

เอกสารแนบ 10

โปรแกรมการตรวจสอบและซ่อมบำรุงอุปกรณ์ ตามอายุการใช้งาน



INSPECTION REPORT

FOR

**ESSO (THAILAND) PUBLIC
COMPANY LIMITED**

NON-DESTRUCTIVE TESTING (NDT)

ON

**LOADING ARM
BI-1, B-2 AND BI-3**

AT

**ESSO SRIRACHA REFINERY PLANT,
CHONBURI**

18-21 AND 24 APRIL 2023

INSPECTION REPORT
FOR
ESSO (THAILAND) PUBLIC
COMPANY LIMITED
NON-DESTRUCTIVE TESTING (NDT)
ON
LOADING ARM
BI-1, B-2 AND BI-3
AT
ESSO SRIRACHA REFINERY PLANT,
CHONBURI

18-21 And 24 April 2023
Report No: 2304019_Rev.00

PREPARED BY
DEXON TECHNOLOGY PUBLIC CO., LTD.

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Ban Chang, 21130 Rayong
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Tel: 033 012484-7

Prepared: Mr. Archakit Sangthong

Date: May 10, 2023

QA/QC

Reviewed: Mr. Thanabodin Bangthamarat

Date: May 10, 2023

Final

Approved: Mr. Amnart Sununkingpech

Date: May 10, 2023



CONTENTS

1. INTRODUCTION
2. INSPECTION SUMMARY
- 3 DETAILED LOGS
- 4 CERTIFICATIONS

1. INTRODUCTION

At the request of Esso (Thailand) Public Company Limited, DEXON Technology Public Company Limited, performed Visual Inspection and Ultrasonic Thickness Measurements (UTM) on loading arm at Esso Sriracha Refinery plant, Chonburi province. The inspection date was 18-24 April 2023 (5 days) by 5 inspectors.

2. INSPECTION SUMMARY

To evaluate the condition of loading arm, therefore, NDT method was utilized. The inspection results were summarized in the following table.

Item	Equipment	Finding			
		VI	UTM	Paint repair	Remark
1	3"-L-1105 A Loading arm	/	/	/	BI-1
2	8"-L-1105 A Loading arm	/	/	/	BI-1
3	8"-L-1106 A Loading arm	/	/	/	BI-1
4	8"-LA-1108 A Loading arm	/	/	/	BI-1
5	3"-L-1104 B Loading arm	/	/	/	BI-2
6	8"-L-1101 B Loading arm	/	/	/	BI-2
7	8"-L-1102 B Loading arm	/	/	/	BI-2
8	8"-L-1103 B Loading arm	/	/	/	BI-2
9	8"-L-1104 B Loading arm	/	/	/	BI-2
10	1" LA-B N2	/	/	No repair	BI-3
11	1" LA-B Vapor return	/	/	No repair	BI-3
12	1"-LA-P Vapor return	/	/	No repair	BI-3
13	6"-LA-B Loading arm	/	/	/	BI-3
14	8"-LA-1107 A Loading arm	/	/	No repair	BI-3
15	8"-LA-B Loading arm	/	/	No repair	BI-3
16	8"-LA-P Loading arm	/	/	No repair	BI-3

3. DETAILED LOGS

On the following pages inspection logs detailing the maintenance findings can be found.

BI-1

VI Report

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-1

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Inspection of

3" L-1105 A Loading arm

Project No

2304019

Extent

External condition

Drawing No

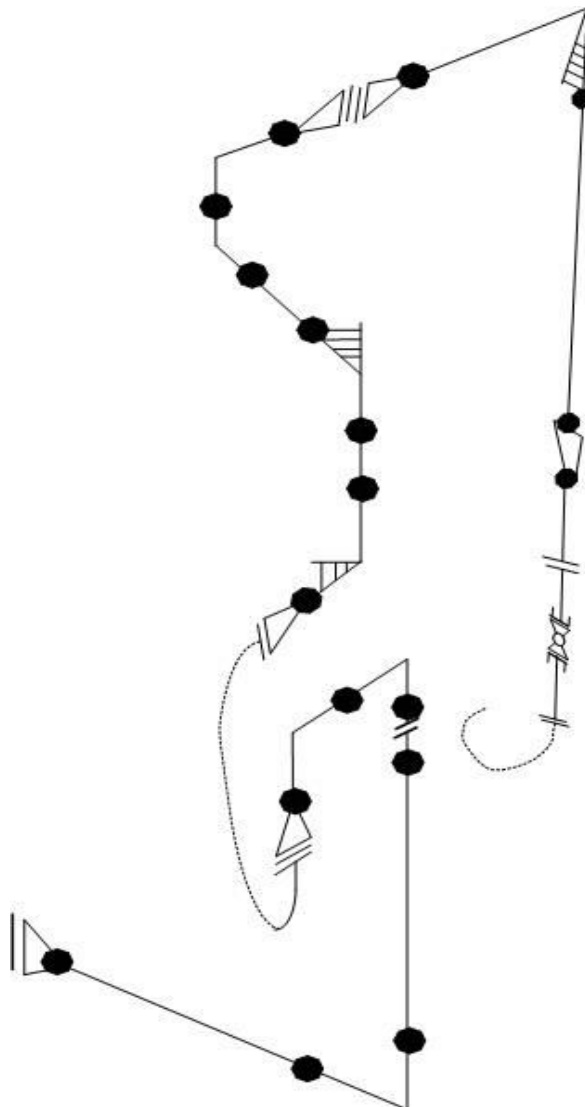
Material

Carbon Steel

Surface

Paint

Reference



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18-Apr-23

Date

Sign

Sign



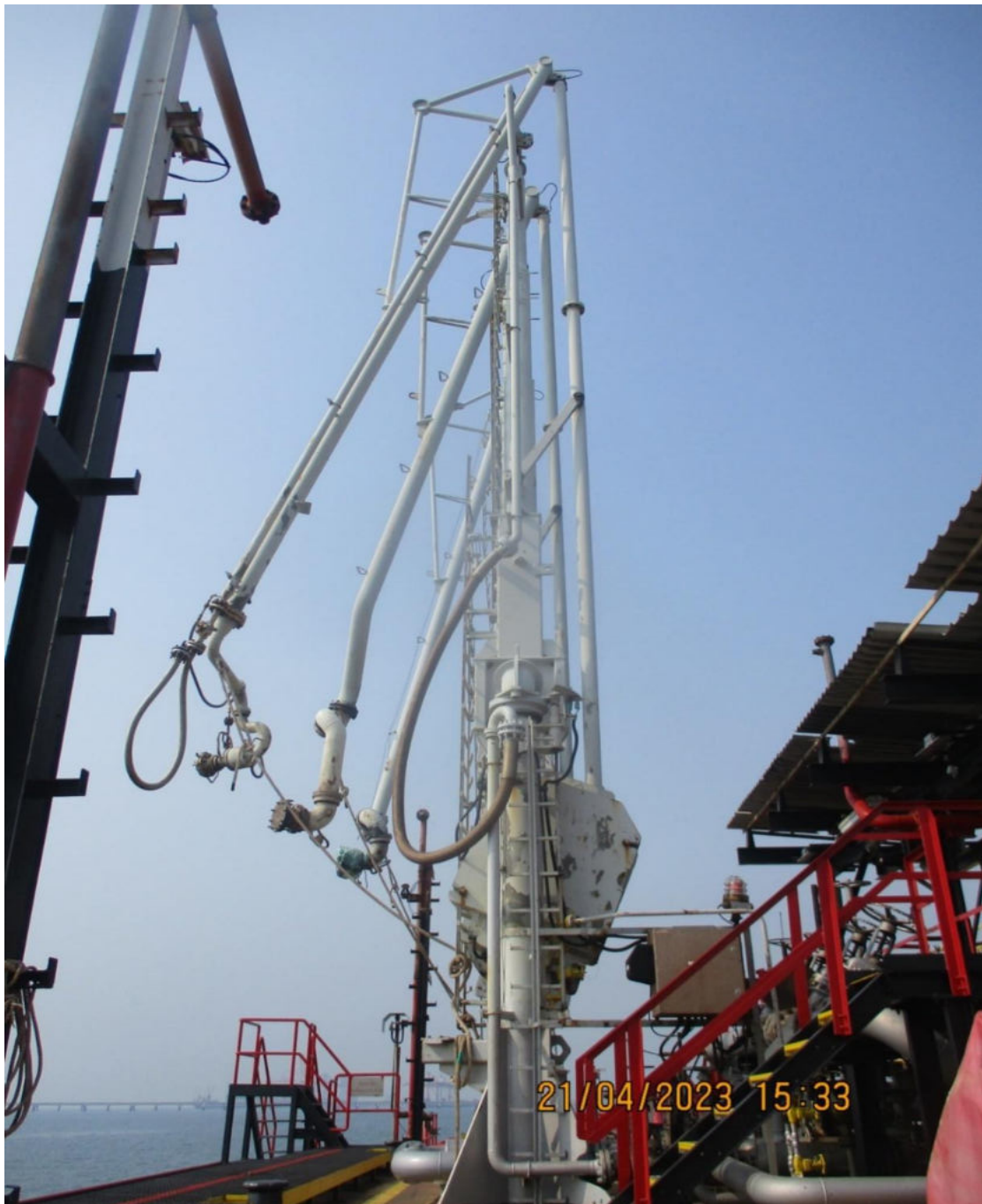
VISUAL INSPECTION REPORT

Addition



Client Name	ESSO (Thailand) Public Company Limited	Location	Esso Refinery Plant	Inspection Date	18-Apr-23
Client Rep. Name	Khun Wisanu Sa-Nguandee	Test Site	BI-1	Page No.	2 of 6
Inspection of	3" L-1105 A Loading arm			Project No	2304019
Extent	External condition			Drawing No	-
Material	Carbon Steel	Surface	Paint		

General view



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-1

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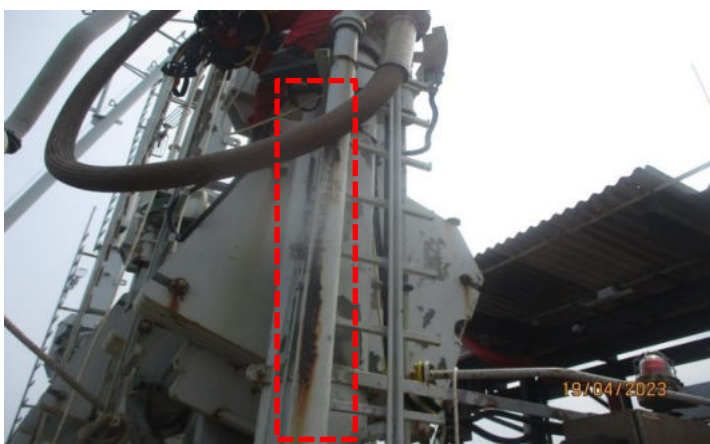

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Inspection of

3" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Painting damage</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition flexible hose</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

3" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name

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Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

3" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-1

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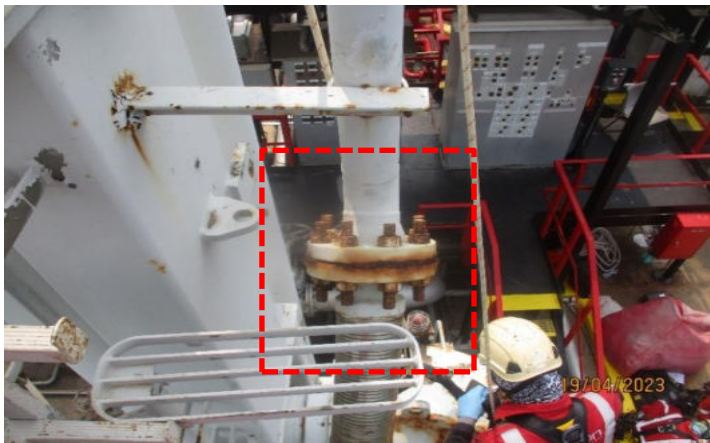


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Inspection of

3" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>3" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-1

Page No.

1 of 6

Inspection of

8" L-1105 A Loading arm

Project No

2304019

Extent

External condition

Drawing No

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18-Apr-23

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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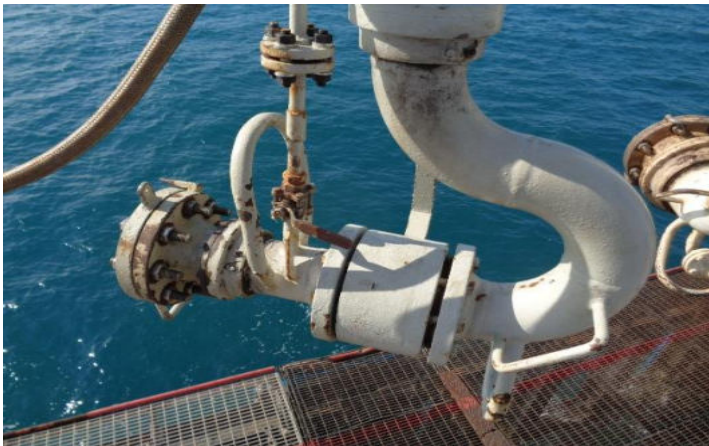
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Inspection of

8" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-1

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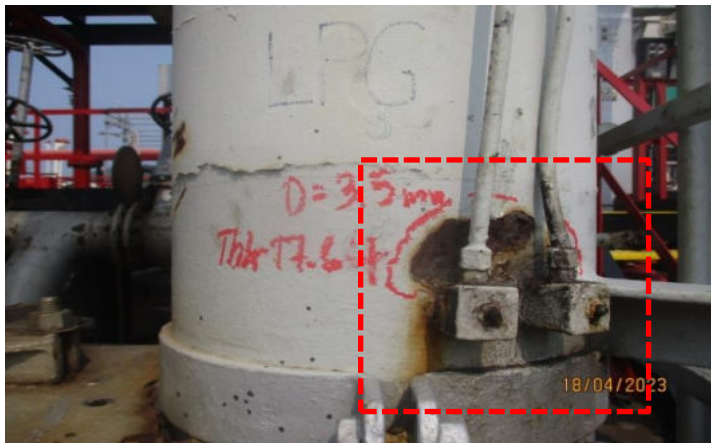

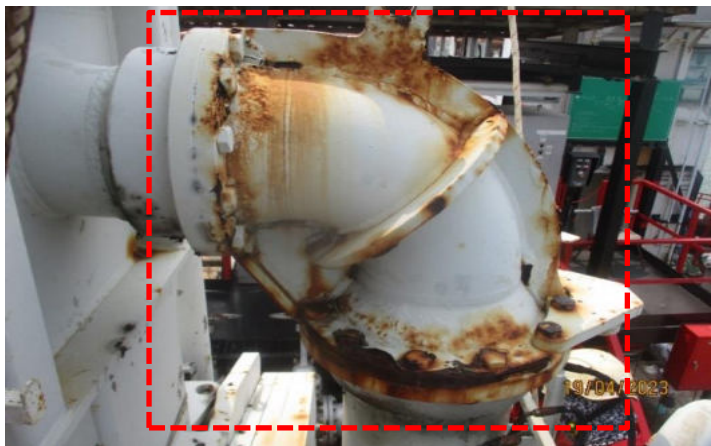
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Inspection of

8" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Corrosion on pipe, good area 17.67 mm., depth = 3.50 mm.</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1105 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1105 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1106 A Loading arm

Project No

2304019

Extent

External condition

Drawing No

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18-Apr-23

Date

Sign

Sign

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1106 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Corrosion on Counterweight and stud bolt nuts.</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1106 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-1

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Inspection of

8" L-1106 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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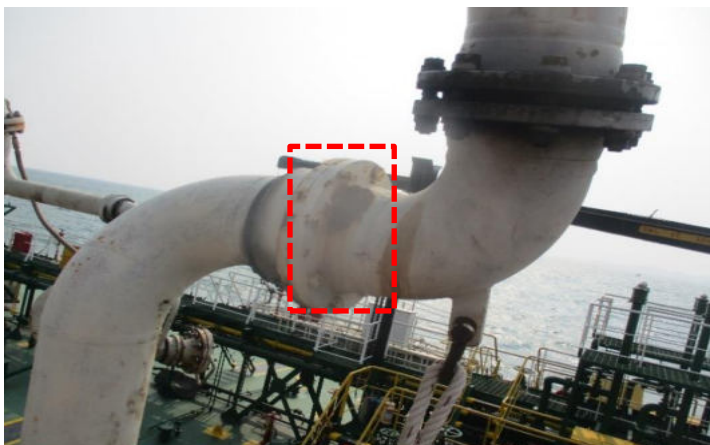

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Inspection of

8" L-1106 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Was found corrosion on Pipe.</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Was found corrosion on Pipe.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1106 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1106 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

VISUAL INSPECTION REPORT



Client Name	ESSO (Thailand) Public Company Limited	Location	Esso Refinery Plant	Inspection Date	18-Apr-23
Client Rep. Name	Khun Wisanu Sa-Nguandee	Test Site	BI-1	Page No.	1 of 7
Inspection of	8" L-1108 A Loading arm			Project No	2304019
Extent	External condition			Drawing No	-
Material	Carbon Steel	Surface	Paint		

General view



Inspection Conclusion

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Inspection Acceptance

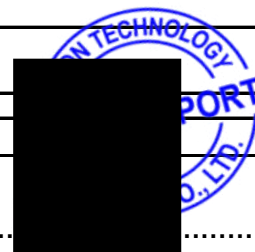
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Inspector Name	Mr.Archakit S. / Mr.Thanapol Suk.
Client Representative	Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

--

Date	18-Apr-23	Sign	
Date		Sign	



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1108 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1108 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1108 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1108 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1108 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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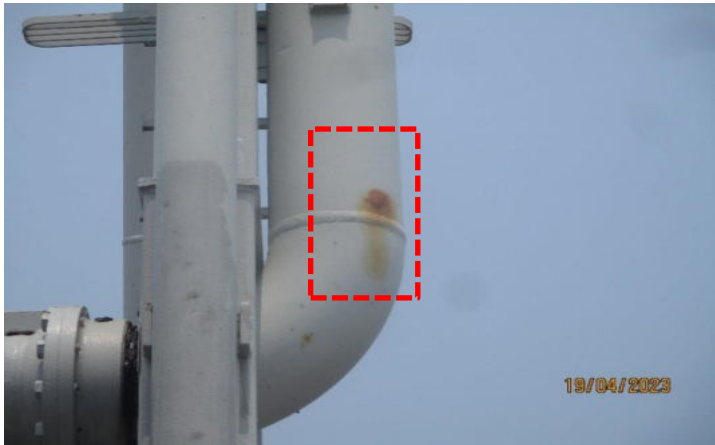


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Inspection of

8" L-1108 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1108 A Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

UTM Report

ULTRASONIC THICKNESS MEASUREMENT



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of Item

3" L-1105 A Loading arm

Extent

Spot check as marked on drawing

Material

Carbon Steel

Procedure No

P-INT-12

Equipment Type / Serial Number

Olympus 38DL Plus / 120465607/ 130718009

Probe

D790M

Crystal Diameter

10 mm.

Location

Esso Refinery Plant

Test Site

BI-1

Drawing No

N/A

Surface (Paint / No Paint)

Paint

Mode (Normal / Echo-Echo)

Echo-Echo

Couplant Type

N/A

Probe Type / Frequency

T/R

Inspection Date

18-Apr-23

Page No.

1 of 2

Project No

2304019

Visual Inspection carried out

☐ Yes ☒ No

Nom. Thickness

-

Temperature

N/A

Acceptance Criteria

Recorded only

Ref. Block (Serial number)

150611-2

Range

20 to 100

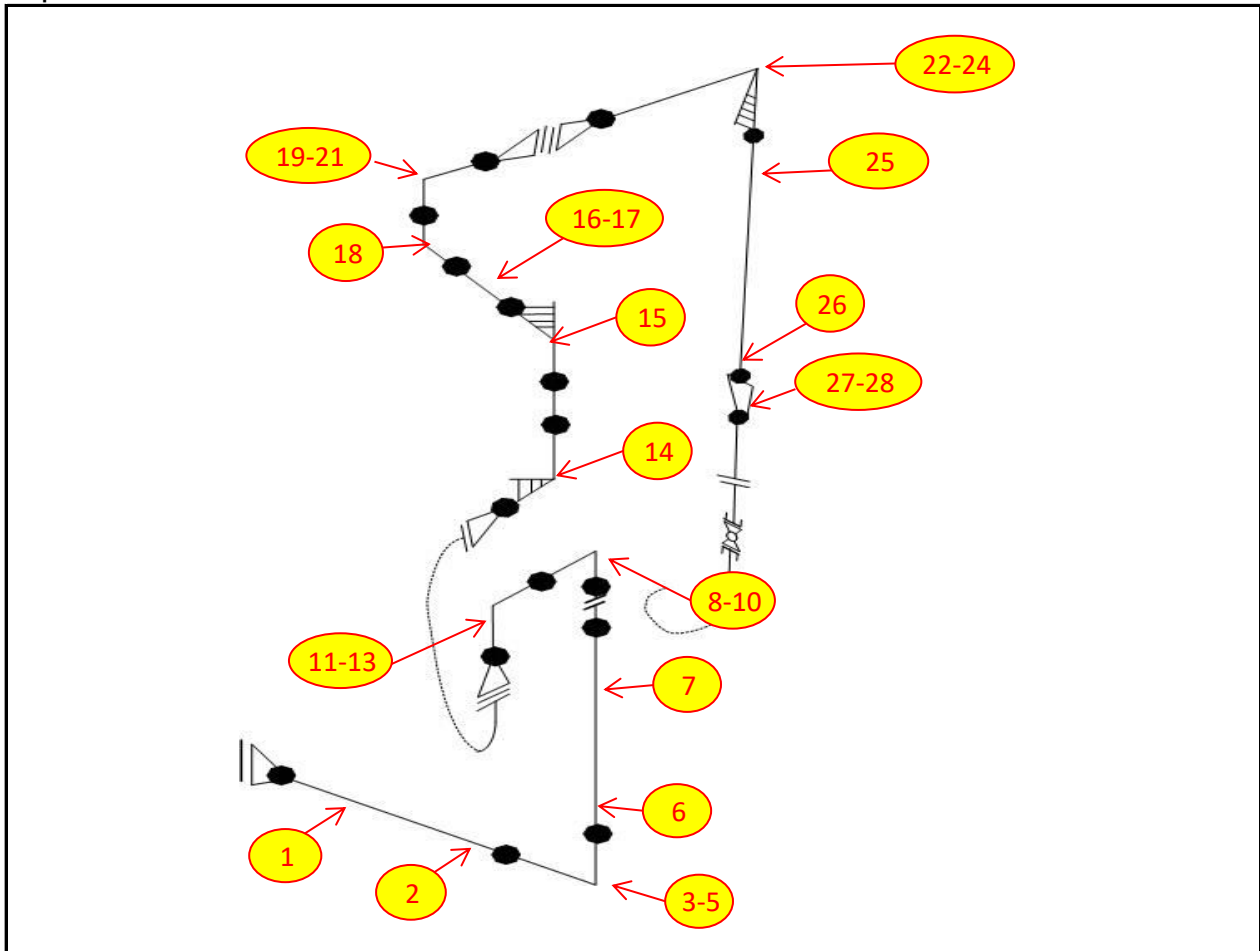
Calibration Low / High Step

5 mm. 10 mm.

