-	-
4	Stack Diameter	Measuring Tape	m	2.30		-	-	-
5	Flue Gas Temperature	Thermocouple	°C	279.58	-	-	-	-
6	Pressure in Stack	Incline Manometer	mmHg	756.24	-	-	-	-
7	Oxygen Rate	Electrochemical Sensor	%	6.45	-	-	-	-
8	Moisture	Condensation Method	%	5.14	-	-	-	-
9	Air Velocity	Type S Pitot Tube	m/s	7.85	-	-	-	-
10	Volumetric Flow Rate ^{1'}	Calculate	Nm ³ /hr	59,798	-	-	-	-
11	Volumetric Flow Rate	Calculate	m ³ /hr	117,478	-	-	-	-
12	Antimony ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	<0.005	-	-	16
13	Arsenic ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	<0.005	-	-	16
14	Copper ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	0.067	0.064	-	-	24
15	Lead ^{1'}	Isokinetic, Digestion, Inductively Coupled Plasma (ICP-OES)	mg/m ³	<0.005	<0.005	-	-	24
16	Mercury ^{1'}	Isokinetic, Digestion, Cold-Vapor Atomic Absorption Spectrometry	mg/m ³	<0.005	<0.005	-	-	2.4
17	Chlorine ^{1'}	Absorption, Ion Chromatography, Conductivity Detection	mg/m ³	0.15	0.14	-	-	24
18	Hydrogen Chloride ^{1'}	Absorption, Ion Chromatography, Conductivity Detection	mg/m ³	1.1	1.1	-	-	160

Remark : ^{1'} Reference condition is 25 degree Celsius at 1 Atmosphere and Dry Basis.

^{2'} Notification of the Ministry of Science Technology and Environment dated March 9, B.E.2544 (2001), published in the Royal Government Gazette, Vol.118 Part 37D dated May 8, B.E.2544 (2001). (Existing Source)

^{3'} Standards as Defined in the Environmental Impact Assessment Report dated October 6, B.E.2548 (2005)

^{4'} Notification of the Ministry of Industry B.E.2549 (2006), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 125D dated December 4, B.E.2549 (2006).

Ncl. Q

(Ms.Natricha Sermmatiwong)

Laboratory Reviewer No. ๖-099-๓-0012

Ramita

(Ms.Ramita Taengthai)

Laboratory Supervisor No. ๖-099-๓-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลววด ระยะที่ 2
Sampling Source : Surface Water Sampling
Sampling Point : อ่างเก็บน้ำของบริษัท
GPS. Coordinate : UTM (WGS84) 47P 0725694 E, 1443939 N
Sampling Date : September 16, 2025
Sampling Time : 11:14
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Physical Properties : Clear, Light Yellow, Sediment, Odor

Quotation No. : MR2025-00258
Analysis No. : 2025-AE848-001
Received Date : September 17, 2025
Analytical Date : September 17-23, 2025
Report No. : 2025-RAAX067
Report Date : September 26, 2025

Parameter	Unit	Method of Analysis ^{1'}	Result	Standard ^{2'}
pH	-	Electrometric	8.2	5.0-9.0
Dissolved Oxygen	mg/L	Membrane Electrode	4.0	≥2.0
Fat Oil and Grease	mg/L	Liquid-Liquid Partition, Gravimetric	1.0	-
Total Dissolved Solids	mg/L	Dried at 180°C	280	-
Total Suspended Solids	mg/L	Dried at 103-105°C	<5.0	-

Remark : ^{1'} Standard Method for Examination of Water and Wastewater, 24th Edition, 2023.

^{2'} Notification of the National Environment Board, No.8, B.E.2537 (1994), issued under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992), published in the Royal Government Gazette No.111 Part 16, dated February 24, B.E.2537 (1994). (Standard Value of Surface Water for Class 4)



(Ms. Yuwadee Na Ranong)

Laboratory Reviewer




(Mr. Virat Hemvannanukul)

Laboratory Supervisor

ANALYSIS REPORT

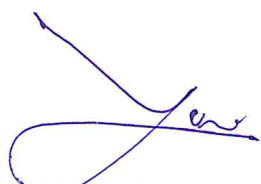
Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวอด ระยะที่ 2
Sampling Source : Surface Water Sampling
Sampling Point : อ่างเก็บน้ำของบริษัท
GPS. Coordinate : UTM (WGS84) 47P 0725702 E, 1443942 N
Sampling Date : December 24, 2025
Sampling Time : 14:14
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Physical Properties : Clear, Light Yellow, No Sediment, Odor

Quotation No. : MR2025-00258
Analysis No. : 2025-AH183-001
Received Date : December 25, 2025
Analytical Date : December 25, 2025-January 7, 2026
Report No. : 2026-RAAA166
Report Date : January 7, 2026

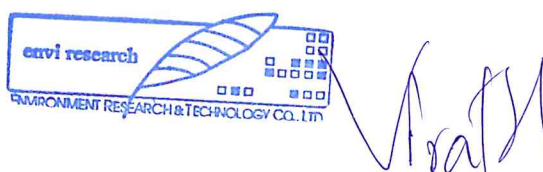
Parameter	Unit	Method of Analysis ^{1'}	Result	Standard ^{2'}
pH	-	Electrometric	8.7	5.0-9.0
Dissolved Oxygen	mg/L	Membrane Electrode	8.4	≥2.0
Fat Oil and Grease	mg/L	Liquid-Liquid Partition, Gravimetric	<1.0	-
Total Dissolved Solids	mg/L	Dried at 180°C	372	-
Total Suspended Solids	mg/L	Dried at 103-105°C	<5.0	-

Remark : ^{1'} Standard Method for Examination of Water and Wastewater, 24th Edition, 2023.

^{2'} Notification of the National Environment Board, No.8, B.E.2537 (1994), issued under the Enhancement and Conservation of National Environmental Quality Act B.E.2535 (1992), published in the Royal Government Gazette No.111 Part 16, dated February 24, B.E.2537 (1994). (Standard Value of Surface Water for Class 4)



(Ms. Yuwadee Na Ranong)
Laboratory Reviewer



(Mr. Virat Hemvannanukul)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : ริมรั้วโรงงานด้านทิศใต้
GPS. Coordinate : UTM (WGS84) 47P 0725684 E, 1443537 N
Measured Date : September 16-17, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-21D Serial Number 820463

