PT. AG IRM SERVIS INDONESIA

ABS In-Water Specialist
Cert No. 21-4655696-A
ABS ESP Hull Gauging
Cert No. 21-4655692-A
ABS Remote Inspection Techniques
Cert No. 21-4996595-A
SKUP MIGAS NDT ★★★

VISUAL INSPECTION REPORT

Job Details

Client	:	PT. Armada Gema Nusantara	***Material***	:	PIPE SMLS A671 Gr CB60
Project Name	:	CMP Project	***Design Temperature***	:	80
P.O. Number	:	4500215518	***Operating Temp***	:	65
Location	:	HCML FIELD MADURA Straits, East Java	***Design Pressure***	:	10 Barg
Installation	:	FPSO KAS III	***Operating Pressure***	:	2 - 4 Barg
Date of Inpection	:	2023-09-11	***Rep Line***	:	No
Report No	:	20AGN22191410PP171	***Corrosion Loop***	:	016-CW-C
AG IRM Project No	:	20AGN2219	***Line From***	:	CW RETURN HEADER
Module	:	M30	***Line To***	:	CW RETURN HEADER
Component ID	:	16-AC123-67-CW-3001-V	***P&ID***	:	21022-BAE-52400-PR-DW-0006
Component Type	:	Piping			

Inspection Summary

Isometric Index	*Results*	*Rectification WO No.*

External Inspection Checklist for Process Piping

16-AC123-67-CW-3001-V

Section 1 - Structural

a) Check and enscure expansion joints are not bent out of shape.
b) Check for any dents and misalignments,overhung, inadequate support and vibration that can cause rupture.

Status	Discrepancy	Photo ref
N/A	N/A	N/A
✓	No discrepancy	N/A

Section 2 - Piping Supports

a) Check for missing supports that can cause the pipe to rupture under weight.

Status	Discrepancy	Photo ref
✓	No discrepancy	See photo pages

Section 3 - Coating

a) Asess the coating condition of the piping system.

Status	Discrepancy	Photo ref
X	Damage coating	See photo pages

Section 4 - Leaks

a) Check for leaks and identify locations.

Status	Discrepancy	Photo ref
✓	No discrepancy	na

Section 5 - Corrosion

a) Identify corroded areas and record them. Take measurements and record pit depth.

Status	Discrepancy	Photo ref
✓	Coating damage	See photo pages

Section 6 - Insullation and Insulation Penetrations

a) Ensure all cladding is sealed.
b) Seal all exposed areas.
c) Expose some insulation to check the pipe surface for corrosion.

Status	Discrepancy	Photo ref
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	na

Section 7 - Small Bore Attachments

a) Ensure all small bore attachment are not vibrating or cracking.

Status	Discrepancy	Photo ref
✓	No discrepancy	N/A

Section 8 - Threaded Plugs

a) Check condition of threaded plugs to ensure they are not corroded.

Status	Discrepancy	Photo ref
X	Corrodid U bolt and nud	See photo pages

Legend

Status ✓ : Drawing as per actual condition, no anomaly
Status X : Drawing as per actual condition, found anomaly
Status N/A : Not exist at drawing and actual condition, no access for inspection

Comments

1. External visual inspection was performed in accordance with API 570-2016, with the findings detailed in this report. The piping was online and at elevated temperature at the time of inspection. Comments as follow:Generally all piping segment was visually in a sound condition with no cracking, leaking, bulging, distortion, or mechanical damage present.
2. Generally all piping segment was visually in a sound condition with no cracking, leaking, bulging, distortion, or mechanical damage present
3. Observed carbon steel studs/bolt/nuts bolted on stainless steel flanges. Recommended to apply apply insulation kit and washer on carbon steel studs/nuts to prevent further galvanic corrosion
4. External corrosion
- Some corrosion observed at studs bolts/nuts either U-bolt or pipe support (P2, P4, P5)
- Sign of rust observed on surface P3, sign of deteriorated.
- Corroded flange bolts/nuts (P5)
recommend : remove rust/surface corrosion and to apply proper protective coating based on ASME Sect 1 and coating codes and to apply proper protective coating based on ASME Sect 1 and coating codes, recommend to replace corroded bolts/nuts at valve P3B.
5. Due to above condition of the piping system, recommend to replace the existing corroded pipe/fitting with same material as stated in the MDR.
6. It is recommended to measure the depth at all pitting corrosion to perform further assesment.
7. It is recommended to label/tagging the piping line so that it can be easily traced and identified.
8. Perform external inspection in a regular basis (every 5 years) as per API 570.

	Name:	Qualification	Signature
API Inspector	Ercarter E. Silalahi	API 570/API 510	

VISUAL INSPECTION REPORT

Photographic Support

General view at Line pipe

Fig. 1

Surface corrosion on bolt and stud at P1

Fig. 2

Surface corrosion on U bolt at P5

Fig. 3

Surface corrosion on bolt and stud at P5

Fig. 4

Good condition at P5

Fig. 5

Good condition at P6

Fig. 6

Surface corrosion on bolt and stud at P6

Fig. 7

Surface corrosion on bolt and stud at P7

Fig. 8

Good condition at E8

Fig. 9

Good condition at T10

Fig. 10

Good condition at P13

Fig. 11

Good condition at P15

Fig. 12

Good condition at P15

Fig. 13

Good condition at P15

Fig. 14

Good condition at T17

Fig. 15

Good condition at T20

Fig. 16

Good condition at P22

Fig. 17

Good condition at P25

Fig. 18

Good condition at P25

Fig. 19

Good condition at P29

Fig. 20

Good condition at P30

Fig. 21

Good condition at P30

Fig. 22

Good condition at T32

Fig. 23

Good condition at P33

Fig. 24

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VISUAL INSPECTION REPORT

Isometric