Visual Inspection Observation

No visible damage was found.

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name

Mr. Tinnapud K.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date

18-Apr-23

Date

Sign

.....

Sign

.....



ULTRASONIC THICKNESS MEASUREMENT **DEXON** TECHNOLOGY

Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

3" L-1105 A Loading arm

Inspection Comment

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18-Apr-23

Page No.

2

of

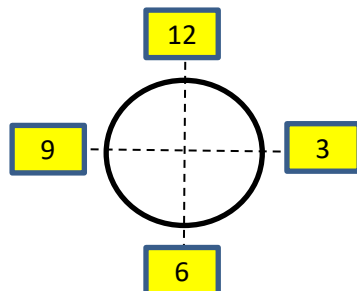
2

Project No

2304019

Point	12	3	6	9
Pipe 1	5.53	5.51	5.49	5.34
Pipe 2	5.75	5.45	5.42	5.57
Elbow(90) 3	5.78	6.07	6.09	6.16
Elbow(90) 4	5.74	5.91	6.25	6.30
Elbow(90) 5	5.86	6.19	5.79	6.20
Pipe 6	5.61	5.40	5.69	5.52
Pipe 7	5.46	5.82	5.34	5.30
Elbow(90) 8	5.30	6.36	6.07	5.89
Elbow(90) 9	5.30	5.90	6.10	6.42
Elbow(90) 10	5.48	5.87	5.54	6.19
Elbow(90) 11	5.41	5.92	6.29	6.15
Elbow(90) 12	5.29	5.96	6.24	5.94
Elbow(90) 13	5.66	5.89	6.13	6.10
Elbow(45) 14	5.72	6.12	5.41	5.79
Elbow(45) 15	5.63	5.58	5.96	5.65
Pipe 16	5.01	5.92	5.46	6.16
Pipe 17	5.78	5.99	5.54	6.12
Elbow(45) 18	5.56	6.02	5.79	5.80
Elbow(90) 19	5.24	6.11	4.94	5.37
Elbow(90) 20	5.38	6.23	5.87	5.33
Elbow(90) 21	5.54	6.41	5.36	5.40
Elbow(90) 22	4.97	5.46	5.16	5.75
Elbow(90) 23	4.82	5.77	5.40	5.70
Elbow(90) 24	5.02	5.74	5.60	5.07
Pipe 25	4.71	5.46	4.44	5.07
Pipe 26	5.94	5.18	5.41	5.87
Reduce 27	5.98	5.82	5.73	5.88
Reduce 28	5.64	5.72	5.71	5.90

Direction



ULTRASONIC THICKNESS MEASUREMENT

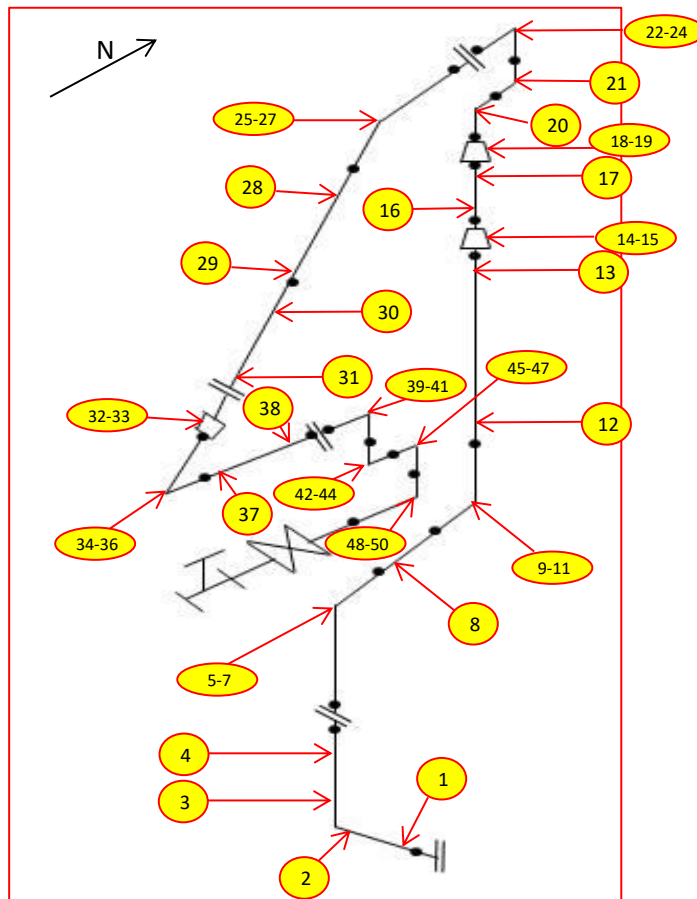


Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-1		Page No. 1 of 3	
Inspection of Item 8" L-1105 A Loading arm				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Acceptance Criteria Recorded only	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/ 130718009		Couplant Type N/A		Ref. Block (Serial number) 150611-2	
Probe D790M	Crystal Diameter 10 mm.	Probe Type / Frequency T/R	Range 20 to 100	Calibration Low / High Step 5 mm. 20 mm.	

Visual Inspection Observation

No visible damage was found.

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name Mr. Tinnapud K.
Client Representative Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date 18 April, 2023	Sign
Date	Sign



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18 April 2023

Page No.

2 of 3

Project No

2304019

Inspection of

8" L-1105 A Loading arm

Inspection Comment

Point	12	3	6	9
Pipe 1	10.42	10.95	11.30	10.99
Pipe 2	10.59	10.79	11.20	10.99
Pipe 3	17.67	17.02	17.15	17.22
Pipe 4	17.21	17.07	17.62	17.56
Elbow(90) 5	13.34	14.60	13.76	13.20
Elbow(90) 6	13.46	14.51	13.02	13.52
Elbow(90) 7	13.52	13.97	13.00	13.95
Pipe 8	15.84	16.42	16.77	16.88
Elbow(90) 9	16.54	16.04	16.33	16.49
Elbow(90) 10	16.24	16.34	16.52	16.08
Elbow(90) 11	16.47	16.48	15.97	16.33
Pipe 12	16.67	16.80	16.24	16.64
Pipe 13	17.26	16.56	16.72	17.19
Reduce 14	20.06	19.06	18.96	19.98
Reduce 15	20.00	19.98	19.96	19.98
Pipe 16	16.35	17.16	16.65	14.23
Pipe 17	15.37	17.54	16.67	16.78
Reduce 18	23.61	23.87	24.23	23.26
Reduce 19	23.26	24.26	24.63	24.84
Elbow(45) 20	15.33	17.54	16.67	16.87
Elbow(45) 21	15.50	17.34	15.95	17.34
Elbow(90) 22	19.65	19.87	19.46	19.35
Elbow(90) 23	26.64	18.11	21.55	19.94
Elbow(90) 24	16.94	18.44	20.01	20.06
Elbow(90) 25	18.87	18.08	19.45	18.23
Elbow(90) 26	**-	20.48	19.87	20.11
Elbow(90) 27	18.17	20.12	20.23	21.21
Pipe 28	10.63	10.71	10.96	10.85
Pipe 29	11.04	11.63	10.47	10.58
Pipe 30	10.59	10.49	10.78	10.46
Pipe 31	11.23	11.12	11.53	11.46
Reduce 32	7.61	7.72	7.41	7.23
Reduce 33	9.53	9.42	9.26	9.47
Elbow(90) 34	15.12	13.42	17.47	15.49
Elbow(90) 35	13.46	13.39	15.46	16.41
Elbow(90) 36	15.78	15.76	15.71	16.49
Pipe 37	8.61	8.42	8.39	8.79
Pipe 38	8.71	8.42	8.69	8.55
Elbow(90) 39	8.81	8.59	8.47	8.42
Elbow(90) 40	8.61	8.32	8.69	8.35

****Remark :** Obstructed by pipe support !

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18 April 2023

Page No.

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Project No

2304019

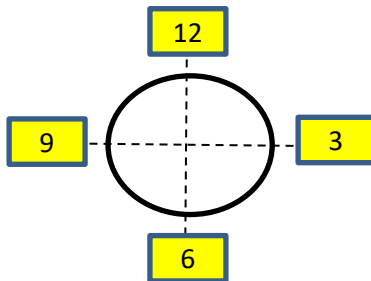
Inspection of

8" L-1105 A Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(90) 41	8.74	8.47	8.59	8.42
Elbow(90) 42	8.87	8.95	9.12	9.11
Elbow(90) 43	8.42	8.46	9.65	8.87
Elbow(90) 44	8.52	8.59	8.54	8.81
Elbow(90) 45	8.36	8.22	8.31	8.32
Elbow(90) 46	8.47	8.98	9.59	9.42
Elbow(90) 47	8.59	8.74	9.23	9.11
Elbow(90) 48	8.49	8.42	8.36	8.61
Elbow(90) 49	8.21	8.42	8.46	8.41
Elbow(90) 50	8.12	8.87	8.76	7.76

Direction



ULTRASONIC THICKNESS MEASUREMENT



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of Item

8" L-1106 A Loading arm

Extent

Spot check as marked on drawing

Material

Carbon Steel

Procedure No

P-INT-12

Equipment Type / Serial Number

Olympus 38DL Plus / 120465607/ 130718009

Probe

D790M

Crystal Diameter

10 mm.

Location

Esso Refinery Plant

Test Site

BI-1

Drawing No

N/A

Surface (Paint / No Paint)

Paint

Mode (Normal / Echo-Echo)

Echo-Echo

Couplant Type

N/A

Probe Type / Frequency

T/R

Inspection Date

18 April, 2023

Page No.

1 of 3

Project No

2304019

Visual Inspection carried out

☐ Yes ☒ No

Nom. Thickness

-

Temperature

N/A

Acceptance Criteria

Recorded only

Ref. Block (Serial number)

150611-2

Range

20 to 100

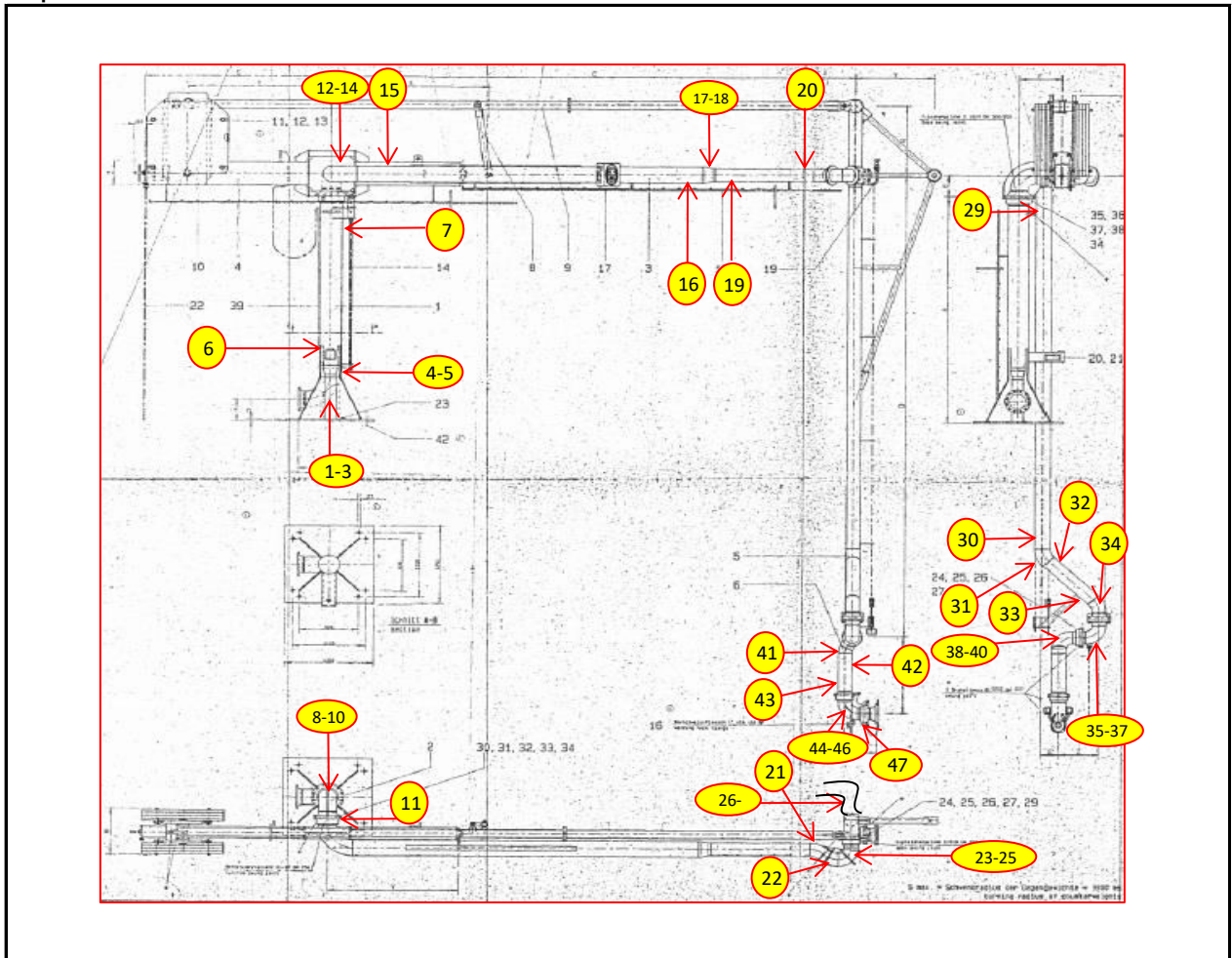
Calibration Low / High Step

5 mm. 20 mm.

Visual Inspection Observation

No visible damage was found.

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name

Mr. Tinnapud K.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date

18 April 2023

Date

Sign

.....

Sign

.....



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18 April 2023

Page No.

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Project No

2304019

Inspection of

8" L-1106 A Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(90) 1	19.14	19.71	18.84	19.23
Elbow(90) 2	19.64	19.38	19.78	19.56
Elbow(90) 3	19.38	19.63	19.67	19.55
Reduce 4	22.42	23.33	23.39	22.46
Reduce 5	22.16	22.35	21.32	20.89
Pipe 6	16.45	16.68	17.32	16.76
Pipe 7	16.73	17.89	17.16	17.43
Elbow(90) 8	14.65	15.22	14.65	15.24
Elbow(90) 9	14.71	15.87	14.46	15.76
Elbow(90) 10	14.93	15.47	15.82	16.48
Pipe 11	14.47	15.15	15.27	15.52
Elbow(90) 12	15.12	16.27	16.24	16.27
Elbow(90) 13	15.22	16.05	16.17	16.15
Elbow(90) 14	15.40	15.30	15.35	15.43
Pipe 15	15.49	16.15	16.42	16.44
Pipe 16	16.36	16.43	16.25	16.35
Reduce 17	18.47	19.64	18.58	18.69
Reduce 18	18.15	18.23	19.53	19.47
Pipe 19	14.35	14.76	14.61	14.23
Pipe 20	14.46	14.87	14.95	14.74
Elbow(45) 21	15.63	15.61	15.42	15.45
Elbow(45) 22	15.59	15.96	15.74	15.85
Elbow(90) 23	17.01	17.23	17.87	17.74
Elbow(90) 24	16.95	19.62	19.67	19.63
Elbow(90) 25	17.65	16.96	17.89	16.32
Elbow(90) 26	17.29	17.61	18.65	19.41
Elbow(90) 27	17.20	18.74	19.15	18.40
Elbow(90) 28	19.21	19.51	19.62	19.65
Pipe 29	12.76	12.75	13.17	13.72
Pipe 30	12.66	12.67	12.69	12.68
Elbow(45) 31	12.41	12.36	12.20	12.85
Pipe 32	12.76	12.75	13.17	13.72
Pipe 33	12.59	12.71	12.94	12.64
Elbow(45) 34	12.82	12.93	12.71	13.06
Elbow(90) 35	13.95	14.27	14.32	14.16
Elbow(90) 36	13.22	13.97	13.70	14.24
Elbow(90) 37	13.49	13.92	13.06	13.87
Elbow(90) 38	13.35	14.32	13.38	14.33

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18 April 2023

Page No.

3 of 3

Project No

2304019

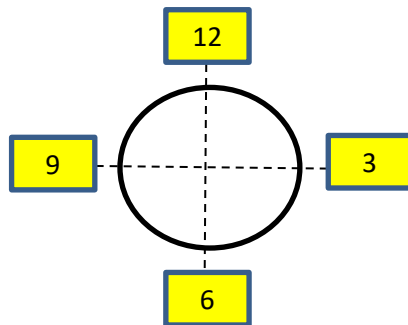
Inspection of

8" L-1106 A Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(90) 39	13.37	14.49	13.19	14.04
Elbow(90) 40	13.22	14.29	13.23	14.22
Elbow(45) 41	12.71	12.77	12.96	12.52
Pipe 42	12.72	12.76	12.48	12.56
Pipe 43	12.82	12.57	12.52	12.71
Elbow(90) 44	13.47	14.47	14.59	14.56
Elbow(90) 45	13.87	14.12	13.86	14.21
Elbow(90) 46	14.15	14.47	14.73	14.74
Drain 47	4.53	4.61	4.78	4.32

Direction



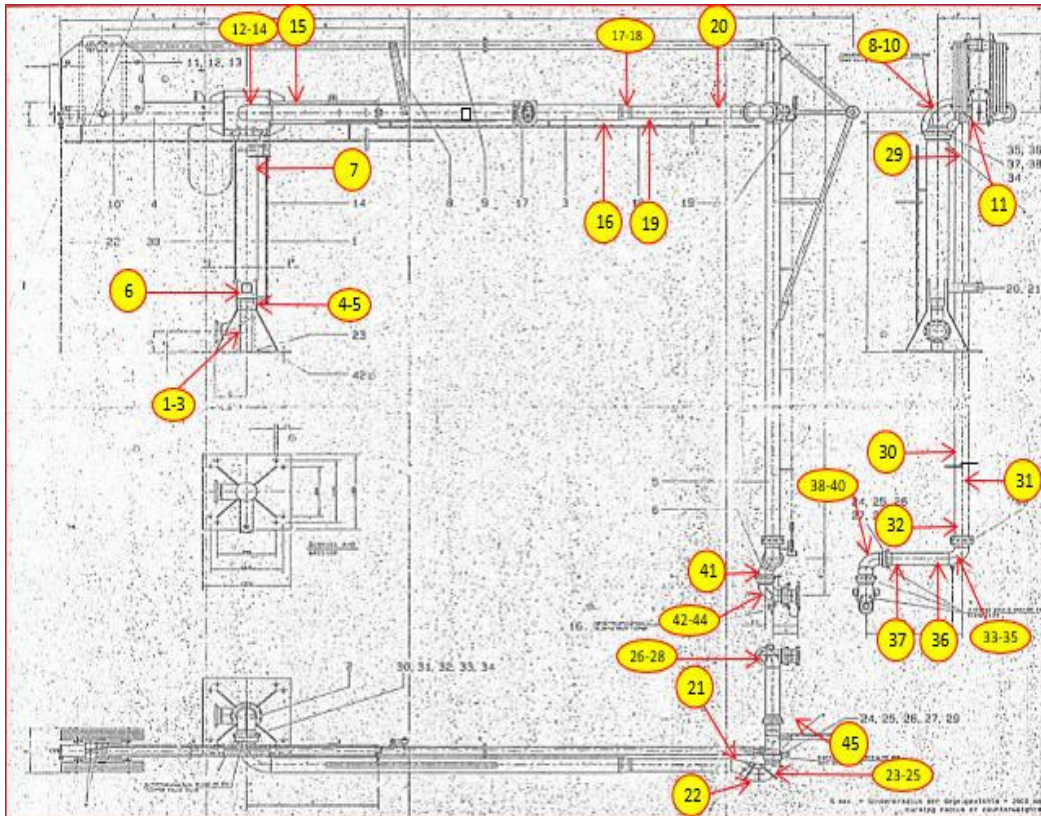
ULTRASONIC THICKNESS MEASUREMENT



Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-1		Page No. 1 of 3	
Inspection of Item 8" L-1108 A Loading arm				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High Step 5 mm. 20 mm.	

Visual Inspection Observation
No visible damage was found.

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name
Mr. Tinnapud K.

Client Representative
Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date
18 April, 2023

Date

Sign

Sign



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18 April 2023

Page No.

2 of 3

Project No

2304019

Inspection of

8" L-1108 A Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(90) 1	20.25	20.71	20.03	20.02
Elbow(90) 2	19.85	21.13	22.78	21.45
Elbow(90) 3	19.36	21.38	20.07	20.01
Reduce 4	23.86	23.24	23.52	23.98
Reduce 5	22.03	21.68	21.59	20.05
Pipe 6	16.68	16.82	16.91	16.71
Pipe 7	17.12	17.23	17.94	17.27
Elbow(90) 8	16.05	15.90	15.88	15.76
Elbow(90) 9	16.03	16.12	14.86	15.92
Elbow(90) 10	15.96	15.96	15.42	15.61
Pipe 11	16.28	16.29	16.38	16.22
Elbow(90) 12	14.61	15.77	16.89	15.81
Elbow(90) 13	14.90	15.90	16.89	15.97
Elbow(90) 14	16.18	16.06	16.34	16.00
Pipe 15	17.30	16.15	16.65	17.28
Pipe 16	16.20	16.95	16.98	16.21
Reduce 17	18.97	18.89	19.11	19.03
Reduce 18	20.02	20.01	20.00	19.95
Pipe 19	15.46	15.49	15.90	16.56
Pipe 20	16.33	15.89	15.23	15.18
Elbow(45) 21	19.18	21.47	20.23	22.12
Elbow(45) 22	18.92	23.33	21.63	21.93
Elbow(90) 23	17.70	18.49	19.85	18.52
Elbow(90) 24	16.89	18.74	20.11	18.71
Elbow(90) 25	17.61	18.03	20.03	17.87
Elbow(90) 26	18.14	22.02	22.93	20.04
Elbow(90) 27	**_	22.23	22.34	22.23
Elbow(90) 28	18.18	20.06	22.13	19.96
Pipe 29	13.51	13.74	13.16	13.67
Pipe 30	13.41	12.89	13.14	12.85
Pipe 31	12.47	12.70	12.79	12.73
Pipe 32	13.47	13.75	13.29	13.92
Elbow(90) 33	13.12	13.87	13.47	13.86
Elbow(90) 34	13.61	13.86	13.72	13.65
Elbow(90) 35	12.89	13.61	13.62	14.12

****Remark :** Obstructed by pipe support!

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-1

Inspection Date

18 April 2023

Page No.