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-029
Report No. : 2025-RAAX722
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
11:00-12:00	48.4	67.2	43.1
12:00-13:00	43.6	61.9	42.1
13:00-14:00	48.0	65.8	44.4
14:00-15:00	49.0	68.8	45.6
15:00-16:00	48.8	63.8	44.9
16:00-17:00	49.1	70.1	45.1
17:00-18:00	47.5	62.8	44.4
18:00-19:00	50.6	69.5	47.0
19:00-20:00	49.9	65.2	48.2
20:00-21:00	52.9	68.7	49.4
21:00-22:00	53.1	65.1	50.0
22:00-23:00	53.1	66.0	49.6
23:00-00:00	53.3	68.5	49.6
00:00-01:00	49.6	63.1	46.2
01:00-02:00	52.7	67.9	47.1
02:00-03:00	52.3	70.6	49.9
03:00-04:00	53.4	61.3	51.4
04:00-05:00	48.6	60.7	44.8
05:00-06:00	50.1	69.2	45.2
06:00-07:00	50.2	67.7	47.1
07:00-08:00	49.9	71.2	45.2
08:00-09:00	54.5	75.8	44.6
09:00-10:00	57.2	74.5	50.7
10:00-11:00	53.3	65.0	49.8
24 Hours Measurement	51.7	75.8	47.6
Standard^{1'}	70	115	-
Ldn	58.2	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : ริมรั้วโรงงานด้านทิศใต้
GPS. Coordinate : UTM (WGS84) 47P 0725684 E, 1443537 N
Measured Date : September 17-18, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-21D Serial Number 820463

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-029
Report No. : 2025-RAAX722
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
11:00-12:00	51.3	69.8	46.6
12:00-13:00	44.2	60.4	42.3
13:00-14:00	49.6	66.1	45.0
14:00-15:00	49.8	71.1	45.0
15:00-16:00	49.3	60.3	45.6
16:00-17:00	47.6	61.9	44.1
17:00-18:00	49.3	60.5	45.3
18:00-19:00	51.8	70.9	47.8
19:00-20:00	50.2	71.0	48.7
20:00-21:00	52.4	68.6	49.7
21:00-22:00	51.1	61.6	48.8
22:00-23:00	51.1	62.2	48.6
23:00-00:00	50.3	62.8	47.4
00:00-01:00	50.5	63.1	47.2
01:00-02:00	51.3	63.4	47.8
02:00-03:00	53.9	63.6	51.1
03:00-04:00	50.9	62.1	46.8
04:00-05:00	46.6	61.2	43.9
05:00-06:00	52.2	65.7	46.7
06:00-07:00	52.9	71.7	47.6
07:00-08:00	49.3	65.3	43.9
08:00-09:00	49.1	65.6	44.7
09:00-10:00	49.7	66.6	43.6
10:00-11:00	49.4	67.4	43.9
24 Hours Measurement	50.6	71.7	46.9
Standard¹⁾	70	115	-
Ldn	57.7	-	-

Remark : ¹⁾ Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : ริมรั้วโรงงานด้านทิศใต้
GPS. Coordinate : UTM (WGS84) 47P 0725684 E, 1443537 N
Measured Date : September 18-19, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-21D Serial Number 820463

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-029
Report No. : 2025-RAAX722
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
11:00-12:00	46.1	63.7	40.4
12:00-13:00	43.6	61.7	40.2
13:00-14:00	47.7	65.0	44.2
14:00-15:00	48.6	66.9	44.9
15:00-16:00	48.6	61.5	45.3
16:00-17:00	48.2	63.9	43.8
17:00-18:00	48.3	64.3	44.2
18:00-19:00	50.3	64.1	47.6
19:00-20:00	49.6	60.6	48.4
20:00-21:00	51.0	62.3	48.0
21:00-22:00	50.6	61.7	48.1
22:00-23:00	50.5	61.7	48.1
23:00-00:00	49.4	63.8	46.7
00:00-01:00	49.9	65.6	46.9
01:00-02:00	50.7	63.9	47.9
02:00-03:00	50.2	61.3	47.5
03:00-04:00	48.2	63.2	45.8
04:00-05:00	46.1	61.0	44.3
05:00-06:00	51.6	68.6	46.3
06:00-07:00	50.7	66.8	46.8
07:00-08:00	51.1	70.7	46.6
08:00-09:00	50.6	69.9	46.1
09:00-10:00	49.8	69.1	45.3
10:00-11:00	49.1	63.8	45.9
24 Hours Measurement	49.5	70.7	46.2
Standard^{1'}	70	115	-
Ldn	56.3	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

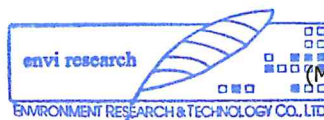
Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : ริมรั้วโรงงานด้านทิศตะวันตก
GPS. Coordinate : UTM (WGS84) 47P 0725957 E, 1444053 N
Measured Date : September 16-17, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-21D Serial Number 820456

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-030
Report No. : 2025-RAAX723
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
11:00-12:00	48.9	70.9	45.9
12:00-13:00	47.1	60.7	45.3
13:00-14:00	48.8	64.2	46.2
14:00-15:00	52.2	74.3	46.8
15:00-16:00	50.7	72.4	46.5
16:00-17:00	49.9	66.2	47.0
17:00-18:00	49.9	66.3	46.9
18:00-19:00	50.9	63.7	48.7
19:00-20:00	51.0	69.2	49.6
20:00-21:00	50.6	66.9	49.2
21:00-22:00	50.8	67.0	49.5
22:00-23:00	51.0	75.1	49.8
23:00-00:00	50.9	67.5	49.6
00:00-01:00	51.6	63.8	50.0
01:00-02:00	53.1	75.7	52.0
02:00-03:00	51.8	65.3	50.8
03:00-04:00	51.6	68.8	50.2
04:00-05:00	52.0	59.8	50.9
05:00-06:00	52.2	64.7	50.9
06:00-07:00	53.2	75.8	52.1
07:00-08:00	52.6	71.2	50.9
08:00-09:00	52.3	79.8	49.5
09:00-10:00	54.3	83.7	52.1
10:00-11:00	52.2	71.4	49.3
24 Hours Measurement	51.5	83.7	49.6
Standard^{1'}	70	115	-
Ldn	58.3	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)
Laboratory Reviewer



(Ms.Thanida Bunrungrueang)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : ร่มรั้วโรงงานด้านทิศตะวันตก
GPS. Coordinate : UTM (WGS84) 47P 0725957 E, 1444053 N
Measured Date : September 17-18, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-21D Serial Number 820456

