

ภาคผนวก ข-43

แผนและผลการบำรุงรักษาท่อขนส่ง

S and L Specialty Polymers Co.,Ltd			Equipment PM plan of 2022 (0.25year=3mth, 0.33year=4mth, 0.50year=6mth)				* by SandL * by Maker		Plan year: 2022 Revision: 00 (05-05-2022)	Preparation by: <div>APD</div> Review by: Year 202205 MAY 2022											
NO.	Equipment	Tag No.	P&ID No.	Name	Type/Model	Detail	Period (year)	Last service (year)	Next service (year)	Jan.	Feb.	Mar.	Apr.	May	Jun	July	Aug.	Sep.	Oct.	Nov.	Dec.
261	Overhead crane	KZ15-1-A	Reslurry house	Hoist Mono rail	Overhead Crane 2 tons	PM package unit	0.25	2021	2022			*		*		*		*		*	
		KZ15-1-A				Loadtest	1.00	2021	2022					*							
262	Overhead crane	KZ15-2-A	Reslurry house	Hoist Mono rail	Overhead Crane 2 tons	PM package unit	0.25	2021	2022			*		*		*		*		*	
		KZ15-2-A				Loadtest	1.00	2021	2022					*		*					
263	Overhead crane	KZ13-A	V37 A	Hoist Mono rail	Overhead Crane 1.6 tons	PM package unit	0.25	2021	2022			*		*		*		*		*	
		KZ13-A				Loadtest	1.00	2021	2022					*		*					
264	CL2 piping	CL2 piping	CL2 line	CL2 piping	CS and PTFE lining	Thickness inspection	1.00	2021	2022					*							
265	Bag Filter	S53-P	1002	Bag filter for PVC loading	4,348m3/hr Casing SUS304	Visual Inspection	1.00	2020	2021											*	
																				*	
266	Bag Filter	S52-1-P	1003	Bag filter for PVC Silo	4,000m3/hr Casing SUS304	Visual Inspection	1.00	2021	2022											*	
																				*	
267	Bag Filter	S52-2-P	1003	Bag filter for PVC Silo	4,000m3/hr Casing SUS304	Visual Inspection	1.00	2021	2022											*	
																				*	
268	Bag Filter	S52-3-P	1003	Bag filter for PVC Silo	4,000m3/hr Casing SUS304	Visual Inspection	1.00	2021	2022											*	
																				*	
269	Bag Filter	S52-4-P	1003	Bag filter for PVC Silo	4,000m3/hr Casing SUS304	Visual Inspection	1.00	2021	2022											*	
																				*	
270	Bag Filter	S31-1-P	1004	Bag filter for PVC Weighing Hopper	1,300Nm3/hr Casing SUS304 PE	Visual Inspection	1.00	2021	2022											*	
																				*	
271	Bag Filter	S31-2-P	1004	Bag filter for PVC Weighing Hopper	1,300Nm3/hr Casing SUS304 PE	Visual Inspection	1.00	2021	2022											*	
																				*	



**INSPECTION REPORT
FOR
S&L SPECIALTY POLYMERS CO., LTD.**

**VISUAL EXAMINATION
FOR
LINE CHLORINE GAS**

**INSPECTION DATE
4 - 7 April 2022**

**PREPARED BY
IS INDUSTRIE (THAILAND) LTD.**

PROJECT :	Pipeline Inspection	DATE:	4 - 7 April 2022
CLIENT :	S&L SPECIALTY POLYMERS CO., LTD.	LOCATION:	Rayong
WELDER No.:	N/A	WELDING PROCCE:	N/A
NDE METHOD:	Visual inspection	REFERENCE CODE :	API 570

00	19/04/2022				
Rev.	Date	Inspected By	Approve By	Approved By Client's	Approved By Owner

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	Customer / Client: S&L SPECIALTY POLYMERS CO., LTD.

Rev: 00 Effective date: May 17, 2013

Technical Data	
Line No. :	CL-200-A5C-16001-H25
Description :	Pipe
Design Pressure :	N/A Kg/cm ² G
Design Temperature :	N/A °C
Fluid :	CL
Material :	Carbon Steel

Type of inspection

- External Visual inspection**
 - Extent of examination 100% VT
- CUI inspection**
 - Extent of examination random
- Vibration piping inspection:** N/A

Summary : Visual inspection, Corrosion Under Insulation (CUI)

Inspection item	Comment
Leak : VT not found leakage of piping system <ul style="list-style-type: none"> ➤ Process ➤ Steam tracing ➤ Existing Clamps 	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Additional comment :	No comment
Misalignment : VT not found of piping Misalignment <ul style="list-style-type: none"> ➤ Piping misali./Restricted movement ➤ Expansion joint misalignment 	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Additional comment :	No comment
Vibration : <ul style="list-style-type: none"> ➤ Excessive overhung weight ➤ Inadequate support. ➤ Thin, small-bore, or alloy piping ➤ Threaded connections ➤ Loose supports causing metal wear 	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Additional comment :	No comment