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Project No

2304019

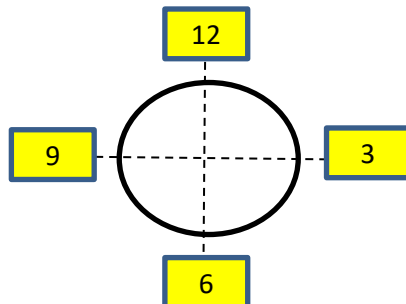
Inspection of

8" L-1108 A Loading arm

Inspection Comment

Point	12	3	6	9
Pipe 36	14.12	13.22	12.82	12.69
Pipe 37	14.12	13.56	12.74	12.71
Elbow(90) 38	13.89	14.26	14.22	13.12
Elbow(90) 39	15.12	14.74	14.42	14.36
Elbow(90) 40	14.87	14.12	14.87	14.22
Elbow(45) 41	13.12	13.59	13.26	13.11
Elbow(90) 42	13.28	14.12	13.38	14.12
Elbow(90) 43	13.15	14.39	14.26	14.23
Elbow(90) 44	12.44	13.87	14.76	14.12
Drain 45	4.39	4.42	4.59	4.23

Direction



BI-2

VI Report

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

Page No.

1

of

6

Inspection of

3" 1104 B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18-Apr-23

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

Page No.

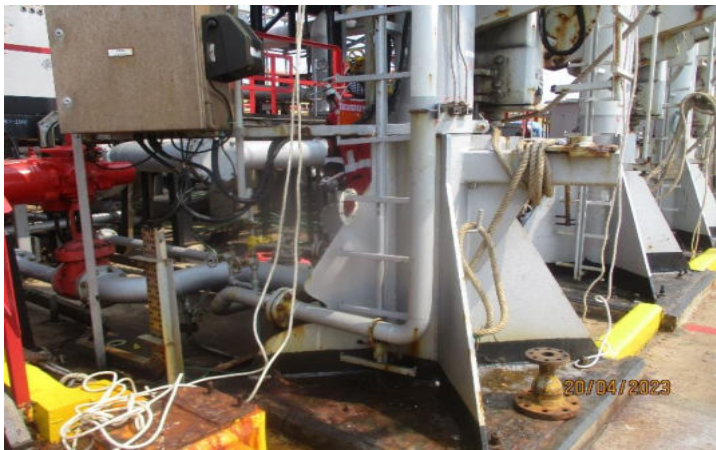


2 of 6

Inspection of

3" 1104 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition flexible hose.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

Page No.

3

of




6

Inspection of

3" 1104 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

Page No.




4 of 6

Inspection of

3" 1104 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

3" 1104 B Loading arm

Location

Esso Refinery Plant

Test Site

BI-2

Inspection Date

18-Apr-23

Page No.




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of

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Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18-Apr-23

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

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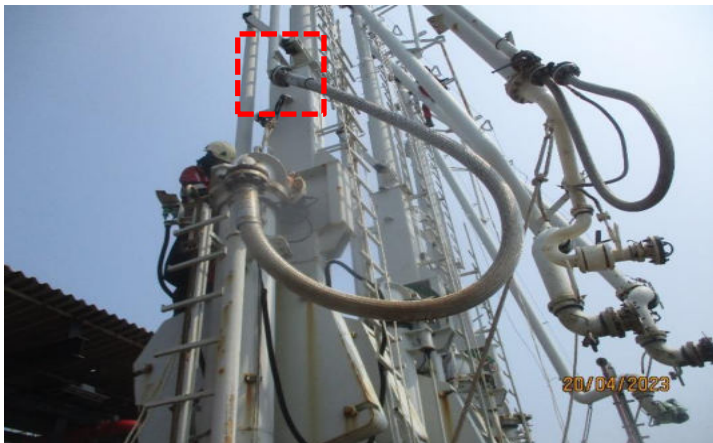


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Inspection of

3" 1104 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on flange stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>3" 1104 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1101 B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

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18/Apr/2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1101 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow. Good area 19.20 mm. Depth = 4.03 mm.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Counterweight and stud bolt nuts.</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

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Client Rep. Name

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Inspection of

8" L-1101 B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

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Client Name	Location	Inspection Date
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8" L-1101 B Loading arm	2304019	




Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18/Apr/2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	5 of 9
Inspection of	Project No	
8" L-1101 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Was found corrosion on Pipe Support.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18/Apr/2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1101 B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

PICTURE LOG

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Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18/Apr/2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	7 of 9
Inspection of	Project No	
8" L-1101 B Loading arm	2304019	




Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe Support.</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18/Apr/2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	8 of 9
Inspection of	Project No	
8" L-1101 B Loading arm	2304019	

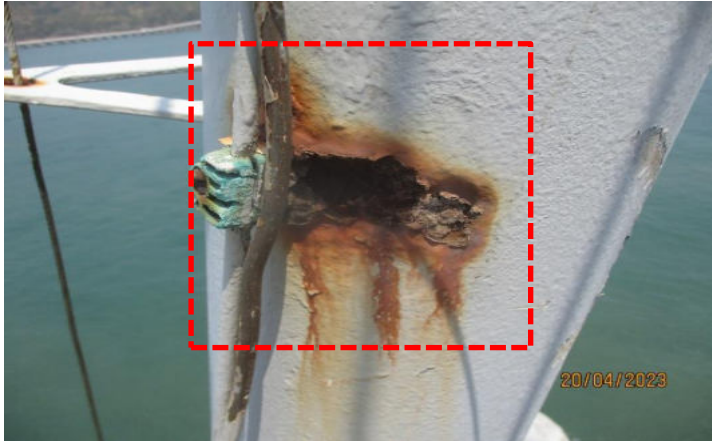

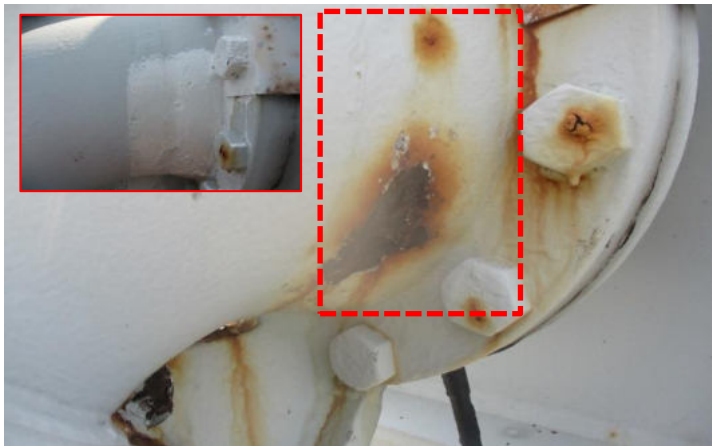
Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

PICTURE LOG

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Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18/Apr/2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	9 of 9
Inspection of	Project No	
8" L-1101 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe Support.</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1101 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow. And After paint repair</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow. Good area 20.56 mm. Depth = 5.96 mm.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow. Good area 20.56 mm. Depth = 5.96 mm.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

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18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Counterweight and stud bolt nuts.</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Support Counterweight.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Counterweight and stud bolt nuts.</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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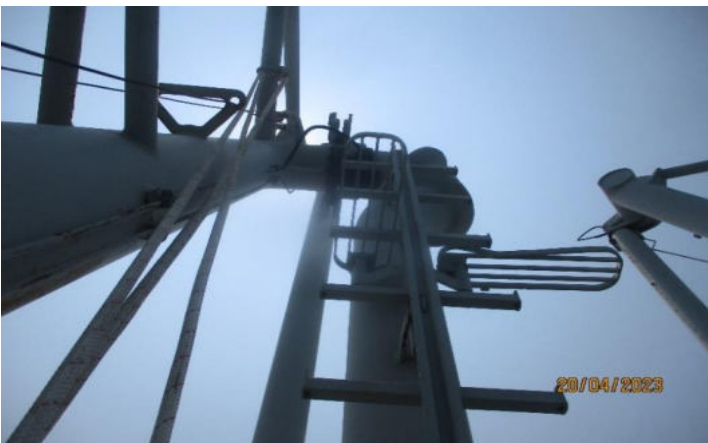
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Inspection of

8" L-1102 B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



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8" L-1102 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

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18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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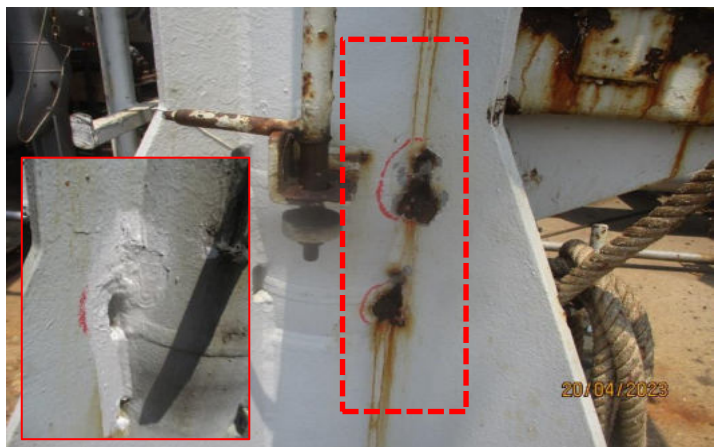
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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow. Good area 20.56 mm. Depth = 5.96 mm.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>After paint repair.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Structure support.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1102 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on pipe. Good area 17.75 mm. Depth = 4.50 mm.</p>
	<p>Name of part:</p> <p>8" L-1102 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Structure support</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Was found corrosion on Elbow.</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Was found corrosion on Elbow. Good area 19.80 mm. Depth = 4.92 mm.</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Counter eight and stud bolt nuts.</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Counter eight and stud bolt nuts.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1103 B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

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Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
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8" L-1103 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Flange stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Flange stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Flange stud bolt & nuts area.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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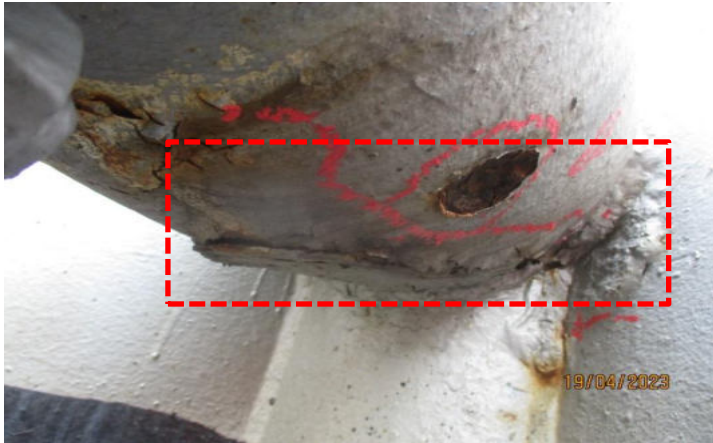

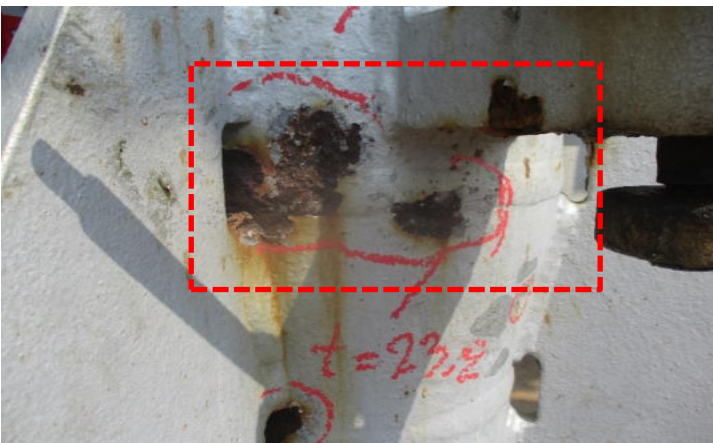
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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Elbow. Good area 19.80 mm. Depth = 4.92 mm.</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Structure support.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

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Inspection of

8" L-1103 B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>8" L-1103 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8" L-1104 B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

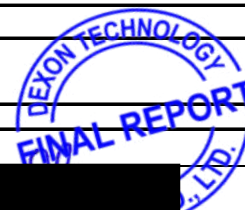
Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-2

Page No.

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of




7

Inspection of

8" L-1104 B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	3 of 7
Inspection of	Project No	
8" L-1104 B Loading arm	2304019	




Picture	Remark
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Flange stud bolt & nuts area.</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	4 of 7
Inspection of	Project No	
8" L-1104 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Counter weight and stud bolt nuts.</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	5 of 7
Inspection of	Project No	
8" L-1104 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8" L-1104 B Loading arm

Location

Esso Refinery Plant

Test Site

BI-2

Inspection Date

18 April 2023

Page No.

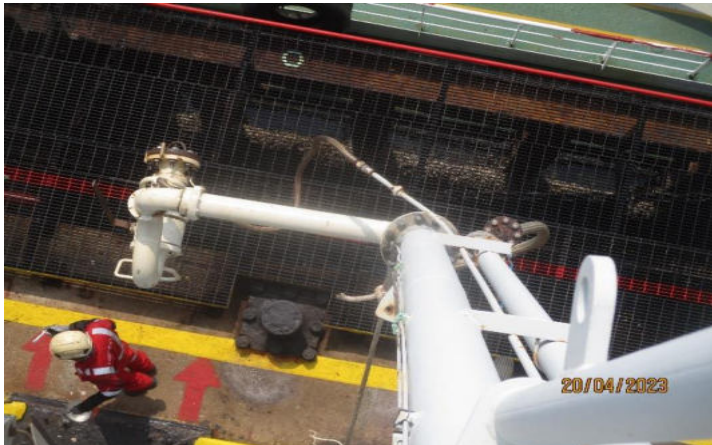


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of

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Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe Elbow.</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-2	7 of 7
Inspection of	Project No	
8" L-1104 B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>Corrosion on Flange stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>
	<p>Name of part:</p> <p>8" L-1104 B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

UTM Report

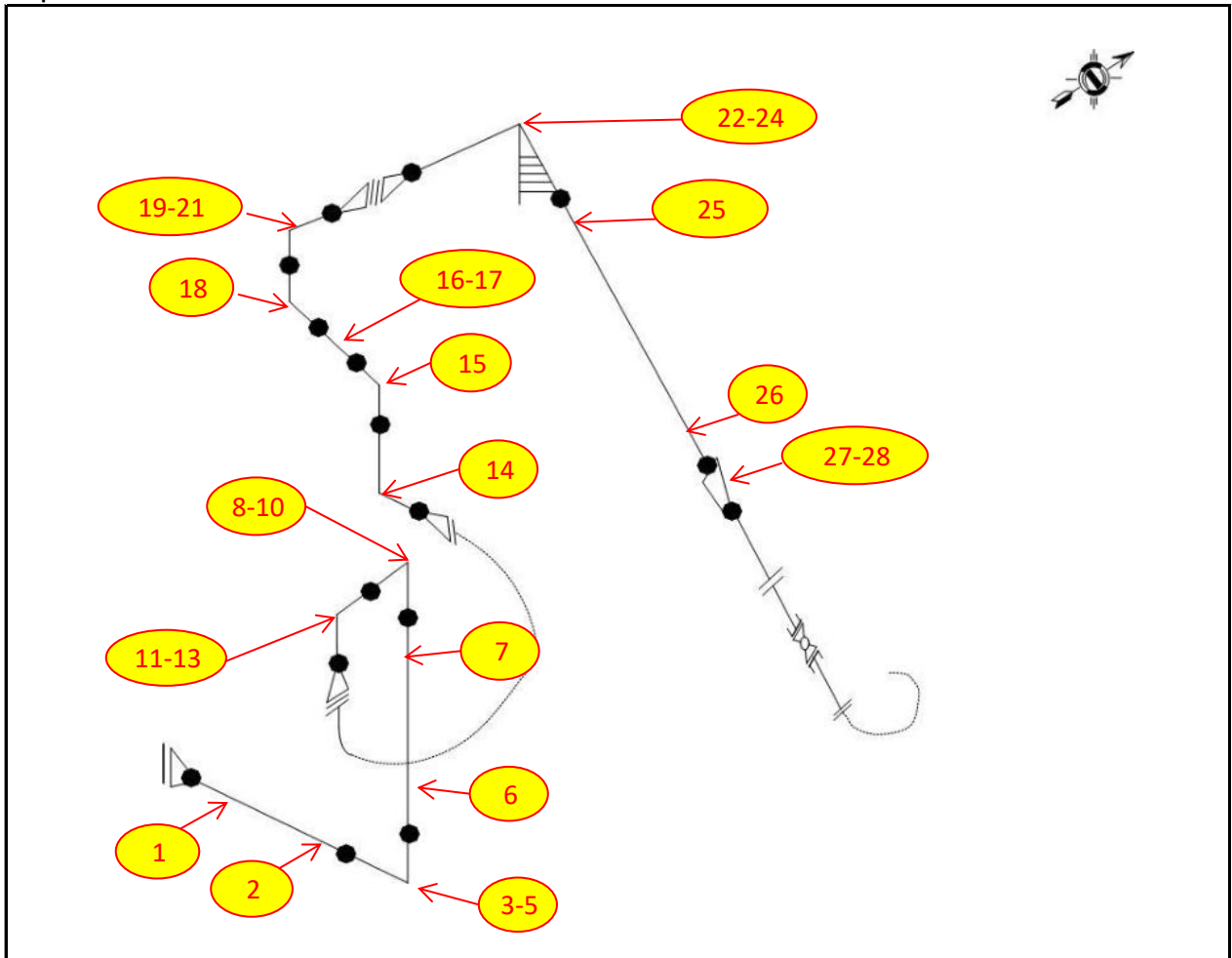
ULTRASONIC THICKNESS MEASUREMENT **DEXON** TECHNOLOGY

Client Name ESSO (Thailand) Public Company Limited	Location Esso Refinery Plant	Inspection Date 18 April, 2023
Client Rep. Name Khun Wisanu Sa-Nguandee	Test Site Jetty BI-2	Page No. 1 of 2
Inspection of Item 3"-L-1104 B Loading arm		Project No 2304019
Extent Spot check as marked on drawing	Drawing No N/A	Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Material Carbon Steel	Surface (Paint / No Paint) Paint	Nom. Thickness -
Procedure No P-INT-12	Mode (Normal / Echo-Echo) Echo-Echo	Temperature N/A
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009	Couplant Type N/A	Acceptance Criteria Recorded only
Probe D790M	Crystal Diameter 10 mm.	Ref. Block (Serial number) 150611-2
	Probe Type / Frequency T/R	Range 20 to 100
		Calibration Low / High Step 5 mm. 10 mm.

Visual Inspection Observation

No visible damage was found.

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Operator Name

Mr. Tinnapud K.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April, 2023

Date

Sign

.....

Sign

.....



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

Jetty BI-2

Page No.

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of

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Inspection of

3"-L-1104 B Loading arm

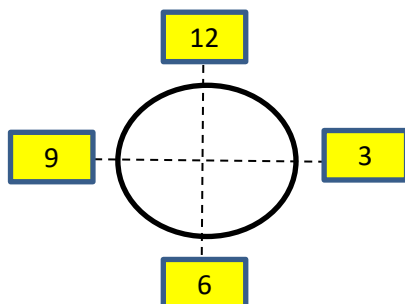
Project No

2304019

Inspection Comment

Point	12	3	6	9
Pipe 1	4.48	4.59	4.42	4.61
Pipe 2	4.63	4.54	4.44	4.61
Elbow(90) 3	6.23	6.58	6.89	6.76
Elbow(90) 4	6.78	6.89	6.49	6.47
Elbow(90) 5	6.73	6.59	6.87	6.98
Pipe 6	5.64	5.68	5.63	5.61
Pipe 7	5.62	5.89	5.62	5.23
Elbow(90) 8	6.01	6.03	6.04	5.99
Elbow(90) 9	6.21	6.23	6.16	6.24
Elbow(90) 10	6.01	6.15	6.11	5.98
Elbow(90) 11	6.03	6.12	5.98	5.99
Elbow(90) 12	6.23	6.14	6.11	6.22
Elbow(90) 13	6.05	6.07	6.11	6.13
Elbow(45) 14	6.05	6.01	5.96	5.87
Elbow(45) 15	5.61	5.49	5.42	5.56
Pipe 16	5.76	5.67	5.74	5.42
Pipe 17	5.74	5.69	5.77	5.67
Elbow(45) 18	5.95	5.87	5.74	5.88
Elbow(90) 19	6.22	6.21	6.26	6.32
Elbow(90) 20	6.38	6.22	6.18	6.27
Elbow(90) 21	6.01	6.32	6.49	6.46
Elbow(90) 22	6.01	6.03	5.87	6.00
Elbow(90) 23	6.03	5.96	5.95	6.02
Elbow(90) 24	6.07	5.95	5.85	5.96
Pipe 25	6.01	6.04	5.96	5.96
Pipe 26	5.96	5.74	5.47	5.62
Reduce 27	7.14	7.36	7.78	7.36
Reduce 28	5.96	6.01	5.87	5.99

Direction



ULTRASONIC THICKNESS MEASUREMENT



Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site Jetty BI-2		Page No. 1 of 3	
Inspection of Item 8"-L-1101 B Loading arm		Drawing No N/A		Project No 2304019	
Extent Spot check as marked on drawing		Surface (Paint / No Paint) Paint		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Mode (Normal / Echo-Echo) Echo-Echo		Nom. Thickness -	
Procedure No P-INT-12		Couplant Type N/A		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Probe Type / Frequency T/R		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
				Range 20 to 100	
				Calibration Low / High Step 5 mm. 20 mm.	