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-030
Report No. : 2025-RAAX723
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
11:00-12:00	50.1	68.4	47.9
12:00-13:00	50.3	64.7	47.0
13:00-14:00	51.1	70.5	48.8
14:00-15:00	50.8	72.5	48.4
15:00-16:00	52.3	71.8	48.7
16:00-17:00	51.6	68.6	49.4
17:00-18:00	51.7	74.2	50.1
18:00-19:00	52.4	68.8	50.8
19:00-20:00	52.3	67.4	51.3
20:00-21:00	51.5	72.8	48.8
21:00-22:00	50.9	78.4	48.7
22:00-23:00	52.0	68.2	49.5
23:00-00:00	50.0	66.5	48.2
00:00-01:00	49.9	64.4	48.3
01:00-02:00	50.1	63.8	48.8
02:00-03:00	50.8	61.3	48.9
03:00-04:00	50.4	67.3	48.9
04:00-05:00	49.3	59.4	48.6
05:00-06:00	50.2	61.7	49.2
06:00-07:00	50.6	65.1	49.3
07:00-08:00	50.7	75.0	48.6
08:00-09:00	49.0	68.9	47.1
09:00-10:00	49.8	72.0	45.2
10:00-11:00	48.5	74.5	44.9
24 Hours Measurement	50.8	78.4	48.8
Standard^{1'}	70	115	-
Ldn	56.9	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : ริมรั้วโรงงานด้านทิศตะวันตก
GPS. Coordinate : UTM (WGS84) 47P 0725957 E, 1444053 N
Measured Date : September 18-19, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-21D Serial Number 820456

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-030
Report No. : 2025-RAAX723
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
11:00-12:00	49.0	73.3	44.6
12:00-13:00	46.4	64.5	43.8
13:00-14:00	47.2	66.6	44.0
14:00-15:00	48.8	66.3	45.5
15:00-16:00	47.6	64.4	45.1
16:00-17:00	48.7	66.7	46.0
17:00-18:00	50.0	76.5	45.9
18:00-19:00	52.2	74.6	48.8
19:00-20:00	51.0	77.7	48.8
20:00-21:00	50.4	65.9	48.8
21:00-22:00	51.3	71.0	48.9
22:00-23:00	52.0	66.0	50.5
23:00-00:00	53.0	74.1	50.2
00:00-01:00	51.7	69.1	49.8
01:00-02:00	51.1	66.3	49.8
02:00-03:00	51.2	71.7	49.5
03:00-04:00	50.9	64.4	49.5
04:00-05:00	51.7	78.6	49.3
05:00-06:00	52.4	74.0	49.1
06:00-07:00	52.5	66.3	51.2
07:00-08:00	52.7	74.1	51.2
08:00-09:00	51.8	74.2	49.9
09:00-10:00	51.6	72.7	47.7
10:00-11:00	50.5	78.2	47.5
24 Hours Measurement	51.0	78.6	48.6
Standard¹⁾	70	115	-
Ldn	58.1	-	-

Remark : ¹⁾ Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : หน้าอาคารสำนักงาน
GPS. Coordinate : UTM (WGS84) 47P 0726693 E, 1443426 N
Measured Date : September 16-17, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-11D Serial Number 820938

Quotation No. : MR2025-00258

Analysis No. : 2025-AF014-031

Report No. : 2025-RAAX724

Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
09:00-10:00	65.2	81.4	61.9
10:00-11:00	64.8	75.6	61.8
11:00-12:00	64.7	76.1	61.7
12:00-13:00	64.3	80.0	61.1
13:00-14:00	64.3	82.0	61.0
14:00-15:00	64.8	86.1	61.5
15:00-16:00	64.2	80.4	61.2
16:00-17:00	65.3	81.1	62.5
17:00-18:00	65.9	76.7	63.5
18:00-19:00	66.5	78.0	64.3
19:00-20:00	67.5	82.2	65.3
20:00-21:00	68.1	84.9	66.0
21:00-22:00	68.9	83.3	67.3
22:00-23:00	67.0	78.1	64.5
23:00-00:00	64.0	74.7	59.8
00:00-01:00	61.6	80.6	53.8
01:00-02:00	58.0	76.0	49.4
02:00-03:00	57.2	73.4	51.1
03:00-04:00	57.8	74.6	51.9
04:00-05:00	59.2	73.6	53.2
05:00-06:00	62.3	75.7	56.5
06:00-07:00	67.0	88.8	63.9
07:00-08:00	67.4	85.5	64.6
08:00-09:00	66.0	89.0	63.0
24 Hours Measurement	65.2	89.0	62.4
Standard¹⁾	70	115	-
Ldn	70.1	-	-

Remark : ¹⁾ Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535.(1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลว่ด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : หน้าอาคารสำนักงาน
GPS. Coordinate : UTM (WGS84) 47P 0726693 E, 1443426 N
Measured Date : September 17-18, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-11D Serial Number 820938

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-031
Report No. : 2025-RAAX724
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
09:00-10:00	66.5	81.1	63.6
10:00-11:00	65.6	82.6	63.0
11:00-12:00	65.0	82.1	62.1
12:00-13:00	65.2	78.9	62.1
13:00-14:00	64.4	76.1	61.3
14:00-15:00	65.2	83.4	62.1
15:00-16:00	65.3	78.2	62.6
16:00-17:00	65.9	80.1	63.3
17:00-18:00	67.1	81.9	64.5
18:00-19:00	66.9	86.2	64.4
19:00-20:00	67.3	80.9	65.4
20:00-21:00	68.1	79.8	66.1
21:00-22:00	67.8	78.3	66.2
22:00-23:00	65.8	76.4	63.3
23:00-00:00	62.3	78.1	57.3
00:00-01:00	61.3	81.1	55.2
01:00-02:00	58.9	75.2	53.5
02:00-03:00	58.1	73.0	50.7
03:00-04:00	57.9	74.8	49.7
04:00-05:00	58.7	75.0	52.0
05:00-06:00	62.4	76.3	56.4
06:00-07:00	67.0	82.7	63.9
07:00-08:00	68.1	85.8	65.2
08:00-09:00	66.3	81.4	63.2
24 Hours Measurement	65.4	86.2	62.6
Standard^{1'}	70	115	-
Ldn	69.8	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : หน้าอาคารสำนักงาน
GPS. Coordinate : UTM (WGS84) 47P 0726693 E, 1443426 N
Measured Date : September 18-19, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-11D Serial Number 820938

Quotation No. : MR2025-00258
Analysis No. : 2025-AF014-031
Report No. : 2025-RAAX724
Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
09:00-10:00	64.8	79.7	61.4
10:00-11:00	64.3	82.4	61.1
11:00-12:00	64.4	74.3	61.5
12:00-13:00	64.0	76.5	61.0
13:00-14:00	64.3	84.9	60.9
14:00-15:00	65.3	80.8	62.6
15:00-16:00	64.9	76.2	62.4
16:00-17:00	65.4	78.0	63.1
17:00-18:00	66.3	86.4	64.0
18:00-19:00	66.7	82.8	64.6
19:00-20:00	67.5	81.3	65.4
20:00-21:00	67.6	77.4	65.5
21:00-22:00	66.6	82.7	64.5
22:00-23:00	65.0	77.0	61.6
23:00-00:00	61.6	74.4	57.7
00:00-01:00	60.6	74.7	54.6
01:00-02:00	60.8	77.4	53.1
02:00-03:00	58.6	71.2	49.8
03:00-04:00	58.2	77.6	50.1
04:00-05:00	58.7	72.8	52.1
05:00-06:00	62.3	74.2	57.6
06:00-07:00	66.8	77.0	63.7
07:00-08:00	68.0	82.8	65.7
08:00-09:00	66.1	79.3	63.7
24 Hours Measurement	64.9	86.4	62.1
Standard¹⁾	70	115	-
Ldn	69.5	-	-