INSTITUT
de SOUDURE
THAILAND

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Inspection item	Comment
Supports :	
➤ Shoes off support	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Hanger distortion or breakage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Bottomed-out springs	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Brace distortion/breakage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Loose brackets	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Slide plates/rollers	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Counter balance condition	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Support corrosion	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Additional comment :	<ul style="list-style-type: none"> - Base plate not contract with floor. - Bolts not extend through nut. - Many points on the local pipe lost of u-bolt at first floor area.
Corrosion :	
➤ Bolting support points under clamps	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Coating/Painting deterioration	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Soil-to-air interface	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Insulation interfaces	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Biological growth	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Additional comment :	No comment
Insulation :	
➤ Damage/penetrations	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Missing jacketing/insulation	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Sealing deterioration	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Bulging	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
➤ Banding (broken/missing)	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Additional comment :	No comment

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INSPECTION PICTURE

Item	Picture	Description
1		<p>For Visual Overview Date : 4 - 7 April 2022</p> <p>Bolts were light surface rust only, did not found rust scale due to corrosion. (General corrosion on bolts and nuts).</p>
2		<p>For Visual (CUI) Date : 4 - 7 April 2022</p> <p>On the local Open insulation Elbow was good surface condition of piping under insulation. No visible rust from visual inspection on this area.</p>
3		<p>For Visual (CUI) Date : 4 - 7 April 2022</p> <p>On the local Open insulation Elbow and straight pipe were good surface condition of piping under insulation. No visible rust from visual inspection on this area.</p>

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INSPECTION PICTURE

Item	Picture	Description
4		<p>For Visual (CUI) Date : 4 - 7 April 2022</p> <p>On the local Open insulation Elbow was good surface condition of piping under insulation. No visible rust from visual inspection on this area.</p>
5		<p>For Visual (CUI) Date : 4 - 7 April 2022</p> <p>On the local Open insulation Elbow was good surface condition of piping under insulation. No visible rust from visual inspection on this area.</p>
6		<p>For Visual (CUI) Date : 4 - 7 April 2022</p> <p>On the local Open insulation Elbow was good surface condition of piping under insulation. No visible rust from visual inspection on this area.</p>

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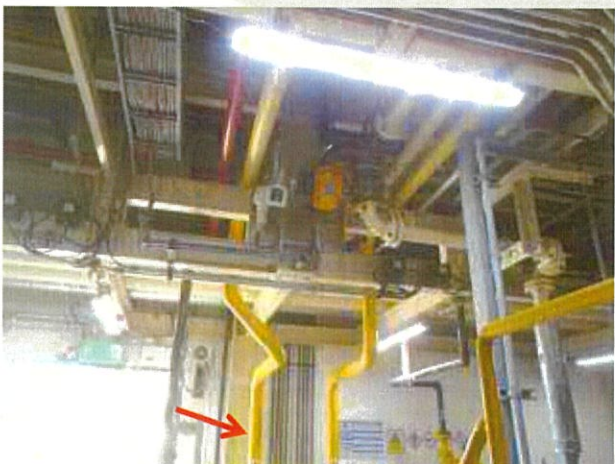

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INSPECTION PICTURE

Item	Picture	Description
7		<p>For Visual External Date : 4 - 7 April 2022</p> <p>Good surface condition.</p> <p>Joint connection of piping system. No leak.</p>
8		<p>For Visual External Date : 4 - 7 April 2022</p> <p>Good surface condition.</p>
9		<p>For Visual External (Painting/Coating) Date : 4 - 7 April 2022</p> <p>Good surface condition.</p> <p>Joint connection of piping system. No leak.</p>

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INSPECTION PICTURE

Item	Picture	Description
10		<p>For Visual External (Joint Flange) Date : 4 - 7 April 2022</p> <p>On the local Bolts & Nuts were light surface rust only, did not found rust scale due to corrosion.</p> <p>Type of corrosion</p> <ul style="list-style-type: none"> - General corrosion on bolts and nuts.
11		<p>For Visual External (on the local pipe support) Date : 4 - 7 April 2022</p> <p>VT was found base plate not contract with floor.</p> <p>Recommended should be install guide support stopper at both sides dummy support and insert plate.</p>
12		<p>For Visual External (Joint flange) Date : 4 - 7 April 2022</p> <p>VT was found bolts not extend through nut.</p> <p>Recommend should be replacing Bolts.</p> <p>Note; in acc. Code B31.3 para. 335.2.3 Bolt Length. Bolts shall extend through their nuts.</p>

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INSPECTION PICTURE

Item	Picture	Description
10		<p>For Visual External (pipe support) Date : 4 - 7 April 2022</p> <p>Incorrect fix pipe support Was found many points on the local pipe lost of u-bolt at first floor area.</p>
11		<p>For Visual External (Coating) Date : 4 - 7 April 2022</p> <p>Good surface condition.</p> <p>Joint connection of piping system. No leak.</p>