Visual Inspection Observation

No visible damage was found

Inspection Comment

Inspection Conclusion

Inspection Acceptance Recorded only		Repair area/Defect marked on N/A	
Operator Name Mr. Tinnapud K.		Date 18 April, 2023	
Client Representative Khun Wisanu Sa-Nguandee		Sign [Signature]	



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8"-L-1101 B Loading arm

Inspection Comment

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

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Project No

2304019

Point	12	3	6	9
Elbow(90) 1	19.12	20.18	19.81	20.22
Elbow(90) 2	19.23	20.21	21.21	20.45
Elbow(90) 3	19.12	19.45	20.12	20.38
Reduce 4	22.76	22.65	22.49	22.71
Reduce 5	22.65	22.55	22.40	22.55
Pipe 6	16.79	16.40	16.52	16.49
Pipe 7	17.42	17.45	17.59	17.71
Elbow(90) 8	15.31	15.23	15.48	15.56
Elbow(90) 9	15.46	15.43	15.69	15.47
Elbow(90) 10	15.15	15.64	15.29	15.44
Pipe 11	15.74	15.46	15.60	15.74
Elbow(90) 12	14.23	15.67	17.49	15.49
Elbow(90) 13	14.46	16.72	16.23	16.19
Elbow(90) 14	15.23	15.42	15.48	15.42
Pipe 15	17.15	16.22	16.27	17.42
Pipe 16	17.26	16.78	16.12	16.98
Reduce 17	20.12	19.96	19.74	19.87
Reduce 18	22.74	20.44	21.74	21.74
Pipe 19	16.74	16.49	14.44	14.89
Pipe 20	16.55	16.72	15.23	14.12
Elbow(45) 21	18.42	21.76	21.11	22.12
Elbow(45) 22	18.44	22.59	22.61	21.38
Elbow(90) 23	17.42	19.38	19.45	18.12
Elbow(90) 24	16.72	19.32	19.45	17.61
Elbow(90) 25	17.61	19.23	19.42	17.71
Elbow(90) 26	17.81	17.96	21.97	19.78
Elbow(90) 27	**-	21.42	20.22	19.59
Elbow(90) 28	19.12	17.74	20.69	18.74
Pipe 29	13.49	13.56	13.61	13.21
Pipe 30	13.39	12.78	12.96	13.12
Pipe 31	13.21	13.16	12.74	12.96
Pipe 32	13.12	13.48	13.52	13.16
Elbow(90) 33	13.46	13.12	13.32	13.14
Elbow(90) 34	13.46	13.22	13.24	13.77
Elbow(90) 35	13.65	14.22	15.29	15.17

****Remark :** Odstructed by pipe support!

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

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Project No

2304019

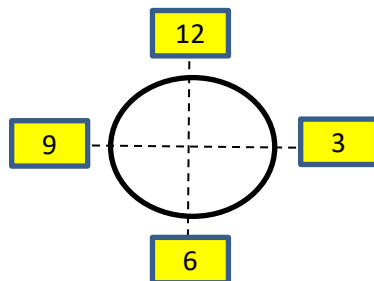
Inspection of

8"-L-1101 B Loading arm

Inspection Comment

Point	12	3	6	9
Pipe 36	13.69	13.74	13.21	12.95
Pipe 37	13.46	13.39	13.42	13.44
Elbow(90) 38	13.36	13.69	13.78	13.74
Elbow(90) 39	13.42	13.89	13.96	14.12
Elbow(90) 40	16.74	13.38	13.61	14.22
Elbow(45) 41	13.44	13.26	13.76	13.87
Elbow(90) 42	13.11	13.39	14.59	14.12
Elbow(90) 43	12.87	13.56	14.98	14.16
Elbow(90) 44	12.67	13.86	15.49	14.63
Drain 45	4.61	4.59	4.32	4.78

Direction

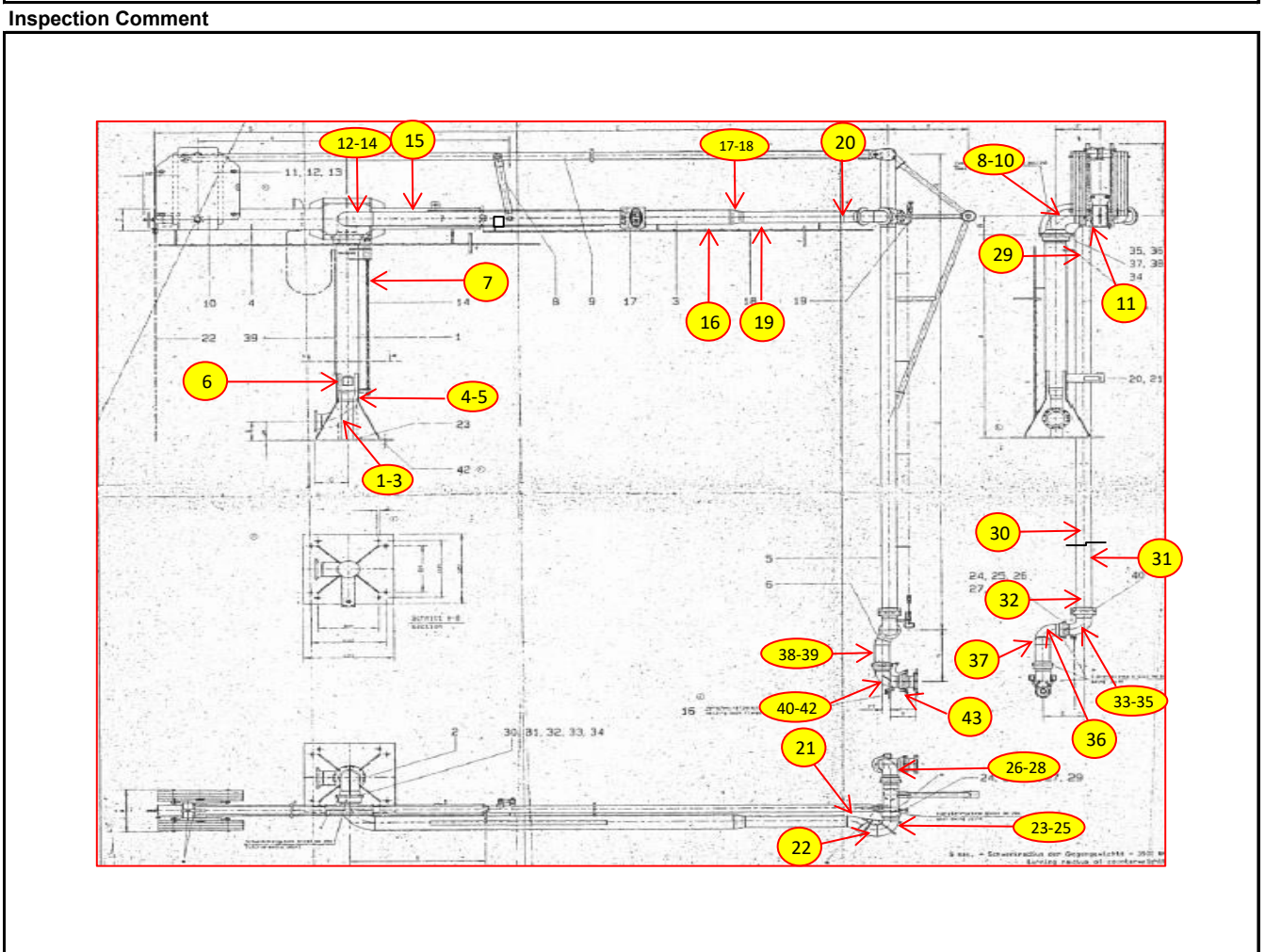


ULTRASONIC THICKNESS MEASUREMENT



Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site Jetty BI-2		Page No. 1 of 3	
Inspection of Item 8"-L-1102 B Loading arm				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High Step 5 mm. 20 mm.	

Visual Inspection Observation
No visible damage was found



Inspection Conclusion

Inspection Acceptance Recorded only		Repair area/Defect marked on N/A	
Operator Name Mr. Tinnapud K.		Date 18 April, 2023	
Client Representative Khun Wisanu Sa-Nguandee		Date [Blank]	
		Sign [Signature]	
		Sign [Signature]	



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8"-L-1102 B Loading arm

Inspection Comment

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

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Project No

2304019

Point	12	3	6	9
Elbow(90) 1	19.78	19.89	20.01	20.21
Elbow(90) 2	19.12	20.12	20.89	21.96
Elbow(90) 3	19.46	19.74	20.12	19.87
Reduce 4	23.78	23.69	23.79	23.61
Reduce 5	22.11	23.46	20.87	20.74
Pipe 6	16.77	16.59	16.74	16.87
Pipe 7	16.76	16.88	16.74	16.89
Elbow(90) 8	14.74	14.77	14.69	14.71
Elbow(90) 9	14.95	14.86	14.61	14.89
Elbow(90) 10	14.69	14.66	14.62	14.74
Pipe 11	15.76	15.61	15.42	15.79
Elbow(90) 12	16.78	16.78	16.74	16.23
Elbow(90) 13	15.74	15.87	16.71	16.42
Elbow(90) 14	15.96	15.87	16.23	16.22
Pipe 15	17.78	17.49	17.12	17.61
Pipe 16	16.12	15.98	15.96	16.12
Reduce 17	18.87	19.12	19.14	18.96
Reduce 18	20.56	20.61	20.74	20.23
Pipe 19	10.12	15.46	15.22	15.32
Pipe 20	15.21	15.32	15.24	15.28
Elbow(45) 21	15.48	15.23	15.74	15.39
Elbow(45) 22	15.21	15.49	15.74	15.42
Elbow(90) 23	17.12	19.69	16.98	16.87
Elbow(90) 24	17.14	17.12	17.42	17.31
Elbow(90) 25	17.61	17.42	17.39	17.12
Elbow(90) 26	17.12	17.69	17.49	17.11
Elbow(90) 27	**-	17.86	20.22	20.11
Elbow(90) 28	18.56	18.74	18.47	18.15
Pipe 29	13.11	13.47	13.14	13.21
Pipe 30	12.47	12.27	12.64	12.34
Pipe 31	13.41	13.21	13.29	13.11
Pipe 32	13.12	13.21	13.39	13.14
Elbow(90) 33	13.47	13.79	13.42	13.21
Elbow(90) 34	13.11	13.47	13.93	13.26
Elbow(90) 35	13.16	13.12	13.47	13.74

****Remark :** Obstructed by pipe support !

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

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Project No

2304019

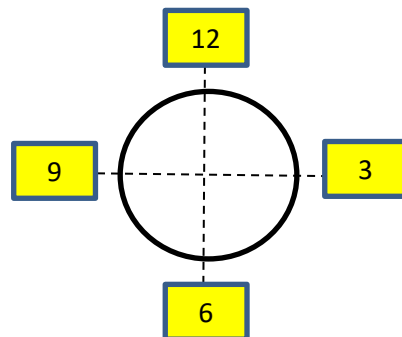
Inspection of

8"-L-1102 B Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(45) 36	14.46	14.74	14.47	14.32
Elbow(45) 37	13.21	13.47	13.61	13.42
Pipe 38	13.87	13.88	13.96	13.59
Pipe 39	13.11	13.12	12.96	12.87
Elbow(90) 40	12.38	13.74	13.61	13.96
Elbow(90) 41	12.74	13.32	13.46	13.39
Elbow(90) 42	14.11	14.69	14.47	14.74
Drain 43	4.65	4.47	4.59	4.73

Direction



ULTRASONIC THICKNESS MEASUREMENT

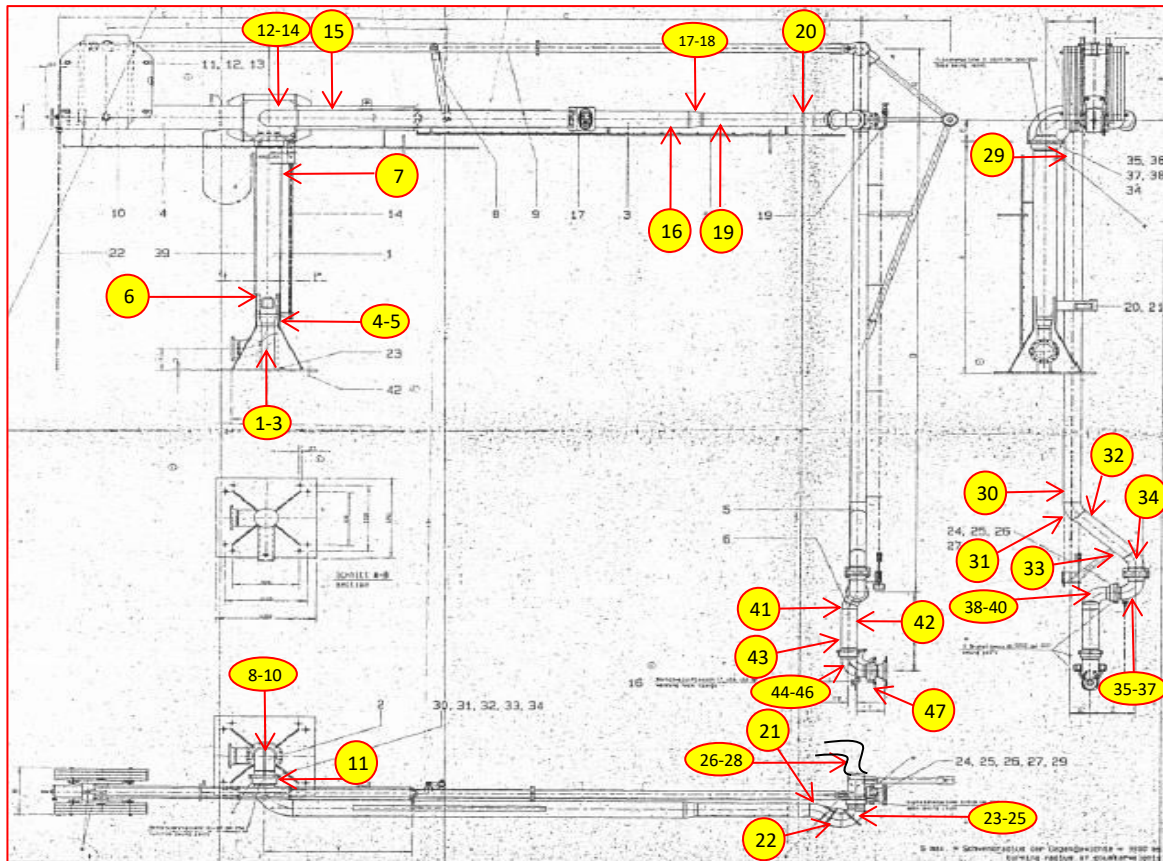


Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site Jetty BI-2		Page No. 1 of 3	
Inspection of Item 8" L-1103 B Loading arm		Drawing No N/A		Project No 2304019	
Extent Spot check as marked on drawing		Surface (Paint / No Paint) Paint		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Mode (Normal / Echo-Echo) Echo-Echo		Nom. Thickness -	
Procedure No P-INT-12		Couplant Type N/A		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Probe Type / Frequency T/R		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
				Range 20 to 100	
				Calibration Low / High Step 5 mm. 20 mm.	

Visual Inspection Observation

No visible damage was found

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name
Mr. Tinnapud K.

Client Representative
Khun Wisanu Sa-Nguandee

Repair area/Defect marked on
N/A

Date
18 April, 2023

Date

Sign

Sign



ULTRASONIC TEST REPORT

Addition



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

2 of 3

Project No

2304019

Inspection of

8" L-1103 B Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(90) 1	19.81	20.18	20.23	20.27
Elbow(90) 2	19.96	20.47	21.49	20.56
Elbow(90) 3	19.87	20.56	21.74	20.12
Reduce 4	20.06	20.12	20.07	20.12
Reduce 5	20.26	20.32	20.19	20.48
Pipe 6	17.47	17.59	17.32	17.37
Pipe 7	17.23	17.39	17.23	17.49
Elbow(90) 8	14.23	16.49	16.22	15.74
Elbow(90) 9	15.44	15.46	16.33	14.12
Elbow(90) 10	15.46	16.67	15.22	14.26
Pipe 11	15.74	15.77	15.89	16.11
Elbow(90) 12	15.23	15.47	15.84	15.47
Elbow(90) 13	15.82	16.74	16.61	16.23
Elbow(90) 14	15.49	15.78	16.12	15.24
Pipe 15	16.38	16.87	16.65	16.84
Pipe 16	15.98	15.23	15.51	16.98
Reduce 17	19.87	18.61	19.60	19.13
Reduce 18	20.48	20.38	21.53	21.44
Pipe 19	16.11	16.87	15.92	14.53
Pipe 20	15.41	16.74	16.18	14.13
Elbow(45) 21	15.47	14.38	15.13	15.74
Elbow(45) 22	16.15	16.28	16.48	15.69
Elbow(90) 23	17.74	14.53	19.47	18.86
Elbow(90) 24	17.23	17.31	19.46	18.56
Elbow(90) 25	17.26	20.34	19.74	18.76
Elbow(90) 26	18.87	18.46	20.36	17.74
Elbow(90) 27	**	19.65	20.98	20.76
Elbow(90) 28	18.35	19.23	21.45	18.93
Pipe 29	14.15	14.23	13.59	13.87
Pipe 30	13.65	13.49	12.95	12.65
Elbow(45) 31	12.65	12.32	12.74	12.85
Pipe 32	12.74	12.32	12.65	12.85
Pipe 33	12.59	13.64	13.85	13.24
Elbow(45) 34	12.76	13.45	12.87	13.21
Elbow(90) 35	13.67	13.65	14.23	13.86
Elbow(90) 36	13.15	13.26	14.36	13.78
Elbow(90) 37	13.15	13.35	13.85	13.42

****Remark :** Obstructed by pipe support !

ULTRASONIC TEST REPORT

Addition



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

Jetty BI-2

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Inspection of

8" L-1103 B Loading arm

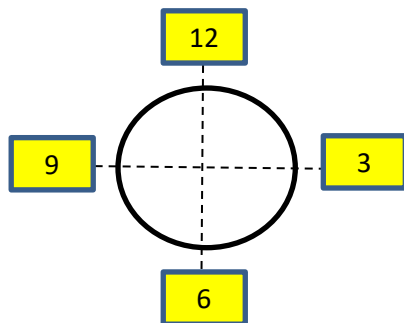
Project No

2304019

Inspection Comment

Point	12	3	6	9
Elbow(90) 38	12.35	13.47	14.23	15.23
Elbow(90) 39	12.55	13.57	15.23	14.74
Elbow(90) 40	12.64	13.46	13.95	13.87
Elbow(45) 41	13.55	13.26	13.76	13.56
Pipe 42	13.12	12.87	12.88	13.46
Pipe 43	13.42	12.42	12.41	13.46
Elbow(90) 44	13.35	13.46	13.85	14.16
Elbow(90) 45	13.11	13.46	13.85	14.41
Elbow(90) 46	13.15	14.22	14.78	14.48
Drain 47	4.59	4.56	4.76	4.65

Direction



ULTRASONIC THICKNESS MEASUREMENT

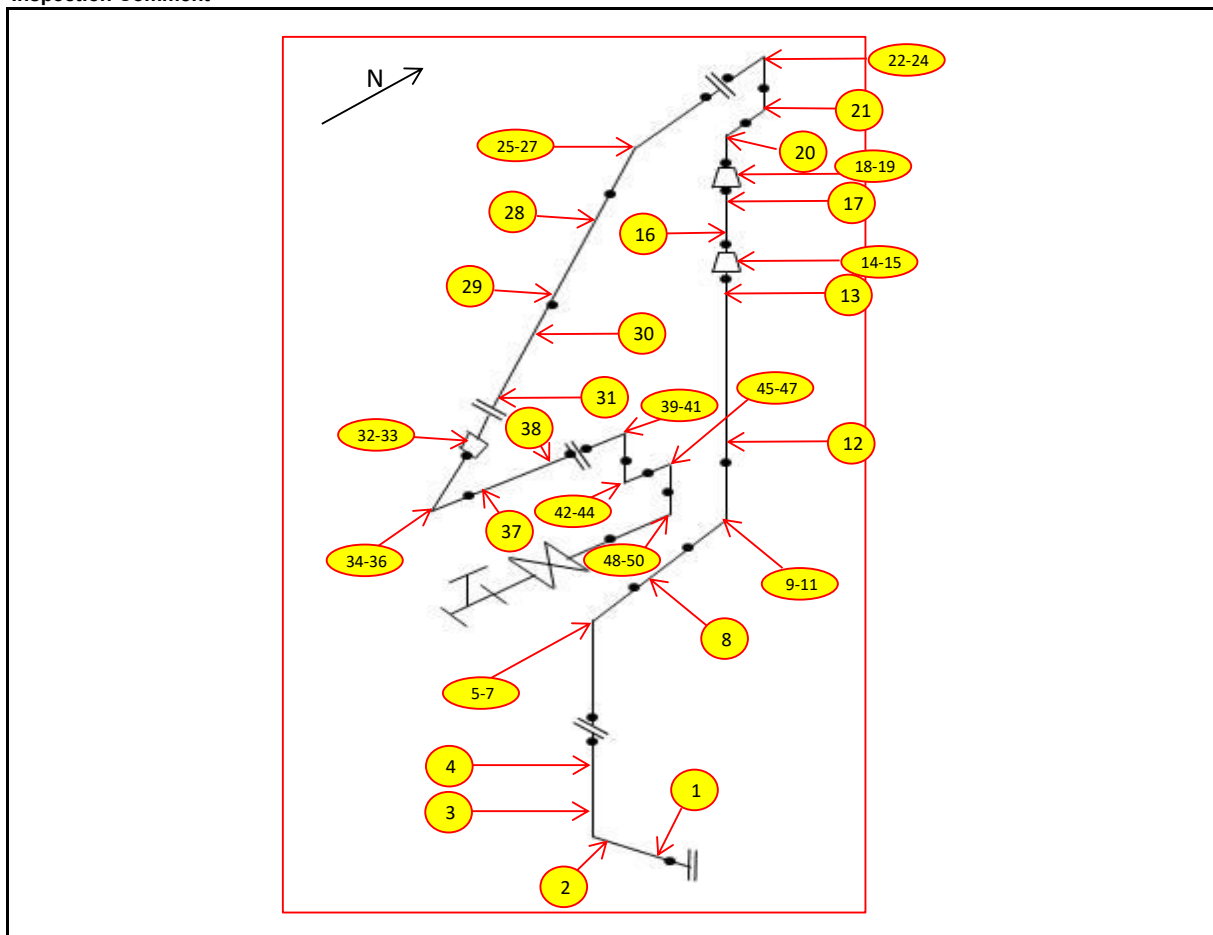


Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site Jetty BI-2		Page No. 1 of 3	
Inspection of Item 8" L-1104 B Loading arm				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/ 130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High St 5 mm. 20 mm.	

Visual Inspection Observation

No visible damage was found.