Remark : ¹⁾ Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : โรงเรียนบ้านเขานิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสัตร์ราชา จังหวัดชลบุรี
 (เดิมชื่อโรงเรียนบ้านเขานินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727621 E, 1444341 N
Measured Date : September 16-17, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-11D Serial Number 820970

Quotation No. : MR2025-00258

Analysis No. : 2025-AF014-032

Report No. : 2025-RAAX725

Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
08:00-09:00	63.6	86.2	59.2
09:00-10:00	61.2	77.0	58.0
10:00-11:00	62.4	84.4	58.8
11:00-12:00	62.2	86.1	58.8
12:00-13:00	63.8	88.3	58.9
13:00-14:00	62.0	88.9	58.4
14:00-15:00	62.0	83.8	59.2
15:00-16:00	63.9	82.8	59.8
16:00-17:00	65.2	88.3	59.9
17:00-18:00	64.1	82.7	60.6
18:00-19:00	62.9	82.0	58.4
19:00-20:00	61.7	77.0	57.8
20:00-21:00	62.3	80.2	57.3
21:00-22:00	59.9	77.5	53.8
22:00-23:00	59.6	82.8	51.2
23:00-00:00	55.6	77.9	48.8
00:00-01:00	56.9	85.3	48.8
01:00-02:00	53.6	80.3	46.4
02:00-03:00	51.5	72.7	45.0
03:00-04:00	52.3	71.5	45.0
04:00-05:00	54.8	76.5	46.3
05:00-06:00	56.4	77.1	50.2
06:00-07:00	61.2	82.1	55.9
07:00-08:00	64.9	81.0	60.5
24 Hours Measurement	61.6	88.9	57.2
Standard^{1'}	70	115	-
Ldn	64.9	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวด ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : โรงเรียนบ้านเขาหิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอสรรพยา จังหวัดชัยนาท
(เดิมชื่อโรงเรียนบ้านเขาหินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727621 E, 1444341 N
Measured Date : September 17-18, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-11D Serial Number 820970

Quotation No. : MR2025-00258

Analysis No. : 2025-AF014-032

Report No. : 2025-RAAX725

Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
08:00-09:00	64.6	84.0	60.3
09:00-10:00	63.9	85.9	59.6
10:00-11:00	61.8	75.5	59.0
11:00-12:00	62.7	83.6	59.3
12:00-13:00	65.1	87.6	59.5
13:00-14:00	64.3	89.3	60.2
14:00-15:00	64.9	86.7	59.7
15:00-16:00	68.1	87.1	61.0
16:00-17:00	65.9	87.7	60.5
17:00-18:00	63.5	81.2	59.9
18:00-19:00	61.7	84.8	57.6
19:00-20:00	62.9	83.9	58.0
20:00-21:00	61.1	78.5	56.2
21:00-22:00	60.1	77.1	55.1
22:00-23:00	59.1	82.3	50.8
23:00-00:00	55.4	75.1	47.8
00:00-01:00	54.5	73.2	47.9
01:00-02:00	52.5	69.6	46.0
02:00-03:00	52.4	72.4	44.1
03:00-04:00	53.3	76.0	45.4
04:00-05:00	54.0	74.6	46.8
05:00-06:00	58.3	77.7	52.2
06:00-07:00	63.4	89.0	58.2
07:00-08:00	66.3	84.8	60.1
24 Hours Measurement	62.8	89.3	57.7
Standard^{1'}	70	115	-
Ldn	65.8	-	-

Remark : ^{1'} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)
Laboratory Reviewer



(Ms.Thanida Bunrungrueang)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Measured Source : Ambient Noise
Measured Point : โรงเรียนบ้านเขานิน (นิคมราษฎร์บำรุง) ตำบลปอวิน อำเภอศรีราชา จังหวัดชลบุรี
 (เดิมชื่อโรงเรียนบ้านเขานินนิคมราษฎร์บำรุง)
GPS. Coordinate : UTM (WGS84) 47P 0727621 E, 1444341 N
Measured Date : September 18-19, 2025
Measured By : Mr.Akarawat Kochobog
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter Scarlet Tech Model ST-11D Serial Number 820970

Quotation No. : MR2025-00258

Analysis No. : 2025-AF014-032

Report No. : 2025-RAAX725

Report Date : October 7, 2025

Interval Time	Noise Level, dB(A)		
	Leq	Lmax	L90
08:00-09:00	62.6	83.1	59.5
09:00-10:00	62.3	87.7	58.7
10:00-11:00	61.1	75.5	58.3
11:00-12:00	65.6	85.7	59.9
12:00-13:00	61.9	81.4	58.5
13:00-14:00	62.3	80.4	58.9
14:00-15:00	66.1	83.0	60.1
15:00-16:00	67.8	87.1	60.5
16:00-17:00	64.4	82.4	59.7
17:00-18:00	63.7	79.9	60.5
18:00-19:00	62.8	83.6	58.6
19:00-20:00	63.0	82.0	58.3
20:00-21:00	62.6	82.4	56.9
21:00-22:00	59.0	83.5	53.7
22:00-23:00	56.8	75.1	51.4
23:00-00:00	57.9	79.3	48.5
00:00-01:00	57.1	86.7	47.7
01:00-02:00	56.0	84.7	46.9
02:00-03:00	53.5	73.9	45.5
03:00-04:00	58.3	69.6	49.7
04:00-05:00	54.0	72.5	47.7
05:00-06:00	57.5	77.0	50.9
06:00-07:00	62.0	86.8	56.0
07:00-08:00	64.5	84.8	60.3
24 Hours Measurement	62.4	87.7	57.4
Standard^{1/}	70	115	-
Ldn	65.7	-	-

Remark : ^{1/} Notification of the Ministry of Industry B.E.2548 (2005), issued under Factory Act B.E.2535 (1992), published in the Royal Government Gazette No.123 Special Part 11D dated January 25, B.E.2549 (2006).