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name Mr. Tinnapud K.
Client Representative Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date 18 April, 2023
Date

Sign

Sign



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

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Project No

2304019

Inspection of

8" L-1104 B Loading arm

Inspection Comment

Point	12	3	6	9
Pipe 1	11.01	11.15	10.95	10.87
Pipe 2	11.15	11.21	10.89	10.96
Pipe 3	17.59	17.42	17.45	17.67
Pipe 4	17.21	17.84	17.25	17.47
Elbow(90) 5	15.21	15.11	15.23	15.47
Elbow(90) 6	14.23	15.27	14.87	14.74
Elbow(90) 7	15.16	15.17	15.11	15.19
Pipe 8	16.15	16.47	16.55	16.18
Elbow(90) 9	15.09	15.06	15.41	16.12
Elbow(90) 10	15.74	15.69	15.56	15.42
Elbow(90) 11	16.12	15.98	15.87	16.12
Pipe 12	15.61	16.42	15.22	15.23
Pipe 13	16.15	15.87	15.95	16.12
Reduce 14	18.16	18.22	18.35	18.12
Reduce 15	19.16	19.22	19.87	19.59
Pipe 16	15.23	15.34	15.25	15.32
Pipe 17	15.87	15.69	15.64	15.63
Reduce 18	22.87	22.86	22.74	22.69
Reduce 19	22.26	22.23	22.14	22.39
Elbow(45) 20	14.23	14.47	14.75	14.89
Elbow(45) 21	14.93	14.61	14.13	15.38
Elbow(90) 22	18.11	17.46	19.12	18.76
Elbow(90) 23	17.69	17.87	17.59	17.86
Elbow(90) 24	18.32	18.21	18.59	18.46
Elbow(90) 25	17.59	19.32	19.22	19.28
Elbow(90) 26	19.23	19.76	19.69	19.22
Elbow(90) 27	19.12	19.21	19.22	18.89
Pipe 28	10.76	10.95	10.74	10.69
Pipe 29	11.12	11.17	11.23	11.52
Pipe 30	10.87	10.76	10.69	10.96
Pipe 31	10.69	10.74	10.73	10.62
Reduce 32	7.87	7.61	7.74	7.89
Reduce 33	9.53	9.42	9.36	9.42
Elbow(90) 34	12.16	12.11	12.22	12.21
Elbow(90) 35	12.21	12.32	12.34	12.59
Elbow(90) 36	12.59	12.12	12.36	12.74
Pipe 37	9.12	8.74	8.69	8.72
Pipe 38	8.76	8.65	8.59	8.67
Elbow(90) 39	8.49	8.87	8.59	8.54
Elbow(90) 40	8.41	8.36	8.59	8.61

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

Jetty BI-2

Inspection Date

18 April 2023

Page No.

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Project No

2304019

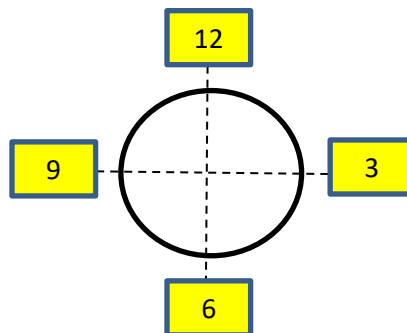
Inspection of

8" L-1104 B Loading arm

Inspection Comment

Point	12	3	6	9
Elbow(90) 41	8.72	8.59	8.64	8.60
Elbow(90) 42	8.42	8.47	8.96	8.88
Elbow(90) 43	9.51	9.56	9.67	9.76
Elbow(90) 44	8.87	8.81	8.74	8.69
Elbow(90) 45	8.42	8.59	8.76	8.39
Elbow(90) 46	8.35	8.59	8.74	8.89
Elbow(90) 47	8.59	8.69	8.78	8.59
Elbow(90) 48	8.36	8.65	9.23	9.36
Elbow(90) 49	9.11	9.23	8.46	9.12
Elbow(90) 50	9.59	9.56	9.48	9.12

Direction



BI-3

VI Report

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

1 of 6

Inspection of

1"-LA-B N2

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18/Apr/2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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of

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Inspection of

1"-LA-B N2

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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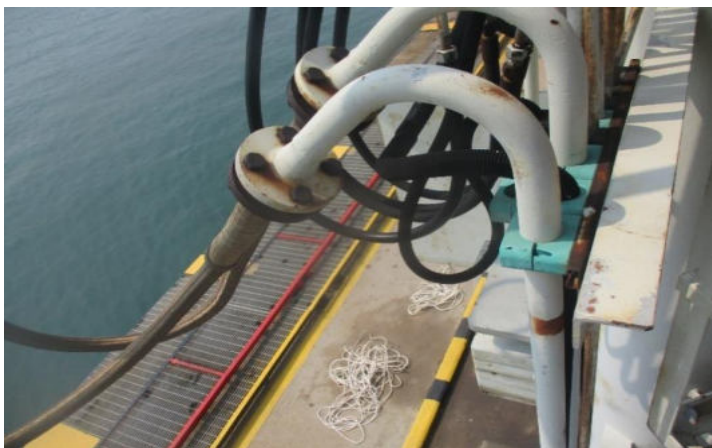

6

Inspection of

1"-LA-B N2

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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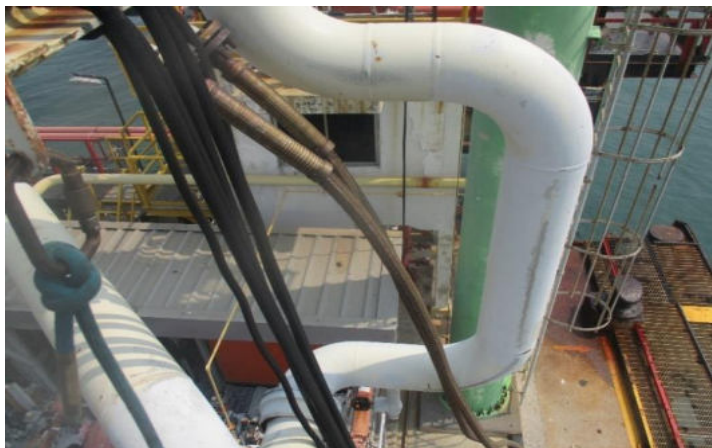


6

Inspection of

1"-LA-B N2

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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of


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Inspection of

1"-LA-B N2

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

1"-LA-B N2

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

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Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B N2</p>
	<p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p>
	<p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B N2</p>
	<p>Findings:</p> <p>Normal condition</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

1"-LA-B vapor return

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

1"-LA-B vapor return

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

1"-LA-B vapor return

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

1"-LA-B vapor return

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	5 of 5
Inspection of	Project No	
1"-LA-B vapor return	2304019	

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-B vapor return</p> <p>Findings:</p> <p>Normal condition</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

1 of 5

Inspection of

1"-LA-P vapor return

Project No

2304019

Extent

External condition

Drawing No

-

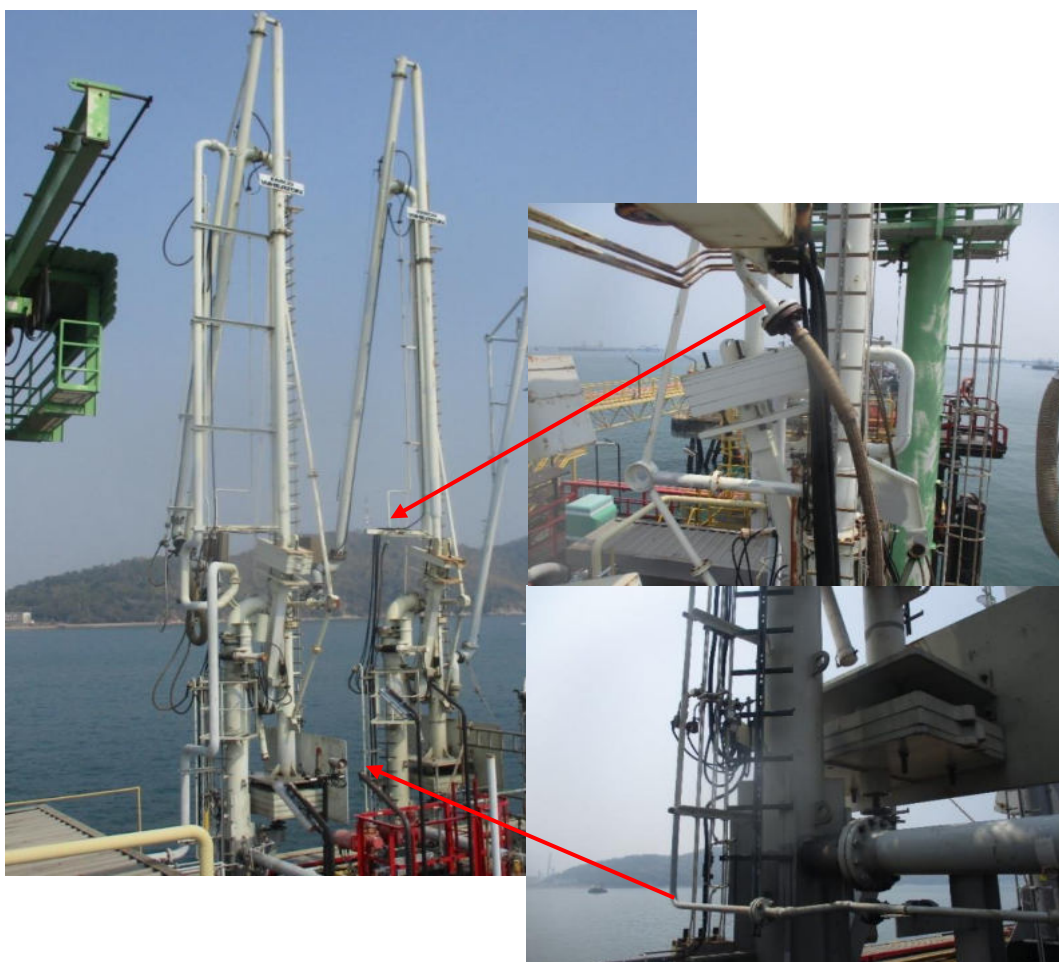
Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

1"-LA-P vapor return

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

1"-LA-P vapor return

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

1"-LA-P vapor return

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.


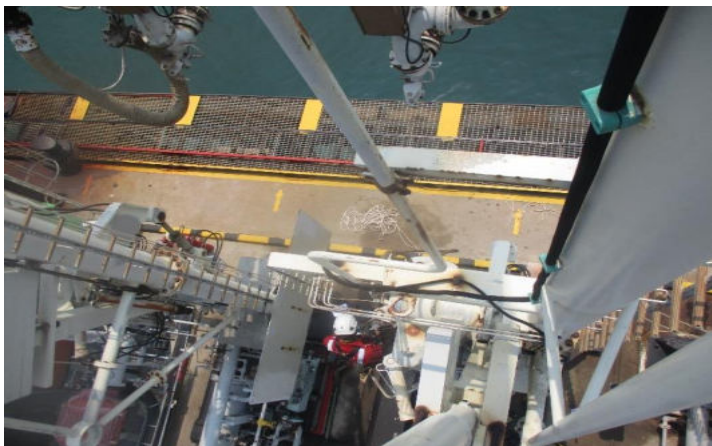

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Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	5 of 5
Inspection of	Project No	
1"-LA-P vapor return	2304019	

Picture	Remark
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>1"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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6

Inspection of

6"-LA-B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

6"-LA-B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	3 of 6
Inspection of	Project No	
6"-LA-B Loading arm	2304019	




Picture	Remark
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	4 of 6
Inspection of	Project No	
6"-LA-B Loading arm	2304019	

Picture	Remark
	Name of part: 6"-LA-B Loading arm
	Findings: Normal condition
	Name of part: 6"-LA-B Loading arm
	Findings: Normal condition
	Name of part: 6"-LA-B Loading arm
	Findings: Normal condition

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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6

Inspection of

6"-LA-B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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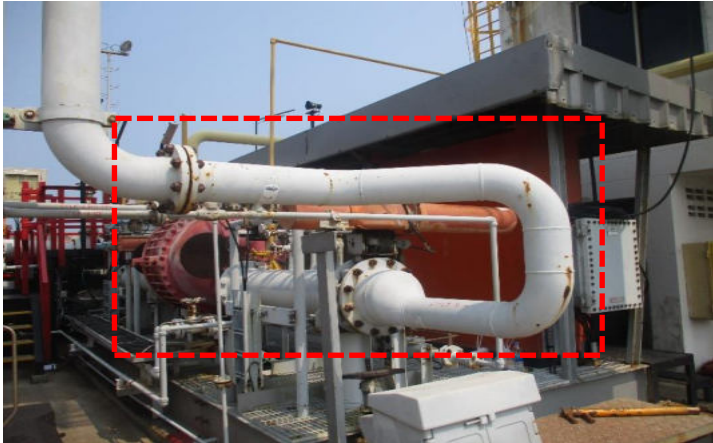


6

Inspection of

6"-LA-B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>Corrosion on Pipe.</p>
	<p>Name of part:</p> <p>6"-LA-B Loading arm</p> <p>Findings:</p> <p>After paint repair</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

8"-LA-1107 A Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

8"-LA-1107 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

8"-LA-1107 A Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	4 of 7
Inspection of	Project No	
8"-LA-1107 A Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8"-LA-1107 A Loading arm

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.


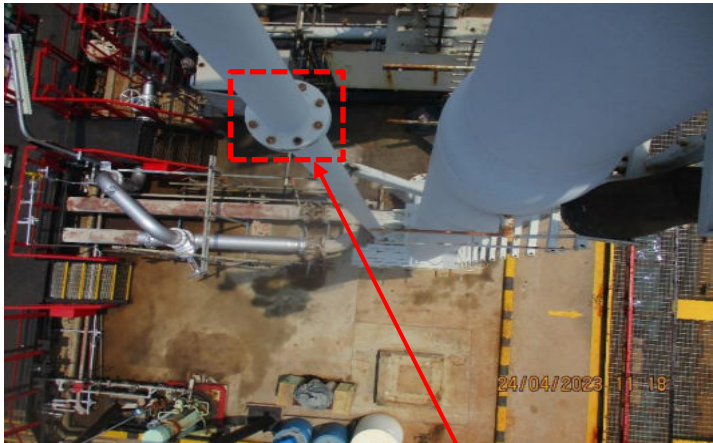
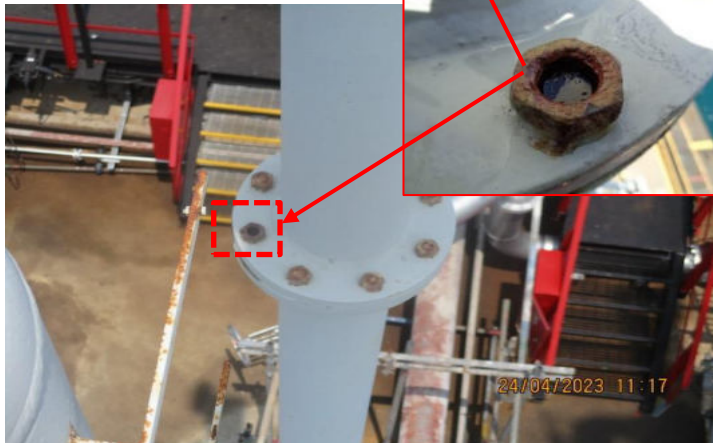
5

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Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Not in complete stud bolt installation</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Not in complete stud bolt installation</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	6 of 7
Inspection of	Project No	
8"-LA-1107 A Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	7 of 7
Inspection of	Project No	
8"-LA-1107 A Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-1107 A Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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7

Inspection of

8"-LA-B Loading arm

Project No

2304019

Extent

External condition

Drawing No

-

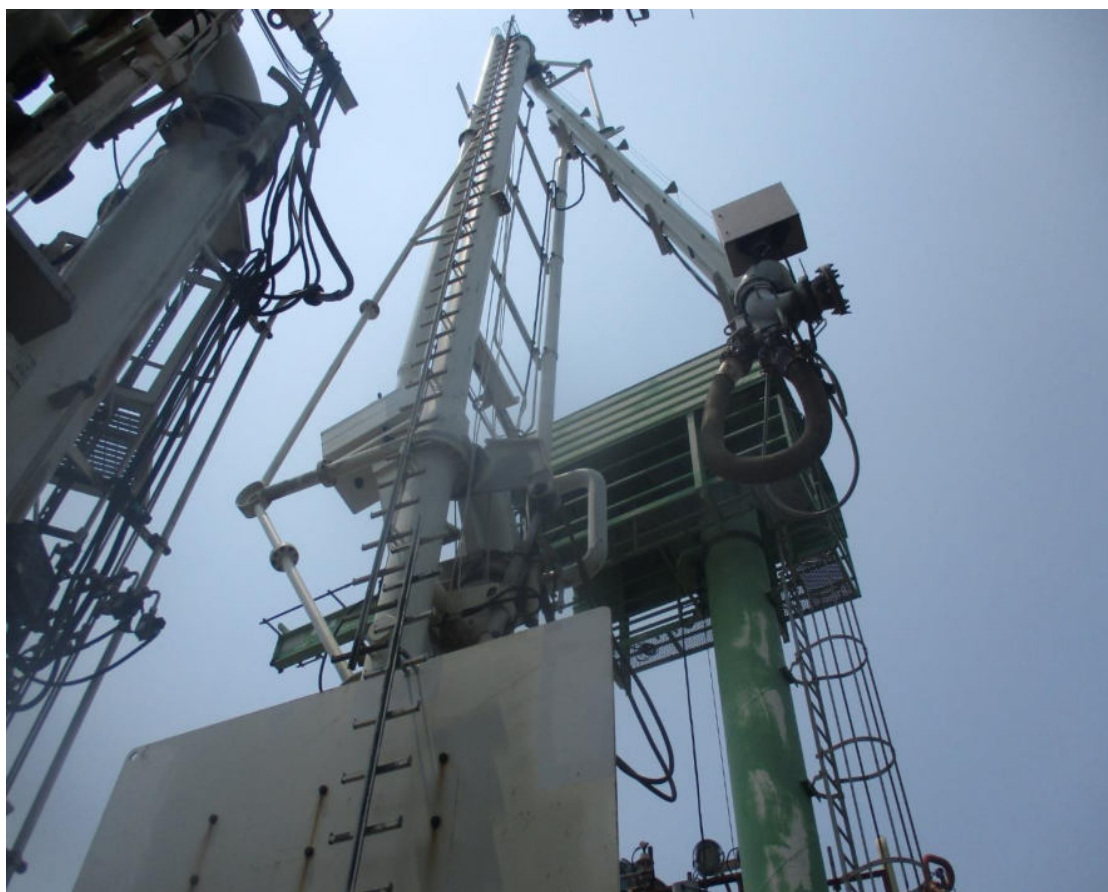
Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign



PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

8"-LA-B Loading arm

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	3 of 7
Inspection of	Project No	
8"-LA-B Loading arm	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

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Inspection of

8"-LA-B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Corrosion on stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Corrosion on stud bolt & nuts area.</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8"-LA-B Loading arm

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.




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Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8"-LA-B Loading arm

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.


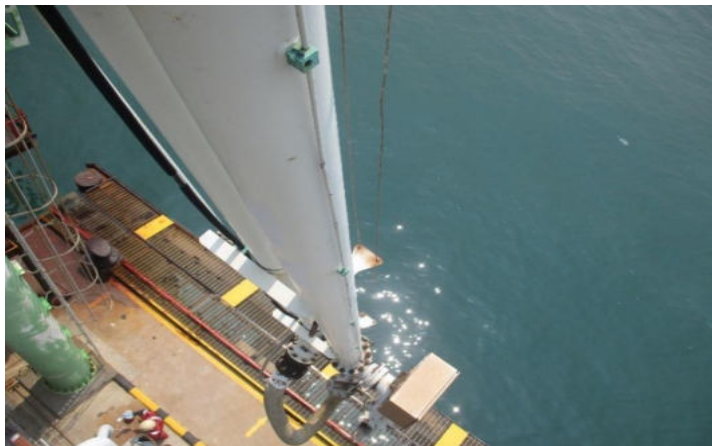
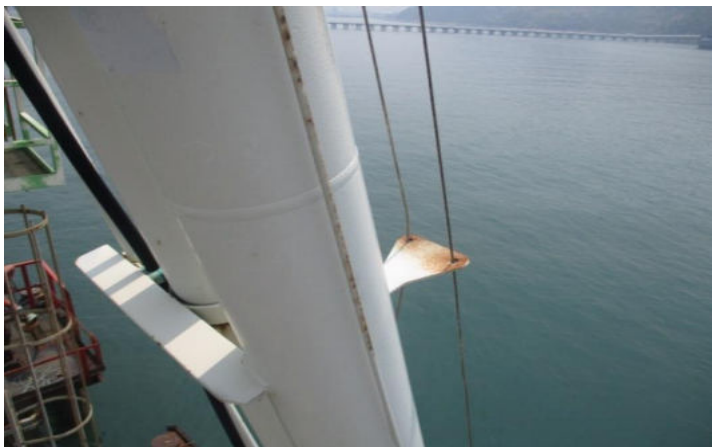
6

of

7

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

8"-LA-B Loading arm

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-B Loading arm</p> <p>Findings:</p> <p>Normal condition</p>

VISUAL INSPECTION REPORT



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

8"-LA-P vapor return

Project No

2304019

Extent

External condition

Drawing No

-

Material

Carbon Steel

Surface

Paint

General view



Inspection Conclusion

Inspection Acceptance

Recorded only

Inspector Name

Mr.Archakit S. / Mr.Thanapol Suk.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

Date

18 April 2023

Date

Sign

Sign






PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	2 of 7
Inspection of	Project No	
8"-LA-P vapor return	2304019	




Picture	Remark
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	3 of 7
Inspection of	Project No	
8"-LA-P vapor return	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Corrosion on stud bolt & nuts area.</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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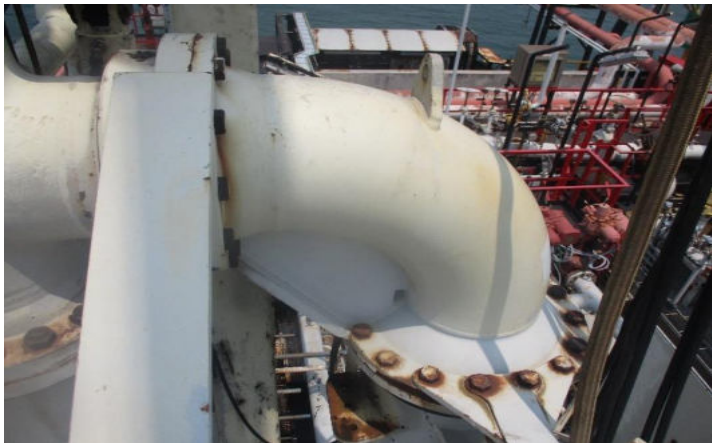


7

Inspection of

8"-LA-P vapor return

Project No

2304019




Picture	Remark
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name	Location	Inspection Date
ESSO (Thailand) Public Company Limited	Esso Refinery Plant	18 April 2023
Client Rep. Name	Test Site	Page No.
Khun Wisanu Sa-Nguandee	BI-3	5 of 7
Inspection of	Project No	
8"-LA-P vapor return	2304019	

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of

8"-LA-P vapor return

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.