(Ms.Supawan Suwannapa)

Laboratory Reviewer



(Ms.Thanida Bunrungrueang)

Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Solid Waste Sampling
Sampling Point : กอง Slag จุดที่ 1
GPS. Coordinate : UTM (WGS84) 47P 0726017 E, 1443467 N
Sampling Date : September 16, 2025
Sampling Time : 09:30
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog, Registration No.ว-099-จ-0015
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory
Registration No.ว-099
Physical Properties :-

Quotation No. : MR2025-00258
Analysis No. : 2025-AE847-001
Received Date : September 17, 2025
Analytical Date : September 17-October 1, 2025
Report No. : 2025-RAAX061
Report Date : October 6, 2025

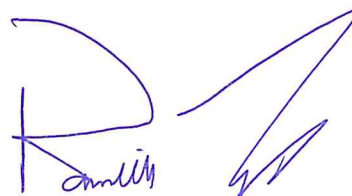
Parameter	Unit	Method of Analysis	Result	Standard ^{1'} (TTLC)
Arsenic	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	0.1	500
Cadmium	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	4.0	100
Chromium Hexavalent	mg/kg ; wet weight	Digestion, Colorimetric	<0.2	500
Chromium	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	1,038	2,500
Chromium Trivalent	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)/Digestion, Colorimetric/Calculation	1,038	2,500
Lead	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	14	1,000
Mercury	mg/kg ; wet weight	Digestion, Cold-Vapor Atomic Absorption Spectrometry	<0.1	20
Zinc	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	61	5,000

Remark : ^{1'} Notification of the Ministry of Industry, B.E.2566 (2023), dated March 16, B.E.2566 (2023) issued under Factory Act B.E.2562 (2022) and B.E.2535 (1992), published in the Royal Government Gazette No.140 Part 126D dated May 31, B.E.2566 (2023).



(Ms.Raiwin Posit)

Laboratory Reviewer No. ว-099-ก-0011



(Ms.Ramita Taengthai)

Laboratory Supervisor No. ว-099-ก-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Solid Waste Sampling
Sampling Point : กอง Slag จุดที่ 2
GPS. Coordinate : UTM (WGS84) 47P 0725999 E, 1443463 N
Sampling Date : September 16, 2025
Sampling Time : 09:31
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog, Registration No.ว-099-จ-0015
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory
Registration No.ว-099
Physical Properties : -

Quotation No. : MR2025-00258
Analysis No. : 2025-AE847-002
Received Date : September 17, 2025
Analytical Date : September 17-October 1, 2025
Report No. : 2025-RAAX062
Report Date : October 6, 2025

Parameter	Unit	Method of Analysis	Result	Standard ^{1'} (TTLC)
Arsenic	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	7.0	500
Cadmium	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	2.6	100
Chromium Hexavalent	mg/kg ; wet weight	Digestion, Colorimetric	<0.2	500
Chromium	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	671	2,500
Chromium Trivalent	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)/Digestion, Colorimetric/Calculation	671	2,500
Lead	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	9.9	1,000
Mercury	mg/kg ; wet weight	Digestion, Cold-Vapor Atomic Absorption Spectrometry	<0.1	20
Zinc	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	107	5,000

Remark : ^{1'} Notification of the Ministry of Industry, B.E.2566 (2023), dated March 16, B.E.2566 (2023) issued under Factory Act B.E.2562 (2022) and B.E.2535 (1992), published in the Royal Government Gazette No.140 Part 126D dated May 31, B.E.2566 (2023).



(Ms.Raiwin Posit)

Laboratory Reviewer No. ว-099-ค-0011



(Ms.Ramita Taengthai)

Laboratory Supervisor No. ว-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลว่ด ระยะที่ 2
Sampling Source : Solid Waste Sampling
Sampling Point : กอง Slag จุดที่ 3
GPS. Coordinate : UTM (WGS84) 47P 0725984 E, 1443463 N
Sampling Date : September 16, 2025
Sampling Time : 09:33
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog, Registration No.จ-099-จ-0015
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory
Registration No.จ-099
Physical Properties : -
Quotation No. : MR2025-00258
Analysis No. : 2025-AE847-003
Received Date : September 17, 2025
Analytical Date : September 17-October 1, 2025
Report No. : 2025-RAAX063
Report Date : October 6, 2025

Parameter	Unit	Method of Analysis	Result	Standard ^{1*} (TTLIC)
Arsenic	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	2.0	500
Cadmium	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	1.7	100
Chromium Hexavalent	mg/kg ; wet weight	Digestion, Colorimetric	<0.2	500
Chromium	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	601	2,500
Chromium Trivalent	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)/Digestion, Colorimetric/Calculation	601	2,500
Lead	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	5.5	1,000
Mercury	mg/kg ; wet weight	Digestion, Cold-Vapor Atomic Absorption Spectrometry	<0.1	20
Zinc	mg/kg ; wet weight	Digestion, Inductively Coupled Plasma (ICP-OES)	82	5,000

Remark : ^{1*} Notification of the Ministry of Industry, B.E.2566 (2023), dated March 16, B.E.2566 (2023) issued under Factory Act B.E.2562 (2022) and B.E.2535 (1992), published in the Royal Government Gazette No.140 Part 126D dated May 31, B.E.2566 (2023).



(Ms.Raiwin Posit)

Laboratory Reviewer No. จ-099-ค-0011



(Ms.Ramita Taengthai)

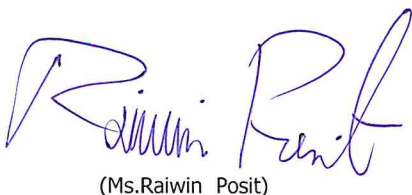
Laboratory Supervisor No. จ-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวอด ระยะที่ 2
Sampling Source : Solid Waste Sampling
Sampling Point : กอง Slag จุดที่ 1
GPS. Coordinate : UTM (WGS84) 47P 0726017 E, 1443467 N
Sampling Date : September 16, 2025
Sampling Time : 09:30
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog, Registration No.จ-099-จ-0015
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory
Registration No.จ-099
Physical Properties :
Quotation No. : MR2025-00258
Analysis No. : 2025-AE847-004
Received Date : September 17, 2025
Analytical Date : September 17-October 2, 2025
Report No. : 2025-RAAX064
Report Date : October 6, 2025

Parameter	Unit	Method of Analysis	Result	Standard ^{1'} (STLC)
Arsenic	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.05	5.0
Cadmium	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	0.02	1.0
Chromium Hexavalent	mg/L	Waste Extracion, Colorimetric	<0.01	5
Chromium	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	3.0	5
Chromium Trivalent	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma /Waste Extraction, Colorimetric/Calculation	3.0	5
Lead	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.05	5.0
Mercury	mg/L	Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric	0.004	0.2
Zinc	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	0.17	250

Remark : ^{1'} Notification of the Ministry of Industry, B.E.2566 (2023), dated March 16, B.E.2566 (2023) issued under Factory Act B.E.2562 (2022) and B.E.2535 (1992), published in the Royal Government Gazette No.140 Part 126D dated May 31, B.E.2566 (2023).