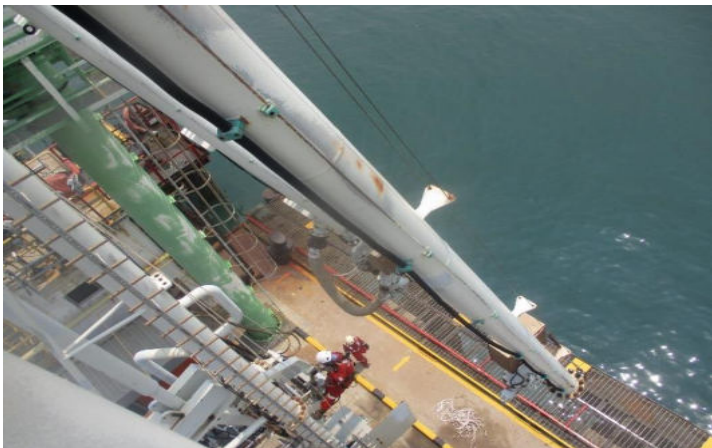
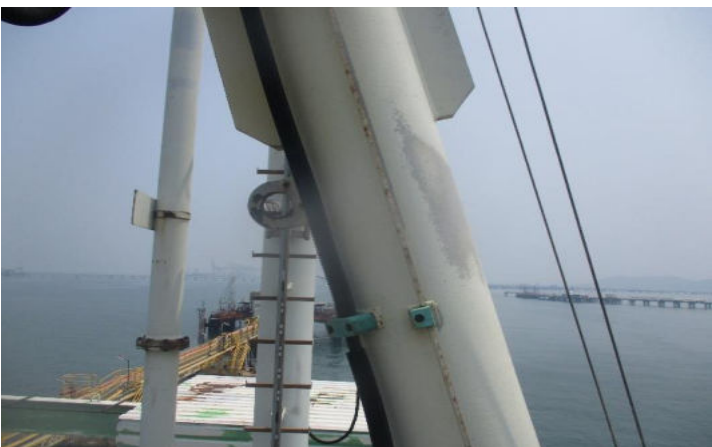
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Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

PICTURE LOG

3 Pictures



Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

8"-LA-P vapor return

Project No

2304019

Picture	Remark
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>
	<p>Name of part:</p> <p>8"-LA-P vapor return</p> <p>Findings:</p> <p>Normal condition</p>

UTM Report

ULTRASONIC THICKNESS MEASUREMENT



Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-3		Page No. 1 of 2	
Inspection of Item 1" LA-B N2				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High Step 5 mm. 10 mm.	

Visual Inspection Observation

No visible damage was found.

Inspection Comment

Inspection Conclusion

Inspection Acceptance Recorded only		Repair area/Defect marked on N/A	
Operator Name Mr. Tinnapud K.		Date 18 April, 2023	
Client Representative Khun Wisanu Sa-Nguandee		Sign [Signature]	

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

1" LA-B N2

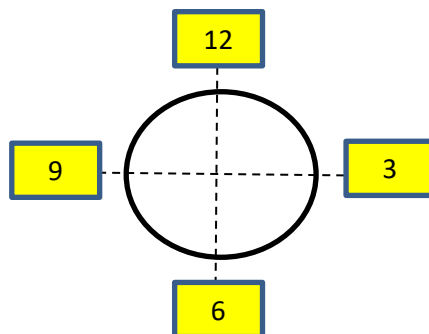
Project No

2304019

Inspection Comment

Point	12	3	6	9
Pipe 1	4.48	4.68	4.55	4.66
Elbow(90) 2	4.46	5.03	4.31	4.24
Elbow(90) 3	4.50	4.58	4.17	4.60
Pipe 4	4.53	4.62	4.68	4.41
Pipe 5	4.62	4.54	4.59	4.50
Elbow(90) 6	4.06	4.23	4.95	4.43
Elbow(45) 7	4.14	4.65	4.22	4.23
Elbow(90) 8	4.68	4.23	4.59	4.60
Elbow(90) 9	4.51	4.49	4.68	4.53
Pipe 10	4.80	4.24	4.45	4.62
Elbow(90) 11	4.23	4.81	4.65	4.59
Elbow(90) 12	4.65	4.64	4.54	4.53
Pipe 13	4.68	4.59	4.60	4.23
Elbow(90) 14	4.80	4.57	4.26	4.36
Drain 15	4.06	4.23	4.95	4.48

Direction



ULTRASONIC THICKNESS MEASUREMENT

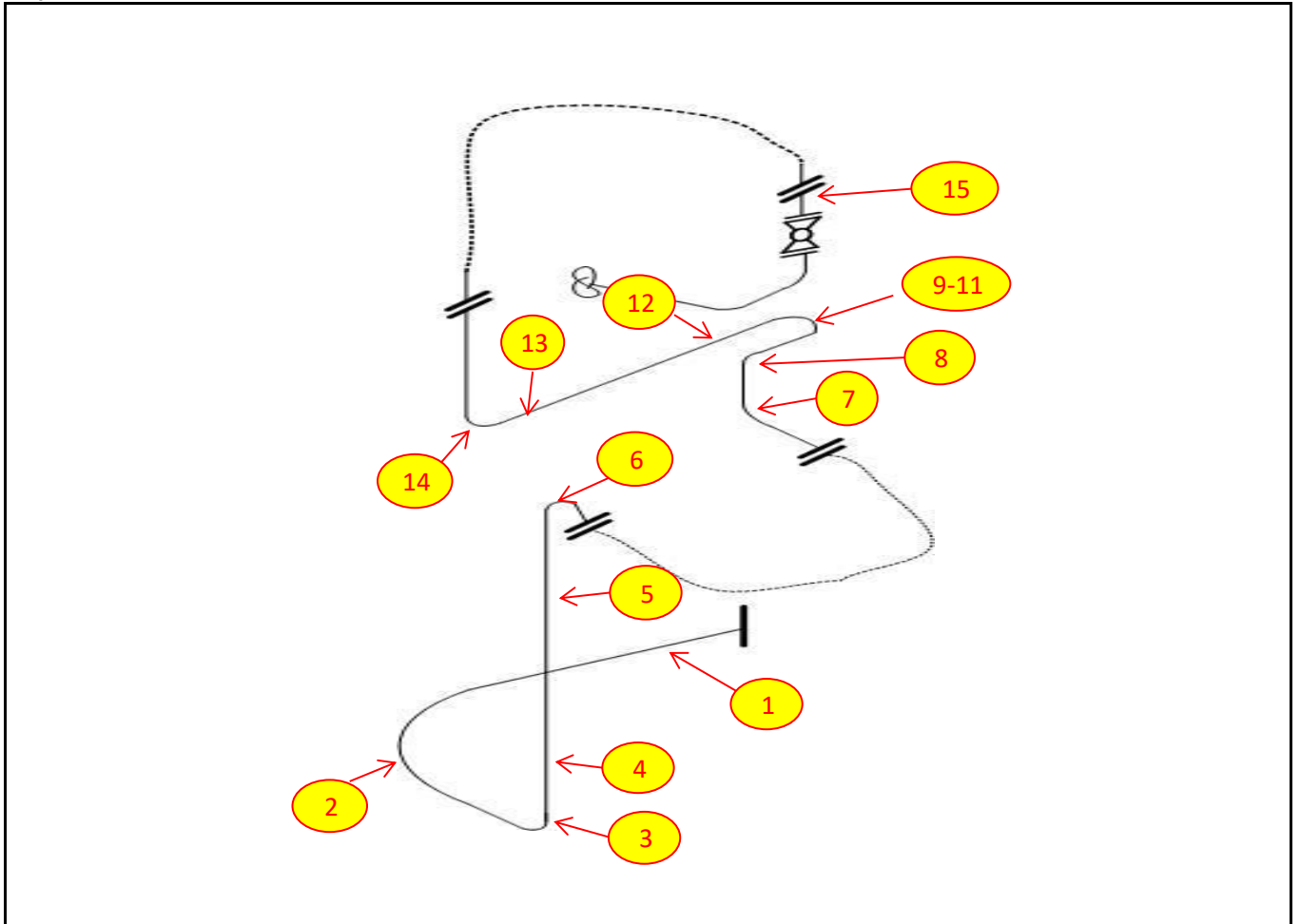


Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-3		Page No. 1 of 2	
Inspection of Item 1" LA-B Vapor return				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High Step 5 mm. 10 mm.	

Visual Inspection Observation

No visible damage was found

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name Mr. Tinnapud K.
Client Representative Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date 30 April, 2023
Date

Sign

.....

Sign

.....



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

1" LA-B Vapor return

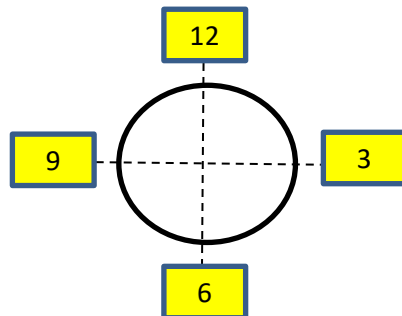
Project No

2304019

Inspection Comment

Point	12	3	6	9
Pipe 1	4.80	4.57	4.26	4.30
Elbow(90) 2	4.39	4.54	4.39	4.43
Elbow(90) 3	4.44	4.50	4.38	4.54
Pipe 4	4.12	4.52	4.56	4.55
Pipe 5	4.42	4.36	4.39	4.61
Elbow(90) 6	5.16	4.51	4.64	4.64
Elbow(45) 7	4.68	4.51	4.54	4.39
Elbow(45) 8	4.12	4.54	4.26	4.21
Elbow(90) 9	4.25	4.36	4.64	4.42
Elbow(90) 10	4.38	4.62	4.69	4.81
Elbow(90) 11	4.29	4.31	4.51	4.62
Pipe 12	4.55	4.59	4.62	4.52
Pipe 13	4.41	4.52	4.29	4.37
Elbow(90) 14	4.51	4.64	4.64	4.39
Pipe 15	4.42	4.36	4.51	4.71

Direction

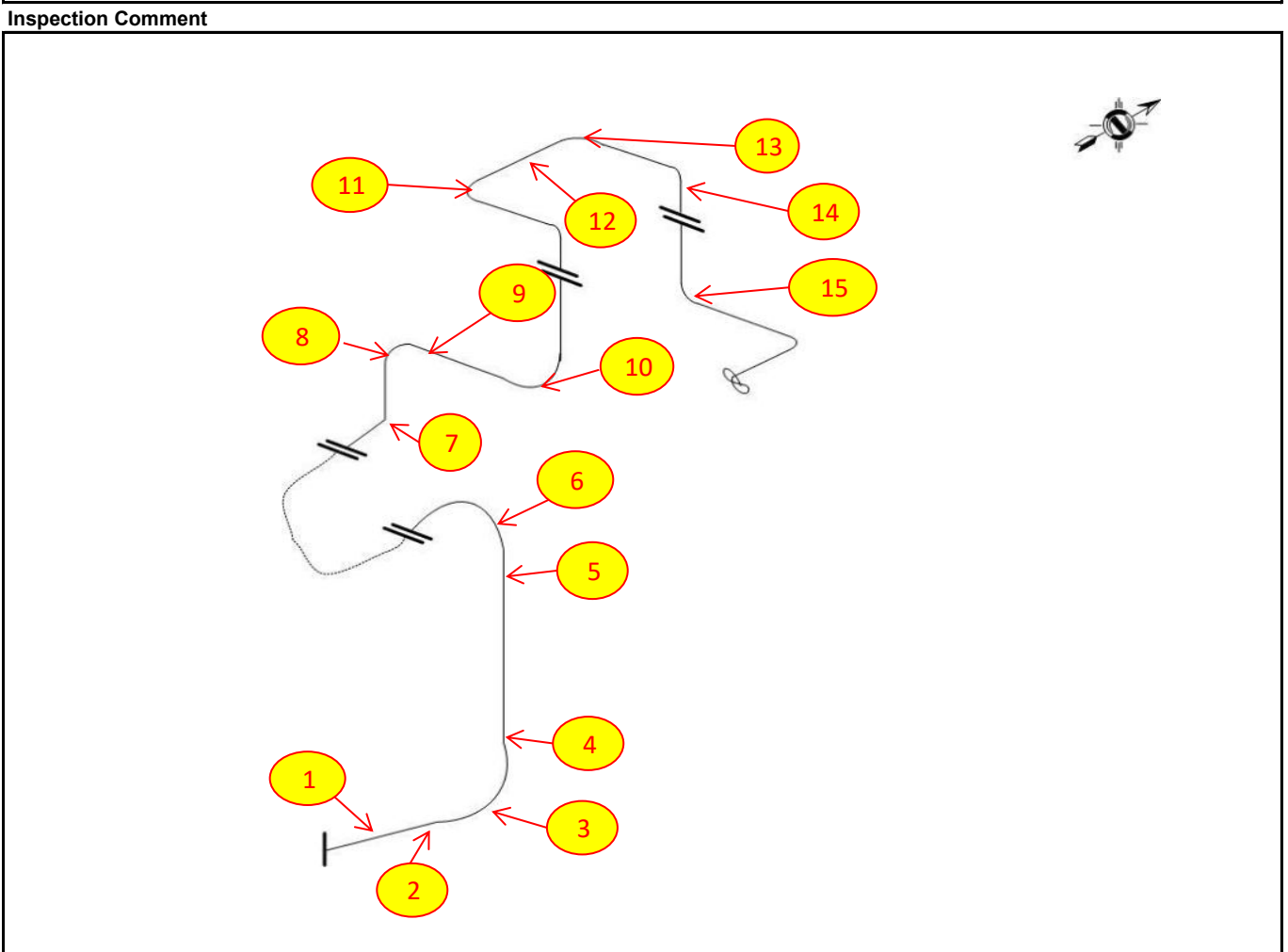


ULTRASONIC THICKNESS MEASUREMENT



Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-3		Page No. 1 of 2	
Inspection of Item 1" LA-P Vapor return				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High Step 5 mm. 10 mm.	

Visual Inspection Observation
No visible damage was found



Inspection Conclusion

Inspection Acceptance Recorded only		Repair area/Defect marked on N/A	
Operator Name Mr. Tinnapud K.		Date 18 April, 2023	
Client Representative Khun Wisanu Sa-Nguandee		Sign [Redacted Signature]	
		Sign [Redacted Signature]	



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

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Inspection of

1" LA-P Vapor return

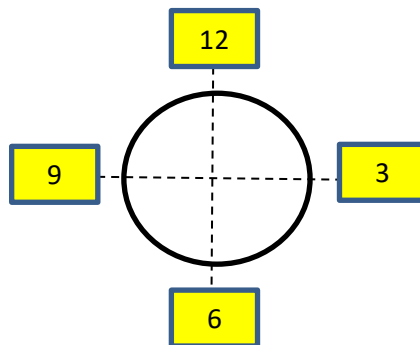
Project No

2304019

Inspection Comment

Point	12	3	6	9
Pipe 1	4.55	4.59	4.00	4.53
Pipe 2	4.95	4.55	4.25	4.50
Elbow(90) 3	4.59	4.56	4.63	4.45
Pipe 4	4.74	4.57	4.50	3.88
Pipe 5	4.59	4.62	4.64	4.46
Elbow(90) 6	4.17	4.67	4.91	4.57
Elbow(45) 7	4.52	4.44	4.61	4.43
Elbow(90) 8	4.71	4.51	4.38	4.41
Pipe 9	4.61	4.50	4.61	4.74
Elbow(90) 10	4.51	4.35	4.55	4.21
Elbow(90) 11	4.61	4.90	4.52	4.53
Pipe 12	4.59	4.60	4.53	4.63
Elbow(90) 13	4.71	4.61	4.46	4.17
Elbow(90) 14	4.50	4.31	4.42	4.28
Elbow(90) 15	4.74	4.57	4.45	4.56

Direction



ULTRASONIC THICKNESS MEASUREMENT



Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-3		Page No. 1 of 3	
Inspection of Item 6" LA-B Benzene vapour				Project No. 2304019	
Extent Spot check as marked on drawing		Drawing No N/A		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Surface (Paint / No Paint) Paint		Nom. Thickness -	
Procedure No P-INT-12		Mode (Normal / Echo-Echo) Echo-Echo		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Couplant Type N/A		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
		Probe Type / Frequency T/R		Range 20 to 100	
				Calibration Low / High Step 5 mm. 10 mm.	

Visual Inspection Observation No visible damage was found
--

Inspection Comment

Inspection Conclusion

Inspection Acceptance Recorded only	Repair area/Defect marked on N/A
Operator Name Mr. Tinnapud K.	Date 18 April, 2023
Client Representative Khun Wisanu Sa-Nguandee	Sign [Redacted Signature]
	Date [Redacted Date]
	Sign [Redacted Signature]



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18/4/2023

Page No.

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Project No

2304019

Inspection of

6" LA-B Benzene vapour

Inspection Comment

Point	12	3	6	9
Reduce 1	10.26	10.36	10.33	10.37
Reduce 2	12.76	12.73	12.66	12.30
Pipe 3	7.20	7.30	7.11	7.19
Pipe 4	7.30	7.11	7.01	7.13
Elbow(90) 5	7.18	7.73	7.01	7.70
Elbow(90) 6	7.21	7.60	7.88	7.81
Elbow(90) 7	7.25	7.30	7.31	7.74
Pipe 8	7.13	6.70	7.00	7.61
Pipe 9	7.10	7.31	7.06	7.50
Elbow(90) 10	7.01	7.35	8.62	7.58
Elbow(90) 11	6.72	8.01	7.44	6.70
Elbow(90) 12	7.01	8.99	7.00	6.98
Pipe 13	6.87	6.92	6.90	6.94
Pipe 14	7.11	7.21	7.60	7.89
Elbow (45) 15	7.33	8.01	7.51	7.95
Pipe 16	7.18	8.89	7.31	7.20
Pipe 17	7.31	6.88	7.21	7.14
Elbow(90) 18	7.14	7.31	6.30	6.71
Elbow(90) 19	7.11	7.32	6.71	6.62
Elbow(90) 20	7.01	7.51	6.91	6.72
Pipe 21	7.50	7.41	7.44	7.02
Pipe 22	7.54	7.00	7.03	7.10
Elbow(90) 23	6.64	7.20	7.61	7.23
Elbow(90) 24	6.69	7.10	7.75	7.73
Elbow(90) 25	6.91	7.20	6.80	7.29
Pipe 26	7.24	7.28	6.81	7.31
Pipe 27	7.25	7.30	7.11	7.10
Elbow(90) 28	6.44	7.40	7.38	6.31
Elbow(90) 29	6.47	7.57	7.34	6.34
Elbow(90) 30	7.01	7.51	7.18	6.65
Pipe 31	7.20	6.82	7.12	7.31
Pipe 32	7.30	7.18	7.26	7.24
Elbow(90) 33	6.81	7.22	7.31	7.51
Elbow(90) 34	6.94	7.31	7.24	7.44
Elbow(90) 35	7.21	7.61	7.31	7.16
Elbow45) 36	7.40	7.39	7.18	7.16
Elbow45) 37	7.01	7.31	7.22	7.24
Elbow(90) 38	8.12	8.11	7.53	7.74
Elbow(90) 40	8.19	8.21	7.72	7.71
Elbow(90) 41	6.81	7.51	7.67	7.42
Elbow(90) 42	6.81	7.43	7.69	7.11
Elbow(90) 43	6.73	7.42	7.10	7.01
Pipe 44	7.22	7.32	7.26	7.00
Pipe 45	7.36	7.42	7.31	7.20

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.

3 of 3

Project No

2304019

Inspection of

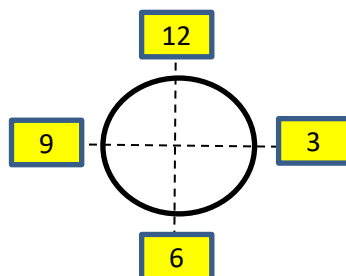
6" LA-B Benzene vapour

Inspection Comment

Point	12	3	6	9
Elbow(45) 46	6.71	7.89	7.00	7.46
Elbow(90) 47	7.91	7.81	7.30	7.40
Elbow(90) 48	8.27	7.84	7.35	7.99
Elbow(90) 49	8.40	7.97	7.65	8.02
Drain 50	11.62	**-	11.67	**-
Pipe 51	7.36	7.26	7.02	7.11
Elbow(90) 52	6.66	7.72	7.01	7.22
Elbow(90) 53	8.69	8.00	8.91	6.91
Elbow(90) 54	7.85	8.06	6.70	6.81
Pipe 55	7.21	7.03	7.41	7.42
Pipe 56	7.34	7.35	7.09	7.12
Elbow(90) 57	8.08	8.11	7.01	6.72
Elbow(90) 58	7.14	8.51	8.00	6.87
Elbow(90) 59	6.91	7.36	8.13	8.17
Pipe 60	7.12	7.05	7.39	7.41
Elbow(90) 61	6.51	7.18	7.08	7.31
Elbow(90) 62	6.54	7.38	7.00	7.45
Elbow(90) 63	6.81	7.42	7.14	7.18
Pipe 64	7.24	7.31	7.50	7.51
Elbow(90) 65	7.44	7.40	7.45	7.50
Elbow(90) 66	6.74	6.89	6.97	6.41
Elbow(90) 67	6.68	6.74	7.01	7.02
Elbow(90) 68	7.24	7.26	7.30	6.99
Elbow(90) 69	4.30	7.31	6.80	7.51
Elbow(90) 70	6.81	7.50	7.01	7.02
Pipe 71	7.03	7.20	6.87	7.24
Pipe 72	7.07	7.21	6.93	7.28
Elbow(90) 73	7.35	7.39	7.40	7.60
Elbow(90) 74	7.48	7.51	7.80	7.87
Elbow(90) 75	7.41	7.54	7.53	7.71

****Remark:** Obstructed by pipe support!

Direction



ULTRASONIC THICKNESS MEASUREMENT

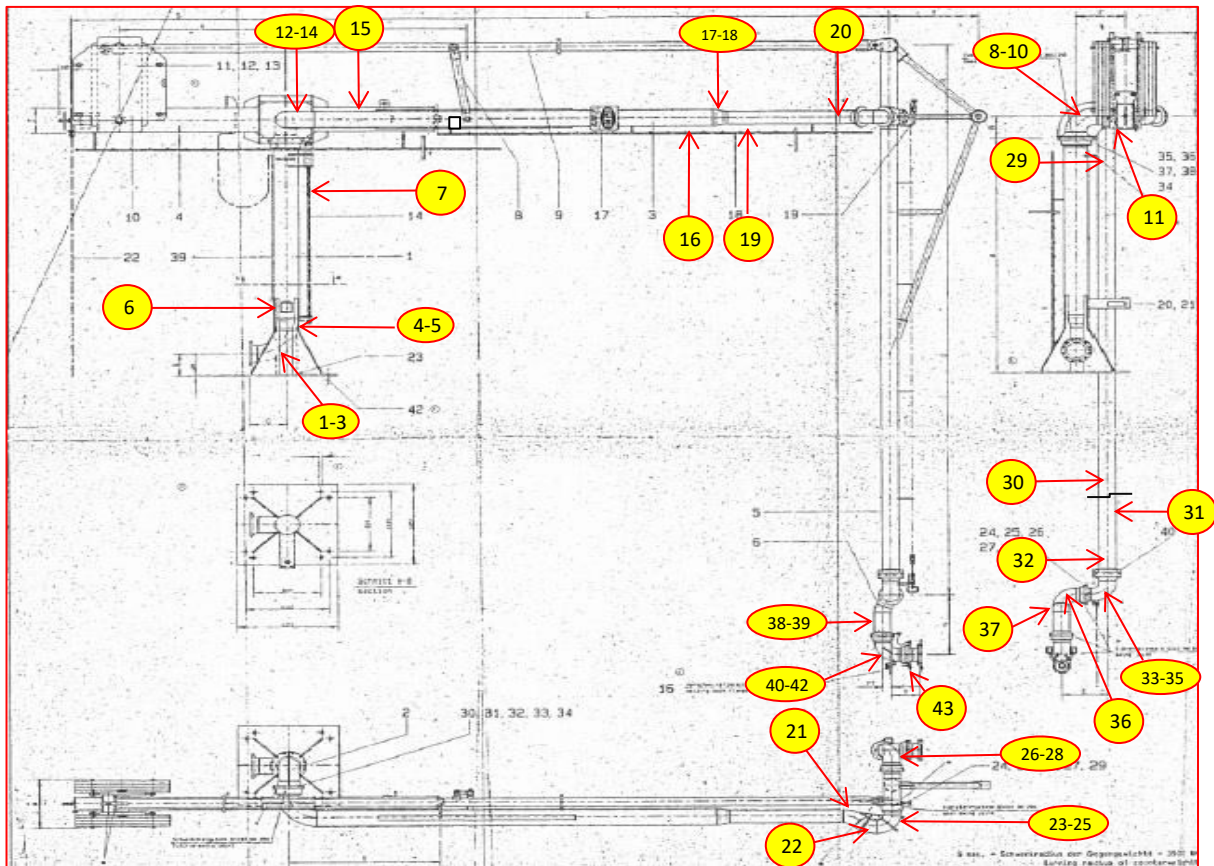


Client Name ESSO (Thailand) Public Company Limited		Location Esso Refinery Plant		Inspection Date 18 April, 2023	
Client Rep. Name Khun Wisanu Sa-Nguandee		Test Site BI-3		Page No. 1 of 3	
Inspection of Item 8" LA-1107 A		Drawing No N/A		Project No 2304019	
Extent Spot check as marked on drawing		Surface (Paint / No Paint) Paint		Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Material Carbon Steel		Mode (Normal / Echo-Echo) Echo-Echo		Nom. Thickness -	
Procedure No P-INT-12		Couplant Type N/A		Temperature N/A	
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009		Probe Type / Frequency T/R		Acceptance Criteria Recorded only	
Probe D790M		Crystal Diameter 10 mm.		Ref. Block (Serial number) 150611-2	
				Range 20 to 100	
				Calibration Low / High Step 5 mm. 20 mm.	