(Ms.Raiwin Posit)

Laboratory Reviewer No. จ-099-ค-0011



(Ms.Ramita Taengthai)

Laboratory Supervisor No. จ-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Solid Waste Sampling
Sampling Point : กอง Slag จุดที่ 2
GPS. Coordinate : UTM (WGS84) 47P 0725999 E, 1443463 N
Sampling Date : September 16, 2025
Sampling Time : 09:31
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog, Registration No.จ-099-จ-0015
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory
Registration No.จ-099
Physical Properties : -

Quotation No. : MR2025-00258
Analysis No. : 2025-AE847-005
Received Date : September 17, 2025
Analytical Date : September 17-October 2, 2025
Report No. : 2025-RAAX065
Report Date : October 6, 2025

Parameter	Unit	Method of Analysis	Result	Standard ^{1'} (STLC)
Arsenic	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.05	5.0
Cadmium	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.01	1.0
Chromium Hexavalent	mg/L	Waste Extracion, Colorimetric	<0.01	5
Chromium	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	0.45	5
Chromium Trivalent	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma /Waste Extraction, Colorimetric/Calculation	0.45	5
Lead	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.05	5.0
Mercury	mg/L	Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric	0.001	0.2
Zinc	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	0.06	250

Remark : ^{1'} Notification of the Ministry of Industry, B.E.2566 (2023), dated March 16, B.E.2566 (2023) issued under Factory Act B.E.2562 (2022) and B.E.2535 (1992), published in the Royal Government Gazette No.140 Part 126D dated May 31, B.E.2566 (2023).


(Ms.Raiwin Posit)

Laboratory Reviewer No. จ-099-ค-0011


(Ms.Ramita Taengthai)

Laboratory Supervisor No. จ-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Solid Waste Sampling
Sampling Point : กอง Slag จุดที่ 3
GPS. Coordinate : UTM (WGS84) 47P 0725984 E, 1443463 N
Sampling Date : September 16, 2025
Sampling Time : 09:33
Sampling Method : Grab
Sampling By : Mr.Akarawat Kochobog, Registration No.จ-099-จ-0015
Analyzed By : Environment Research & Technology Co., Ltd. Laboratory
Registration No.จ-099
Physical Properties : -

Quotation No. : MR2025-00258
Analysis No. : 2025-AE847-006
Received Date : September 17, 2025
Analytical Date : September 17-October 2, 2025
Report No. : 2025-RAAX066
Report Date : October 6, 2025


Parameter	Unit	Method of Analysis	Result	Standard ^{1'} (STLC)
Arsenic	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.05	5.0
Cadmium	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.01	1.0
Chromium Hexavalent	mg/L	Waste Extracion, Colorimetric	<0.01	5
Chromium	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	0.38	5
Chromium Trivalent	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma /Waste Extraction, Colorimetric/Calculation	0.38	5
Lead	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	<0.05	5.0
Mercury	mg/L	Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric	<0.001	0.2
Zinc	mg/L	Waste Extraction, Digestion, Inductively Coupled Plasma	0.05	250

Remark : ^{1'} Notification of the Ministry of Industry, B.E.2566 (2023), dated March 16, B.E.2566 (2023) issued under Factory Act B.E.2562 (2022) and B.E.2535 (1992), published in the Royal Government Gazette No.140 Part 126D dated May 31, B.E.2566 (2023).



(Ms.Raiwin Posit)

Laboratory Reviewer No. จ-099-ค-0011



(Ms.Ramita Taengthai)

Laboratory Supervisor No. จ-099-ค-0010

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลว ระยะที่ 2
Measured Source : Work Place Noise
Measured Date : September 16, 2025
Measured By : Ms.Thanida Bunrungrueang
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter ACO Model 6236 Serial Number 222117


Quotation No. : MR2025-00258
Analysis No. : 2025-AE858-003
Report No. : 2025-RAAW514
Report Date : September 19, 2025

Measured Location/ Employee Name	Interval Time	Equivalent Level; dB(A)	Maximum Level; dB(A)	Standard
ห้องควบคุมของโรงหลอม (คุณเกียรติศักดิ์ เลิศฤทธิรัตนพาล)	09:03 - 10:03	77.5	92.6	-
	10:03 - 11:03	76.7	89.8	-
	11:03 - 12:03	72.0	93.4	-
	12:03 - 13:03	71.2	88.0	-
	13:03 - 14:03	75.3	92.2	-
	14:03 - 15:03	74.0	87.7	-
	15:03 - 16:03	73.0	92.7	-
	16:03 - 17:03	72.4	87.8	-
	Equivalent Level 8 hrs (Leq 8 hrs)	74.6		-
	Time Weighted Average (TWA 8 hrs) ^{1'}	74.5		85 ^{2'}
	Maximum Level (Lmax)	93.4		115 ^{3'}


Remark : ^{1'} Calculates the Case of Employees Working in this Area throughout the Work Period.

^{2'} The Announcement of the Department of Labour Protection and Welfare, issued under the Labour Ministerial Regulation, B.E.2559 (2016), published in the Royal Government Gazette Volume 135 Special Part 19D dated January 26, B.E.2561 (2018) and published in the Royal Government Gazette Volume 135 Special Part 57D dated March 12, B.E.2561 (2018).

^{3'} Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).


 (Ms. Supawan Suwannapa)
 Laboratory Reviewer




 (Ms. Thanida Bunrungrueang)
 Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวอด ระยะที่ 2
Measured Source : Work Place Noise
Measured Date : September 16, 2025
Measured By : Ms.Thanida Bunrungrueang
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter ACO Model 6236 Serial Number 222111


Quotation No. : MR2025-00258
Analysis No. : 2025-AE858-001
Report No. : 2025-RAAW512
Report Date : September 19, 2025

Measured Location/ Employee Name	Interval Time	Equivalent Level; dB(A)	Maximum Level; dB(A)	Standard
ห้องควบคุมของโรงรีด 1 (คุณเกียรติ หันดูลา)	08:50 - 09:50	74.7	88.6	-
	09:50 - 10:50	70.3	83.6	-
	10:50 - 11:50	70.2	83.5	-
	11:50 - 12:50	68.3	84.1	-
	12:50 - 13:50	69.8	88.2	-
	13:50 - 14:50	69.8	84.8	-
	14:50 - 15:50	68.4	83.2	-
	15:50 - 16:50	70.9	83.4	-
	Equivalent Level 8 hrs (Leq 8 hrs)	70.8		-
	Time Weighted Average (TWA 8 hrs) ^{1'}	70.7		85 ^{2'}
	Maximum Level (Lmax)	88.6		115 ^{3'}


Remark : ^{1'} Calculates the Case of Employees Working in this Area throughout the Work Period.

^{2'} The Announcement of the Department of Labour Protection and Welfare, issued under the Labour Ministerial Regulation, B.E.2559 (2016), published in the Royal Government Gazette Volume 135 Special Part 19D dated January 26, B.E.2561 (2018) and published in the Royal Government Gazette Volume 135 Special Part 57D dated March 12, B.E.2561 (2018).

^{3'} Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).