Visual Inspection Observation

No visible damage was found

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name Mr. Tinnapud K.
Client Representative Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date 18 April, 2023
Date

Sign

Sign



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.

2 of 3

Project No

2304019

Inspection of

8" LA-1107 A

Inspection Comment

Point	12	3	6	9
Elbow(90) 1	19.23	20.15	20.46	20.87
Elbow(90) 2	18.71	20.49	22.98	22.60
Elbow(90) 3	19.45	19.47	19.48	20.12
Reduce 4	23.47	24.59	24.26	23.52
Reduce 5	22.15	23.39	21.56	20.66
Pipe 6	17.11	17.64	17.25	18.22
Pipe 7	17.87	17.46	17.59	17.12
Elbow(90) 8	14.75	15.47	15.02	15.36
Elbow(90) 9	14.73	16.02	15.78	15.42
Elbow(90) 10	14.74	16.12	16.16	15.59
Pipe 11	15.45	15.12	15.71	16.36
Elbow(90) 12	15.46	17.12	16.65	15.59
Elbow(90) 13	15.98	16.43	16.45	16.16
Elbow(90) 14	15.77	16.02	15.98	16.73
Pipe 15	17.21	17.59	17.02	15.74
Pipe 16	15.59	16.82	17.84	16.11
Reduce 17	19.12	19.47	19.58	19.04
Reduce 18	19.87	20.42	20.81	20.63
Pipe 19	15.12	15.65	15.34	15.38
Pipe 20	15.42	15.59	15.61	15.42
Elbow(45) 21	15.15	15.42	14.89	14.48
Elbow(45) 22	14.47	15.85	15.87	17.16
Elbow(90) 23	16.96	17.23	17.26	17.19
Elbow(90) 24	16.65	16.72	16.74	16.65
Elbow(90) 25	17.38	17.36	17.59	17.78
Elbow(90) 26	17.23	17.46	17.95	18.47
Elbow(90) 27	**_	17.46	21.23	19.71
Elbow(90) 28	19.23	18.16	17.42	18.45
Pipe 29	12.63	12.47	12.74	12.98
Pipe 30	12.65	12.53	12.47	13.47
Pipe 31	13.01	12.84	13.56	13.15
Pipe 32	13.11	12.45	13.42	13.37
Elbow(90) 33	13.12	13.46	14.42	14.50
Elbow(90) 34	15.15	13.47	14.49	14.46
Elbow(90) 35	12.65	12.77	14.13	14.26

****Remark:** Obstructed by pipe support!

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

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Inspection of

8" LA-1107 A

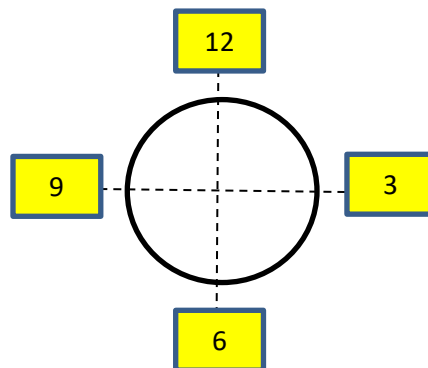
Project No

2304019

Inspection Comment

Point	12	3	6	9
Elbow (45) 36	14.25	14.67	13.23	14.12
Elbow (45) 37	13.39	13.56	12.53	13.48
Pipe 38	13.38	13.32	13.65	13.42
Pipe 39	13.57	13.18	13.71	13.46
Elbow(90) 40	13.26	13.87	14.72	14.62
Elbow(90) 41	13.42	14.65	14.59	14.66
Elbow(90) 42	13.12	14.34	14.28	14.22
Drain 43	5.67	5.74	5.59	5.61

Direction



ULTRASONIC THICKNESS MEASUREMENT **DEXON** TECHNOLOGY

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Inspection of Item

8" LA-B Loading arm

Extent

Spot check as marked on drawing

Material

Carbon Steel

Procedure No

P-INT-12

Equipment Type / Serial Number

Olympus 38DL Plus / 120465607/130718009

Probe

D790M

Crystal Diameter

10 mm.

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April, 2023

Page No.

1 of 3

Project No

2304019

Visual Inspection carried out

☐ Yes ☒ No

Drawing No

N/A

Surface (Paint / No Paint)

Paint

Mode (Normal / Echo-Echo)

Echo-Echo

Couplant Type

N/A

Probe Type / Frequency

T/R

Nom. Thickness

-

Temperature

N/A

Acceptance Criteria

Recorded only

Ref. Block (Serial number)

150611-2

Range

20 to 100

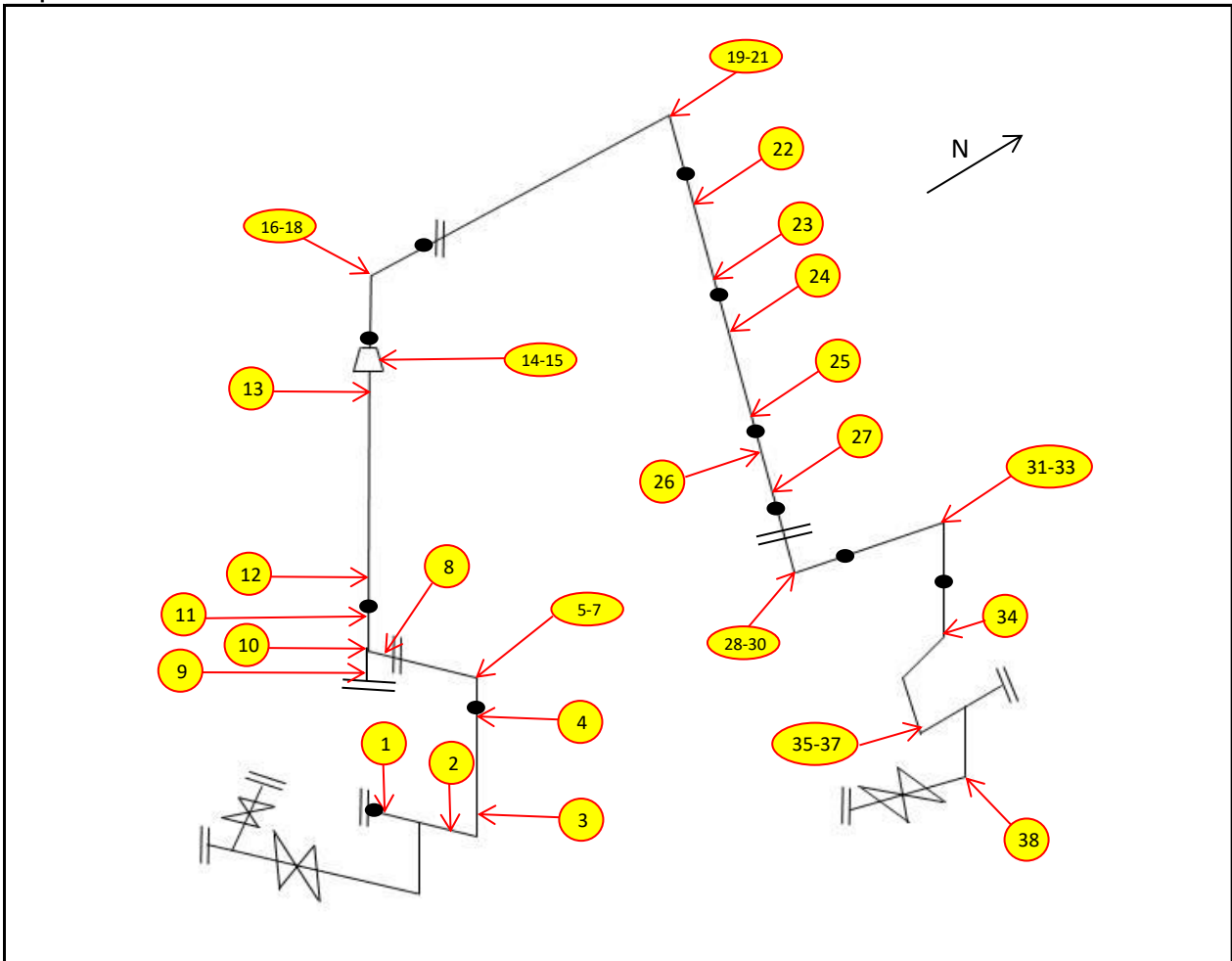
Calibration Low / High Step

5 mm. 20 mm.

Visual Inspection Observation

No visible damage was found

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name

Mr. Tinnapud K.

Client Representative

Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date

18 April, 2023

Date

Sign

.....

Sign

.....



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.

2 of 3

Project No

2304019

Inspection of

8" LA-B Loading arm

Inspection Comment

Point	12	3	6	9
Pipe 1	14.95	14.35	15.44	15.61
Pipe 2	15.21	15.98	15.42	14.22
Pipe 3	17.21	17.37	17.44	16.98
Pipe 4	17.46	18.39	16.20	16.22
Elbow(90) 5	12.85	13.21	13.87	13.39
Elbow(90) 6	13.26	13.47	13.23	13.18
Elbow(90) 7	13.26	13.25	13.41	13.12
Tee 8	20.49	20.32	20.47	20.61
Tee 9	26.98	28.74	29.23	26.12
Tee 10	25.95	25.61	**_	25.83
Tee 11	27.87	27.83	27.74	27.72
Pipe 12	18.76	18.61	18.59	18.22
Pipe 13	18.86	19.26	18.86	18.92
Reduce 14	13.89	14.21	14.41	14.26
Reduce 15	16.59	16.57	16.62	16.59
Elbow(90) 16	18.61	19.89	20.38	20.21
Elbow(90) 17	17.61	18.86	19.63	19.59
Elbow(90) 18	18.72	19.43	20.21	19.74
Elbow(90) 19	13.21	13.15	14.23	14.26
Elbow(90) 20	**_	12.69	12.12	12.21
Elbow(90) 21	11.98	11.61	11.46	12.15
Pipe 22	12.15	12.96	12.57	12.35
Pipe 23	12.76	12.23	12.86	12.15
Pipe 24	8.61	8.25	8.69	8.76
Pipe 25	8.69	8.36	8.48	8.95
Pipe 26	8.36	8.43	8.59	8.86
Pipe 27	8.48	8.59	8.69	8.56
Elbow(90) 28	8.59	9.21	10.11	9.35
Elbow(90) 29	8.46	9.23	9.96	9.26
Elbow(90) 30	8.42	9.35	9.95	9.19
Elbow(90) 31	7.61	7.42	8.63	8.21
Elbow(90) 32	7.55	7.49	7.87	7.96
Elbow(90) 33	7.23	7.59	7.48	7.69

****Remark:** Obstructed by pipe support!

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

3 of 3

Inspection of

8" LA-B Loading arm

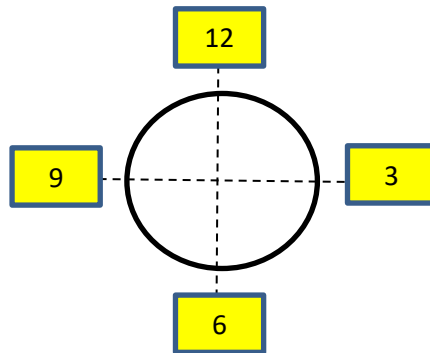
Project No

2304019

Inspection Comment

Point	12	3	6	9
Elbow(45) 34	8.21	7.42	7.49	7.61
Elbow(90) 35	7.77	7.56	7.79	7.86
Elbow(90) 36	7.76	7.84	7.59	7.64
Elbow(90) 37	7.71	7.83	7.47	7.72
Drain 38	5.71	5.38	5.89	5.61

Direction



ULTRASONIC THICKNESS MEASUREMENT

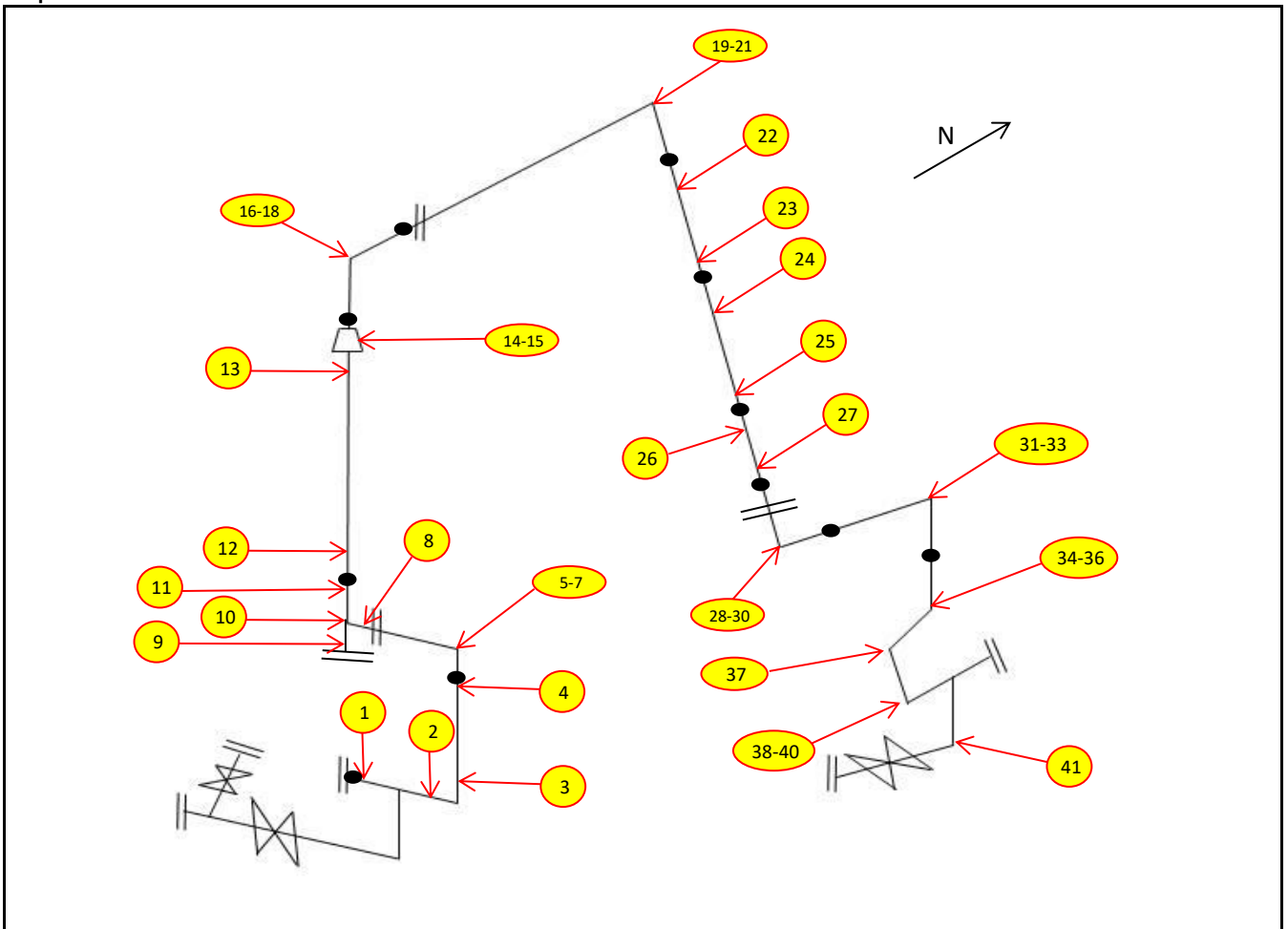


Client Name ESSO (Thailand) Public Company Limited	Location Esso Refinery Plant	Inspection Date 18 April, 2023
Client Rep. Name Khun Wisanu Sa-Nguandee	Test Site BI-3	Page No. 1 of 3
Inspection of Item 8"-LA-P Loading arm		Project No 2304019
Extent Spot check as marked on drawing	Drawing No N/A	Visual Inspection carried out <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Material Carbon Steel	Surface (Paint / No Paint) Paint	Nom. Thickness -
Procedure No P-INT-12	Mode (Normal / Echo-Echo) Echo-Echo	Temperature N/A
Equipment Type / Serial Number Olympus 38DL Plus / 120465607/130718009	Couplant Type N/A	Acceptance Criteria Recorded only
Probe D790M	Crystal Diameter 10 mm.	Ref. Block (Serial number) 150611-2
	Probe Type / Frequency T/R	Range 20 to 100
		Calibration Low / High Step 5 mm. 20 mm.

Visual Inspection Observation

No visible damage was found

Inspection Comment



Inspection Conclusion

Inspection Acceptance

Recorded only

Operator Name Mr. Tinnapud K.
Client Representative Khun Wisanu Sa-Nguandee

Repair area/Defect marked on

N/A

Date 18 April, 2023
Date

Sign	
Sign	



ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Client Rep. Name

Khun Wisanu Sa-Nguandee

Location

Esso Refinery Plant

Test Site

BI-3

Inspection Date

18 April 2023

Page No.

2 of 3

Project No

2304019

Inspection of

8"-LA-P Loading arm

Inspection Comment

Point	12	3	6	9
Pipe 1	14.48	15.49	15.85	15.22
Pipe 2	14.45	15.25	15.42	15.62
Pipe 3	16.63	17.12	17.18	16.74
Pipe 4	17.84	17.11	17.68	18.06
Elbow(90) 5	12.68	13.34	13.01	13.46
Elbow(90) 6	12.78	13.15	13.48	13.46
Elbow(90) 7	12.87	12.98	13.69	13.46
Tee 8	21.76	19.74	19.56	19.87
Tee 9	25.58	26.78	25.48	26.76
Tee 10	25.49	25.48	**-	25.26
Tee 11	27.28	27.38	27.46	27.38
Pipe 12	18.06	18.69	18.74	18.65
Pipe 13	17.98	17.36	18.67	18.59
Reduce 14	15.15	15.10	14.87	14.75
Reduce 15	17.98	16.79	16.22	16.76
Elbow(90) 16	18.43	19.49	19.56	19.81
Elbow(90) 17	18.35	19.74	20.21	20.15
Elbow(90) 18	18.35	19.65	19.17	19.12
Elbow(90) 19	11.47	11.21	11.85	12.22
Elbow(90) 20	13.06	12.47	12.12	12.47
Elbow(90) 21	12.12	12.78	12.96	12.84
Pipe 22	12.42	12.78	12.76	12.42
Pipe 23	12.78	12.06	12.42	12.59
Pipe 24	8.42	8.59	8.61	8.44
Pipe 25	8.87	8.42	8.59	8.61
Pipe 26	8.74	8.59	8.61	8.74
Pipe 27	8.38	8.46	8.69	8.56
Elbow(90) 28	8.46	8.87	8.76	8.59
Elbow(90) 29	8.28	8.82	8.79	8.61
Elbow(90) 30	8.76	8.98	8.77	8.96
Elbow(90) 31	8.49	8.78	8.74	8.91
Elbow(90) 32	8.89	8.96	8.97	8.84
Elbow(90) 33	8.96	9.02	9.12	9.07
Elbow(90) 34	8.46	8.61	8.96	8.87

****Remark:** Obstructed by pipe support!

ULTRASONIC THICKNESS MEASUREMENT



Addition

Client Name

ESSO (Thailand) Public Company Limited

Location

Esso Refinery Plant

Inspection Date

18 April 2023

Client Rep. Name

Khun Wisanu Sa-Nguandee

Test Site

BI-3

Page No.