 (Ms. Supawan Suwannapa)
 Laboratory Reviewer




 (Ms. Thanida Bunrungrueang)
 Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกลวอด ระยะที่ 2
Measured Source : Work Place Noise
Measured Date : September 16, 2025
Measured By : Ms.Thanida Bunrungrueang
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Integrating Sound Level Meter ACO Model 6236 Serial Number 222116

Quotation No. : MR2025-00258
Analysis No. : 2025-AE858-002
Report No. : 2025-RAAW513
Report Date : September 19, 2025

Measured Location/ Employee Name	Interval Time	Equivalent Level; dB(A)	Maximum Level; dB(A)	Standard
ห้องควบคุมของโรงรีด 2 (คุณอนันท์ หาญชนะ)	08:51 - 09:51	67.6	84.6	-
	09:51 - 10:51	59.9	81.0	-
	10:51 - 11:51	60.4	81.9	-
	11:51 - 12:51	59.7	79.9	-
	12:51 - 13:51	64.4	84.1	-
	13:51 - 14:51	62.3	83.1	-
	14:51 - 15:51	59.6	76.0	-
	15:51 - 16:51	65.7	78.2	-
	Equivalent Level 8 hrs (Leq 8 hrs)	63.5		-
	Time Weighted Average (TWA 8 hrs) ^{1'}	63.4		85 ^{2'}
	Maximum Level (Lmax)	84.6		115 ^{3'}

Remark : ^{1'} Calculates the Case of Employees Working in this Area throughout the Work Period.

^{2'} The Announcement of the Department of Labour Protection and Welfare, issued under the Labour Ministerial Regulation, B.E.2559 (2016), published in the Royal Government Gazette Volume 135 Special Part 19D dated January 26, B.E.2561 (2018) and published in the Royal Government Gazette Volume 135 Special Part 57D dated March 12, B.E.2561 (2018).

^{3'} Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).

(Ms.Supawan Suwannapa)
Laboratory Reviewer

(Ms.Thanida Bunrungrueang)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กผลัดหมุนเวียนที่ 2
Measured Source : Work Place Air Temperature
Measured Date : November 28, 2025
Measured By : Mr.Noppasit Taweepornpadit
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Heat Stress Monitor/Electronic Metrosonics Model hs-32 Serial Number MCH110038

Quotation No. : MR2025-00258
Analysis No. : 2025-AG618-001
Report No. : 2025-RABD369
Report Date : December 9, 2025

Measured Location	Employee Name	Duration	Measurement Temperature, °C					Job Description/ Activities	Work Load, Wl		Standard ^{2/}
			T _{wb}	T _{db}	T _{gr}	WBGT	WBGT ^{1/} (Avg.)		Metabolic Rate (Kcal/hr)	Metabolic Rate Average (Kcal/hr)	
- บริเวณหลอม EAF (Indoor)	คุณฉัตร นิสะวงษ์	09:58-10:28	20.8	32.3	40.0	26.6	24.4	จัดรถโฟล์คสแตป	57.0	148.5	34.0
- ห้องควบคุม (Indoor)		10:28-11:58	19.3	29.8	33.9	23.7		- นั่ง ทำงานควบคุมเครื่องจักร	31.5		
			-	-	-	-		- นั่ง ทำงานด้วยมือ (เบา)	60.0		
			-	-	-	-		การนำผลปฏิบัติงานมาลงรายงาน			

Remark : T_{wb} = Nature Wet Bulb Temperature, T_{db} = Dry Bulb Temperature, T_{gr} = Globe Temperature, WBGT = Wet Bulb Globe Temperature Index.

^{1/} Calculate by ((WBGT x Time)+(WBGT₂ x Time)+...+(WBGT_n x Time)) / (Time + Time₂ +...+Time_n)

^{2/} Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).

(Ms.Thidarat Pukkha)
Laboratory Reviewer



(Ms.Thanida Bunnungruang)
Laboratory Supervisor

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REPORT ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กหลอด ระยะที่ 2
Measured Source : Work Place Air Temperature
Measured Date : November 28, 2025
Measured By : Mr.Noppasit Taweepornpadit
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Heat Stress Monitor/Electronic Quest Technologies Model QT-32 Serial Number TPH030060

Quotation No. : MR2025-00258
Analysis No. : 2025-AG618-002
Report No. : 2025-RABD370
Report Date : December 9, 2025

Measured Location	Employee Name	Duration	Measurement Temperature, °C					Job Description/ Activities	Work Load, WL			Standard ²⁷
			T _{WB}	T _{DB}	T _{gr}	WBGT	WBGT ¹⁷ (Avg.)		Metabolic Rate (Kcal/hr)	Metabolic Rate Average (Kcal/hr)	Workload Rate	
- บริเวณภายใน LF (Indoor) - โรงบรรจุ (Indoor)	คุณสุวิมล พูลเงิน	10:07-10:37	18.8	28.2	30.6	22.3	22.2	เดินเหล็ก - ถิ่น ทำงานด้วยเขมือมทั้ง 2 ข้าง (เบา) ตรวจสอบการทำงานบนเครื่องจักร - เดินบนพื้นราบ ควบคุมการทำงานบนเครื่องจักร - นั่ง ทำงานด้วยมือ (เบา) การไหลเวียนที่ฐานของร่างกาย	15.8 15.0 31.5 60.0	122.3	Light	34.0

Remark : T_{me} = Nature Wet Bulb Temperature, T_{db} = Dry Bulb Temperature, T_{gr} = Globe Temperature, WBGT = Wet Bulb Globe Temperature Index.

¹⁷ Calculate by ((WBGT x Time)+(WBGT₂ x Time)+...+(WBGT_n x Time)) / (Time₁ + Time₂ +...+Time_n)

²⁷ Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).

(Ms.Thidarat Pukha)
Laboratory Reviewer

(Ms.Thanida Bunngruang)
Laboratory Supervisor



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ENVIRONMENT RESEARCH & TECHNOLOGY CO., LTD.

Environment Research & Technology Company Limited

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Thung Song Hong, Lat K Si, Bangkok 10210
Tel 0-2954-7745-6 Fax 0-2954-7747
E-mail : envi@enviresearch.co.th
www.enviresearch.co.th
Head Office/Tax ID 0105 542 064 981

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกล้า ระยะที่ 2
Measured Source : Work Place Air Temperature
Measured Date : October 22, 2025
Measured By : Ms.Supawan Suwannapa
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Heat Stress Monitor/Electronic Quest Technologies Model QT-32 Serial Number TPE110019

Quotation No. : MR2025-00258
Analysis No. : 2025-AF678-001
Report No. : 2025-RAAZ620
Report Date : October 30, 2025

Measured Location	Employee Name	Duration	Measurement Temperature, °C				Job Description/ Activities	Work Load, WL			Standard ^{2'}
			T _{WB}	T _{db}	T _{tr}	WBGT ^{1'} (Avg.)		Metabolic Rate (Kcal/hr)	Metabolic Rate Average (Kcal/hr)	Workload Rate	
โรงหล่อ 1 เตาอบเหล็ก (Indoor)	คุณณัฐเลิา แจ้งดีน้า	14:03-16:03	26.8	37.1	41.6	31.2	31.2	ตรวจสอบการทำงานของเครื่องจักร - เดินบนพื้นราบ - ความเร็วเครื่องจักร - เดิน ทำงานด้วยแขนทั้ง 2 ข้าง (เบา) - การนำผลจากเซ็นเซอร์มาทำงาน	20.0 105.0 60.0	185.0 Light	34.0

Remark : T_{me} = Nature Wet Bulb Temperature, T_{db} = Dry Bulb Temperature, T_{tr} = Globe Temperature, WBGT = Wet Bulb Globe Temperature Index.

^{1'} Calculate by $(WBGT_1 \times Time_1) + (WBGT_2 \times Time_2) + \dots + (WBGT_n \times Time_n) / (Time_1 + Time_2 + \dots + Time_n)$

^{2'} Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).

[Signature]

(Ms.Thidarat Pukha)

Laboratory Reviewer



[Signature]

(Ms.Thanida Buntungrueang)

Laboratory Supervisor

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REPORT ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กกล้า รมชน 2
Measured Source : Work Place Air Temperature
Measured Date : October 22, 2025
Measured By : Ms. Supawan Suwannapa
Analyzed By : Environment Research & Technology Co., Ltd.
Measured Instrument : Heat Stress Monitor/Electronic Metrosonics Model hs-32 Serial Number MCB030005

Quotation No. : MR2025-00258
Analysis No. : 2025-AF678-002
Report No. : 2025-RAAZ622
Report Date : October 30, 2025

Measured Location	Employee Name	Duration	Measurement Temperature, °C					Job Description/ Activities	Work Load, WL			Standard ^{2'}
			T _{NWB}	T _{DB}	T _{GT}	WBGT	WBGT ^{1'} (Avg.)		Metabolic Rate (Kcal/hr)	Metabolic Rate Average (Kcal/hr)	Workload Rate	
โรงสี 2 อาคารเหล็ก (Indoor)	คุณเรก เจริญนันทการ	14:05-16:05	27.4	36.2	40.2	31.2	31.2	ตรวจสอบการทำงานของเครื่องจักร - เดินบนพื้นราบ - คอยดูแลเครื่องจักร - ยืน ทำงานด้วยแขนทั้ง 2 ข้าง (เบา) - การนำผลปฏิบัติงานมาส่งช่างภายใน	20.0 105.0 60.0	185.0	Light	34.0

Remark : T_{wa} = Nature Wet Bulb Temperature, T_{oa} = Dry Bulb Temperature, T_{gr} = Globe Temperature, WBGT = Wet Bulb Globe Temperature Index.

^{1'} Calculate by $((WBGT_1 \times Time_1) - (WBGT_2 \times Time_2) + \dots + (WBGT_n \times Time_n)) / (Time_1 + Time_2 + \dots + Time_n)$
^{2'} Ministerial Regulation of the Ministry of Labour, B.E.2559 (2016), published in the Royal Government Gazette No.133, Part 91A dated October 17, B.E.2559 (2016).

(Ms.Thidarat Pukha)
Laboratory Reviewer



(Ms.Thanida Bunnrungrueang)
Laboratory Supervisor

Signature

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Work Place Air Quality
Sampling Date : August 29, 2025
Sampling Time : 08:46-09:51
Sampling Method : APHA, NIOSH
Sampling By : Mr.Natthapon Suttimon
Analyzed By : Environment Research & Technology Co., Ltd.

Quotation No. : MR2025-00258
Analysis No. : 2025-AE486
Received Date : September 1, 2025
Analytical Date : September 1-5, 2025
Report No. : 2025-RAAV260
Report Date : September 5, 2025

Item	Sampling Area	Parameter	Method of Analysis	Unit	Result	Standard	
						Thai ^{1'}	ACGIH ^{2'}
1	หน้าเตาหลอม EAF	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	<0.10	-	10
2	หน้าเตาหลอม LF	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	<0.10	-	10
3	ห่างจากเตาหลอม EAF ประมาณ 10 เมตร	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	<0.10	-	10
4	ห่างจากเตาหลอม LF ประมาณ 10 เมตร	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	<0.10	-	10

Remark : ^{1'} The Announcement of the Department of Labour Protection and Welfare, issued under the Labour Ministerial Regulation, B.E.2556 (2013), published in the Royal Government Gazette Volume 134 Special Part 198D dated August 3, B.E.2560 (2017).

^{2'} ACGIH = American Conference of Governmental Industrial Hygienists, 2021.

(Ms.Natnicha Sermmatiwong)
Laboratory Reviewer



(Ms.Ramita Taengthai)
Laboratory Supervisor

ANALYSIS REPORT

Customer Name : Tata Steel Manufacturing (Thailand) PCL. (Branch : 00001)
Address : 351 Moo 6 WHA Chonburi Industrial Estate 1, 331 Highway Road, Bo Win, Si Racha, Chon Buri 20230
Project Name : โครงการขยายกำลังการผลิตเหล็กถลุง ระยะที่ 2
Sampling Source : Work Place Air Quality
Sampling Date : November 28, 2025
Sampling Time : 09:59-11:11
Sampling Method : APHA, NIOSH
Sampling By : Mr.Noppasit Taweepornpadit
Analyzed By : Environment Research & Technology Co., Ltd.

Quotation No. : MR2025-00258
Analysis No. : 2025-AG612
Received Date : December 2, 2025
Analytical Date : December 2-10, 2025
Report No. : 2025-RABD327
Report Date : December 10, 2025

Item	Sampling Area	Parameter	Method of Analysis	Unit	Result	Standard	
						Thai ^{1'}	ACGIH ^{2'}
1	หน้าเตาหลอม EAF	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	0.55	-	10
2	หน้าเตาหลอม LF	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	0.31	-	10
3	ห่างจากเตาหลอม EAF ประมาณ 10 เมตร	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	0.56	-	10
4	ห่างจากเตาหลอม LF ประมาณ 10 เมตร	Sulfur Dioxide	Titration	ppm	<0.11	5	0.25
		Inhalable Dust	Gravimetric	mg/m ³	0.31	-	10

Remark : ^{1'} The Announcement of the Department of Labour Protection and Welfare, issued under the Labour Ministerial Regulation, B.E.2556 (2013), published in the Royal Government Gazette Volume 134 Special Part 198D dated August 3, B.E.2560 (2017).

^{2'} ACGIH = American Conference of Governmental Industrial Hygienists, 2021.

(Ms.Naticha Sermmatiwong)
Laboratory Reviewer



(Ms.Ramita Taengthai)
Laboratory Supervisor