3 of 3

Inspection of

8"-LA-P Loading arm

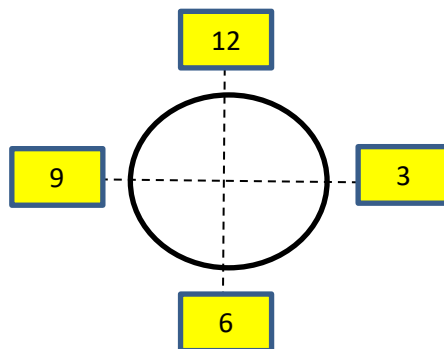
Project No

2304019

Inspection Comment

Point	12	3	6	9
Elbow(90) 35	8.61	8.74	8.86	8.96
Elbow(90) 36	8.74	8.76	8.89	8.94
Elbow(45) 37	8.65	8.74	8.86	8.49
Elbow(90) 38	7.89	8.96	8.95	8.74
Elbow(90) 39	7.74	8.89	8.96	8.71
Elbow(90) 40	7.77	8.56	8.74	8.32
Drain 41	5.61	5.48	5.69	5.47

Direction



4. CERTIFICATIONS



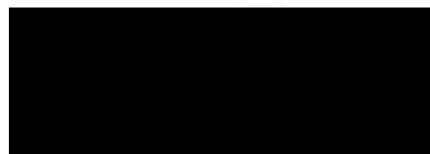
This is to certify that
Archakit Sangthong
IRATA No.: 3/31866

was successfully assessed as a

Level 3 Rope Access Technician

of IRATA International and has satisfied the requirements as stipulated in
the IRATA Training, Assessment and Certification Scheme.

The validity of this certificate should be verified at www.irata.org



Dr S Kondaveeti
Head of Quality, Audit and Certification

Date Originally Assessed at this Level: 26 Aug 2017

Assessment Date: 18 Jun 2022

Certification Expiry: 17 Jun 2025



This certificate remains the property of IRATA International and is bound by the provisions of the Articles of Association & Bye-Laws of IRATA International. This certificate is valid until midnight of the 'Certification Expiry' date shown above. Contact: IRATA International, 1st & 2nd Floor, Unit 3, Eurogate Business Park, Ashford, Kent, TN24 8XW, UK. Tel: +44 (0)1233 754 600 [TP-210ENG_003]



Certificate No. VT-2022-07-0078

Details of qualification can be found on certification sheet VT-2022-07-0078-S which has been issued in conjunction with this certificate

Reference training certificate No. DTC-VT-220130

CERTIFICATE

This is to certify that

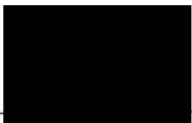
ARCHAKIT SANGTHONG

has successfully fulfilled Experience, Education, Training and Examination Requirements in accordance with the guidelines outlined in Dacon inspection's written practice P-INT-16 which is based on ASNT's Recommended practice SNT-TC-1A for Qualification and Certification of NDT Personnel, for the level and method indicated below

Visual Testing Level 2

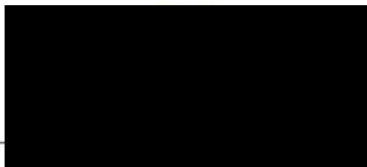
Date of issue: 11-07-2022

Date of Exam: 11-07-2022

()
Amnart Sununkingpech
NDT Level III

Date of expiry: 10-07-2025

This certificate becomes void when the holder is not employed by Dacon Inspection Technologies

()
Malika Kaekla
Chief Executive Officer



This is to certify that
Thanapon Suktam
IRATA No.: 1/67566

was successfully assessed as a

Level 1 Rope Access Technician

of IRATA International and has satisfied the requirements as stipulated in
the IRATA Training, Assessment and Certification Scheme.

The validity of this certificate should be verified at www.irata.org



Dr S Kondaveeti
Head of Quality, Audit and Certification

Date Originally Assessed at this Level: **04 Oct 2013**

Assessment Date: **03 Apr 2022**

Certification Expiry: **02 Apr 2025**



This certificate remains the property of IRATA International and is bound by the provisions of the Articles of Association & Bye-Laws of IRATA International. This certificate is valid until midnight of the 'Certification Expiry' date shown above. Contact: IRATA International, 1st & 2nd Floor, Unit 3, Eurogate Business Park, Ashford, Kent, TN24 8XW, UK. Tel: +44 (0)1233 754 600 (TP-210ENG_003)



Certificate No. VT-2022-01-0001

Details of qualification can be found on certification sheet VT-2022-01-0001-S which has been issued in conjunction with this certificate

Reference training certificate No. DTC-VT-220001

CERTIFICATE

This is to certify that


THANAPON SUKTAM

has successfully fulfilled Experience, Education, Training and Examination Requirements in accordance with the guidelines outlined in Dacon inspection's written practice P-INT-16 which is based on ASNT's Recommended practice SNT-TC-1A for Qualification and Certification of NDT Personnel, for the level and method indicated below

Visual Testing Level 2


Date of issue: 06-01-2022

Date of Exam: 06-01-2022

()
Amnart Sununkingpech
NDT Level III

Date of expiry: 05-01-2025

This certificate becomes void when the holder is not employed by Dacon Inspection Technologies

()
Mallika Kaekla
Chief Executive Officer



This is to certify that
Tinnapud Kumchairungrueang
IRATA No.: 2/118477

was successfully assessed as a

Level 2 Rope Access Technician

of IRATA International and has satisfied the requirements as stipulated in the IRATA Training, Assessment and Certification Scheme.

The validity of this certificate should be verified at www.irata.org



Dr S Kondaveeti
Head of Quality, Audit and Certification

Date Originally Assessed at this Level: **02 Nov 2019**

Assessment Date: **12 Nov 2022**

Certification Expiry: **11 Nov 2025**



This certificate remains the property of IRATA International and is bound by the provisions of the Articles of Association & Bye-Laws of IRATA International. This certificate is valid until midnight of the 'Certification Expiry' date shown above. Contact: IRATA International, 1st & 2nd Floor, Unit 3, Eurogate Business Park, Ashford, Kent, TN24 8XW, UK. Tel: +44 (0)1233 754 600 [TP-210ENG_003]



Certificate No. UTM-2020-06-0174

Details of qualification can be found on certification sheet UTM-2020-06-0174-S which has been issued in conjunction with this certificate.

Reference training certificate No. DTC-UTM-200234

CERTIFICATE

This is to certify that

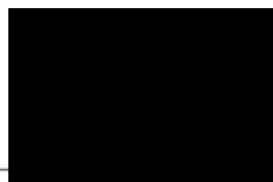
TINNAPUD KAMCHAIRUNGRUEANG

has successfully fulfilled Experience, Education, Training and Examination Requirements in accordance with the guidelines outlined in Dacon inspection's written practice P-INT-16 which is based on ASNT's Recommended practice SNT-TC-1A for Qualification and Certification of NDT Personnel, for the level and method indicated below

Ultrasonic Thickness Measurement Testing Level 2

Date of issue: 08-04-2020

Date of Exam: 08-06-2020



(*Jarno De Jonge*)
NDT Level III

Date of expiry: 07-06-2023

This certificate becomes void when the holder is not employed by Dacon Inspection Technologies



(*Mallika Kaekla*)
Chief Executive Officer

Certificate of Calibration

Work Order No. : IN2023-02-07

Certificate No. : DEXTH089-2023

Page : Page 1 of 2

1. Client

Name : Store Section / Dexon Technology Public Company Limited
Address : 78/4-5 Moo 6, Sukhumvit Road, Ban Chang, Rayong, 21130, THAILAND

2. Calibration Subject

Equipment : Ultrasonic Thickness Measurement
Manufacturer : Olympus
Model : 38 DL PLUS
Serial No. : 130718009
ID No. : UTM 39
Description : Probe type D790-SM 5MHz Probe Serial No : 921708

3. Received Date : 03 March 2023**4. Calibration Date** : 03 March 2023

5. Environmental Conditions : Ambient Temperature (20 ± 2) °C
Relative Humidity (55 ± 20) %
Location : Permanent Laboratory

6. Calibration Procedure

Calibration Method and / or Brief Description. This Certificate is Traceable to the International System of Unit (SI).

In house method : The calibration result with attached was done accord to Dexon Technology Public Company Limited by standard W-TEC02-03 Ultrasonic Thickness Measurement According to Direct measurement method with gauge block.

7. List of Use Standards / Specifications

Item	Instrument	Manufacturer	Model	Serial No.	Certificate No.	Due Date
1	Step Block	None	A1018	150916-1	220418CA45	19-Apr-23
2	Data logger	Almemo	2470	H1110057	220418DA35	19-Apr-23

8. Calibration Results : Refer attached file**9. Measurement Uncertainty** : Refer attached file

Calibration Perform

Approved By

Name Mr. Worawit Panchanassakul

Position Calibration Engineer

Issue Date : 3 March 2023

Name

Position

Mr. David Kuakamchai

Operation-QA/QC & Store Manager.

The report uncertainty of measurement was based on a standard uncertainty multiplied by a coverage k=2, providing a level of confidence of approximately 95%

This result of calibration was found accurate as show on date and place of calibration only. This certificate may not be reproduced other infull, except with the prior written approval form the Laboratory Manager of Dexon technology public company limited.

Calibration Results

Cert. No. : DEXTH089-2023

Page : 2 of 2

Result of Calibration : Without adjustment

Scale range : 2 mm to 100 mm

Resolution : 0.01 mm

Measurement Result

Range	Nominal length (mm)	UUC*Reading (mm)	Deviation (mm)	Measurement Uncertainty (μ m)
2 mm to 100 mm	2.0491	2.05	0.00	13.0
	4.0861	4.09	0.00	13.0
	6.0469	6.05	0.00	13.9
	8.0641	8.06	0.00	14.2
	10.0512	10.05	0.00	13.0
	20.0326	20.03	0.01	13.0
	30.0156	30.02	0.00	14.3
	40.0100	40.00	0.01	13.0
	50.0023	50.01	-0.01	13.1
	60.0084	60.00	0.01	13.1
	70.0021	70.00	0.00	13.1
	80.0027	80.00	0.00	13.2
	90.0240	90.02	0.00	13.2
	99.9818	99.98	0.00	13.3

Remark :
Gauge Setup :
Meas Option :
Gain (dB) :
Gage Velocity
Gage Zero

Deviation = Nominal length - UUC*Reading
Default
Standard
60
5.936 mm/ μ s
36020

This certifies that Calibration of the above Ultrasonic gaging system has been verified within the tolerance and measurement range indicated below, using calibration standards with measured thickness traceable to the Calibration standards material is A1018.

Calibration interval will vary based on usage handling and storage conditions. The Certificate shall not be reproduced, except in full, without the written approval of Operation-QA/QC & Store Manager Department.

Uncertainty of Measurement

The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor $k = 2.00$. It has been determined in accordance with EA publication EA-4/02 "Expression of the Uncertainty of Measurement in Calibration" and M3003 "The Expression of Uncertainty and Confidence in Measurement". The value of the measurand lies within the assigned range of values with a probability of 95%.

End of Certificate.

Certificate of Calibration

Work Order No. : IN2023-03-01

Certificate No. : DEXTH092-2023

Page : Page 1 of 2

1. Client

Name : Store section
Address : Store Section / Dexon Technology Public Company Limited

2. Calibration Subject

Equipment : Ultrasonic thickness gauge
Manufacturer : Olympus
Model : 38 DL PLUSE
Serial No. : 120465607
ID No. : UTM 23
Description : Probe type D790-SM 5MHz Probe Serial No : 921708

3. Received Date : 09 March 2023**4. Calibration Date** : 09 March 2023

5. Environmental Conditions : Ambient Temperature (20 ± 2) °C
Relative Humidity (55 ± 20) %
Location : Permanent Laboratory

6. Calibration Procedure

Calibration Method and / or Brief Description. This Certificate is Traceable to the International System of Unit (SI).

In house method : The calibration result with attached was done accord to Dexon Technology Public Company Limited by standard W-TEC02-03 Ultrasonic Thickness Measurement According to Direct measurement method with gauge block.

7. List of Use Standards / Specifications

Item	Instrument	Manufacturer	Model	Serial No.	Certificate No.	Due Date
1.	Calibration Block	Precision	A1018	150916-1	220418CA45	19-Apr-23
2.	Data logger	Almemo	2470	H1110057	220418DA35	19-Apr-23

8. Calibration Results : Refer attached file**9. Measurement Uncertainty** : Refer attached file

Calibration Perform

Approved By

Name : Mr. Worawat Vacharatassanakul
Position : Calibration Engineer
Issue Date : 9 March 2023

Name : Mr. David Kuakamchad
Position : Operation-QA/QC & Store Manager.

The report uncertainty of measurement was based on a standard uncertainty multiplied by a coverage k=2, providing a level of confidence of approximately 95%

This result of calibration was found accurate as show on date and place of calibration only. This certificate may not be reproduced other infull, except with the prior written approval form the Laboratory Manager of Dexon technology public company limited.

Calibration Results

Cert. No. : DEXTH092-2023

Page : 2 of 2

Result of Calibration : Without adjustment

Scale range : 2 - 100 mm

Resolution : 0.01 mm

Measurement Result

Range	Nominal length (mm)	UUC*Reading (mm)	Deviation (mm)	Measurement Uncertainty (μ m)
2 mm to 100 mm	2.0491	2.05	0.00	13.0
	4.0861	4.09	0.00	13.0
	6.0469	6.05	0.00	13.9
	8.0641	8.06	0.00	14.2
	10.0512	10.05	0.00	13.0
	20.0326	20.03	0.01	13.0
	30.0156	30.01	0.01	14.3
	40.0100	40.00	0.01	13.0
	50.0023	50.00	0.00	13.1
	60.0084	60.00	0.01	13.1
	70.0021	70.00	0.00	13.1
	80.0027	80.00	0.00	13.2
	90.0240	90.02	0.00	13.2
	99.9818	99.98	0.00	13.3

Remark : Deviation = Nominal length - UUC*Reading
Gauge Setup : Default
Meas Option : Standard
Gain (dB) : 60
Gage Velocity : 5.780 mm/ μ s
Gage Zero after Calibration : 36020

This certifies that Calibration of the above Ultrasonic gaging system has been verified within the tolerance and measurement range indicated below, using calibration standards with measured thickness traceable to the Calibration standards material is A1018.

Calibration interval will vary based on usage handling and storage conditions. The Certificate shall not be reproduced, except in full, without the written approval of Operation-QA/QC & Store Manager Department.

Uncertainty of Measurement

The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor $k = 2.00$. It has been determined in accordance with EA publication EA-4/02 "Expression of the Uncertainty of Measurement in Calibration" and M3003 "The Expression of Uncertainty and Confidence in Measurement". The value of the measurand lies within the assigned range of values with a probability of 95%.

End of Certificate.

2023 Inspection Program for S-3 area

Item	AMP / Non AMP	AMP Line No.	WO#	CREDO task ID / Adhoc	Unit	Equipment Tag in CREDO	Task Name / Line Item Title	Task Description / Minimum Scope Description	EDD	Inspection type	SHE RISK	ECON RISK	due date from CREDO	1150%	1650%	1800%	1850%	50%	1800%	2200%	3025%	25%	2675%	3375%	2400%	Task plan completion date	Field Inspection completed (Y/N)	Need Repair (Y/N)	Record in Routine repair tracking sheet	CREDO Report Complete (Y/N)	CREDO task ID	ES update complete (Y/N)
														Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec							
	Non-AMP			85297947	Sphere - DOEB regulation_FE	TK-3902_PRTK-3902	PRTK-3902 annual safety valve testing	Perform annual safety valve testing per DOEB regulation by qualified third party inspection company		Regulatory	N/A	N/A	1/14/2023	100%												31-Jan-23						
	Non-AMP			85297948	Sphere - DOEB regulation_FE	TK-990_SV-990	SV-990 annual safety valve testing	erform annual safety valve testing per DOEB regulation by qualified third party inspection company		Regulatory	N/A	N/A	1/14/2023	100%												31-Jan-23						
	Non-AMP			85297949	Sphere - DOEB regulation_FE	TK-904_SV-902	SV-902 annual safety valve testing	Perform annual safety valve testing per DOEB regulation by qualified third party inspection company		Regulatory	N/A	N/A	1/14/2023	100%												31-Jan-23						
	Non-AMP			85297950	Sphere - DOEB regulation_FE	TK-903_SV-901	SV-901 annual safety valve testing	Perform annual safety valve testing per DOEB regulation by qualified third party inspection company		Regulatory	N/A	N/A	1/14/2023	100%												31-Jan-23						
	Non-AMP			85297951	Sphere - DOEB regulation_FE	TK-3901_SV-3901	SV-3901 annual safety valve testing	Perform annual safety valve testing per DOEB regulation by qualified third party inspection company		Regulatory	N/A	N/A	1/14/2023	100%												31-Jan-23						
	Non-AMP			85297952	Sphere - DOEB regulation_FE	TK-985_SV-927	SV-927 annual safety valve testing	Perform annual safety valve testing per DOEB regulation by qualified third party inspection company		Regulatory	N/A	N/A	1/14/2023	100%												31-Jan-23						
	Non-AMP			75746352	R&S Tank under custom regulation_FE	TK-2204_Fixed Cone Roof	CONDITION ASSESSMENT AND UT SURVEY OF FIXED CONE ROOF PLATE PITTING AREA	UT Survey - UT measurements to be carried around Pitting area indentified in 2010 visual inspection report at Fixed Cone Roof plate - Measure the Pit area to verify if it is isolated or widespread - If the Pit area remaining thickness is less than 2.3mm, the area should be barricaded to prevent Personnel access and to avoid fall injury - If remaining thickness is in acceptable limit, preprepare the surface and perform re-coating	EDD_0001B	STANDARD RISK BASED TASK	C-III	C-III	3/31/2023	100%												31-Jan-23						
	Non-AMP			75741314	Subsea_Piping_G B-91	12"-O-5702-A1_Piping along Jetty	Close visual inspection per GIP-4.2.9 and GIP 2.2.1.	Task Driver: SHE Close visual inspection per GIP-4.2.9 and GIP 2.2.1. Ensure follow up inspection if corrosion is found - Visual inspection by rope access	EDD_0001B, EDD_0020	STANDARD RISK BASED TASK	C-III	C-III	12/31/2023	100%												31-Jan-23						
	Non-AMP			75741374	Subsea_Piping_L SADO	12"-O-6306-A1_Splash zone on Jetty	Visual inspection of concrete jacketing.	Task Driver: SHE Visual inspection of concrete jacketing, if the concrete jacketing is cracking or damage need to remove the concrete and inspect the pipeline and Diving inspection to determine any unusual coating failure and rusty areas. Remove marine growth randomly to inspect the condition of the pile metal. If finding high corrosion areas, conduct more detailed inspection to quantify the extent of degradation to enable remaining useful life evaluation. 3 year inspection program.	EDD_0051	STANDARD RISK BASED TASK	C-II	C-IV	12/31/2023	100%												31-Jan-23						
	Non-AMP			75741375	Subsea_Piping_L SADO	12"-O-6306-A1_Splash zone on BI-1/2	Visual inspection of concrete jacketing.	Task Driver: SHE Visual inspection of concrete jacketing, if the concrete jacketing is cracking or damage need to remove the concrete and inspect the pipeline and Diving inspection to determine any unusual coating failure and rusty areas. Remove marine growth randomly to inspect the condition of the pile metal. If finding high corrosion areas, conduct more detailed inspection to quantify the extent of degradation to enable remaining useful life evaluation. 3 year inspection program.	EDD_0051	STANDARD RISK BASED TASK	D-II	D-IV	12/31/2023	100%												31-Jan-23						
	Non-AMP			75741410	Subsea_Piping_N G	2"-NG-6962-1104-B1AD-NI_Piping on BI-3	Close visual inspection per GIP-4.2.9.	Task Driver: SHE Close visual inspection per GIP-4.2.9. Ensure follow up inspection if corrosion is found	EDD_0020	STANDARD RISK BASED TASK	D-III	C-IV	12/31/2023	100%												31-Jan-23						
	AMP	1388	10551524	Adhoc	Marine		Wave buoy annual inspection	Diving visual inspection for the rope of Wave buoy by marine contractor (Annually).							100%											28-Feb-23						
	AMP	1047	10551559	Adhoc	Marine		Crude subsea hose inspection >>> Follow in situ test procedure of offsite.								100%											28-Feb-23						
	Non-AMP			75737286	Marine_FE	BI3_BD Structural Piles, Framing, and Braces - BD 1-2 - Concrete Deck	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	C-II	B-II	12/30/2023		100%											28-Feb-23						
	Non-AMP			75737205	Marine_FE	BI3_BD Structural Piles, Framing, and Braces - BD 1-2 - Walkway to Loading Platform	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	B-III	N/A	12/30/2023		100%											28-Feb-23						
	Non-AMP			75737211	Marine_FE	BI3_MD Structural Piles, Framing, and Braces - MD 2-3 - Ladder	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	D-I	N/A	12/30/2023		100%											28-Feb-23						
	Non-AMP			75737153	Marine_FE	BI3_Loading Platform - Beam	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	B-III	B-II	12/30/2023		100%											28-Feb-23						
	Non-AMP			75737163	Marine_FE	BI3_Walkways and Supports - Skid Plate	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	C-II	A-IV	12/30/2023		100%											28-Feb-23						
	Non-AMP			75737264	Marine_FE	BI3_MD Structural Piles, Framing, and Braces - MD 1-4 - Concrete Deck	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	C-I	A-II	12/30/2023		100%											28-Feb-23						
	Non-AMP			75737280	Marine_FE	BI3_Loading Platform - Ladder	Unit Inspector to follow GIP 2.6.4 for the above water inspection	Unit Inspector to follow GIP 2.6.4 for the above water inspection documenting findings by S1 – S4 categories at component level. Visual inspection of piles, sheet piles, and retaining walls should be done at low tide. All findings should be documented in the structural inspection checklists provided at the end of the Marine Structure GIP.	EDD_0105	STANDARD RISK BASED TASK	E-I	N/A	12/30/2023		100%											28-Feb-23						

[illegible]

[illegible]

	Non-AMP			Auto create by repeating task	Subsea_Piping_F O	12"-O-6310-A1_Subsea piping	Conduct CP monitoring quarterly at FO line	Conduct CP monitoring quarterly at FO line		Regulatory	N/A	N/A	12/31/2023														100%	31-Dec-23						
	Non-AMP			Auto create by repeating task	Subsea_Piping_P Xylene	12"-PL-6962-0204-B1AG-NI_Subsea piping	Conduct CP monitoring quarterly at Px line	Conduct CP monitoring quarterly at Px line		Regulatory	N/A	N/A	12/31/2023														100%	31-Dec-23						
	Non-AMP			Auto create by repeating task	Subsea_Piping_L VN-MIX	12"-PL-6962-1512-A1AP-NI_Subsea piping	Conduct CP monitoring quarterly at LVN line	Conduct CP monitoring quarterly at LVN line		Regulatory	N/A	N/A	12/31/2023														100%	31-Dec-23						

Sign by Chief Inspector

Date



January 8, 2023