



1595 So. Hwy 150, Suite F
Evanston, WY 82930

Inspections Performed for: FMC Technologies Completion	
Inspection Report for: LH-0011-C1/C2 Line Heater	
Remaining Life: (C1 10.3) (C2 6.9) YRS	Date last Inspected: 12/04/2015
Representative Corrosion Rate: 0.1 MPY	Next Inspection Due Date: 12/04/2016
Manufacturer: Tara Oilfield Services, LTD.	Mfg Serial #: 05-129C
Date Built: 2006	National Board #: N/A
Alberta registration #: 537501	Canadian Registration #: T5045.2

FMC Technologies Completion LH-0011 Line Heater



PRESSURE VESSEL INVENTORY

☒ Code ☐ Code-invalidated ☐ Non-Code ☐ Unknown ☐ Code-Exempt

☐ High Consequence (HCO) ☐ Medium Consequence (MCO) ☐ Low Consequence (LCO)

VESSEL ID INFORMATION

Company Name : FMC Technologies
Facility/Location Name : Grand Junction, CO
Field Name :
Equipment Number : LH-0011
Eq/Circ. ID : LH0011-C1/C2
Equipment Name/Service : Line Heater
Physical Location : In Grand Junction Yard
GPS Coordinates :

VESSEL DESCRIPTION AND SERVICE CONDITIONS

Type of Vessel: Horizontal Line Heater

Vessel Size: 3.5" O.D. Coils

Operating Pressure Range (psig): Not in service

Operating Temperature Range (°F): Not in service

Does the vessel have Internal Access? Yes

Specify type of internal access, if available: Into Heater shell will coil bundle removed.

Vessel is located: Outside

MISCELLANEOUS VESSEL INFORMATION: (IF VESSEL HAS NO NAMEPLATE, PLEASE OBTAIN AS MUCH OF THE FOLLOWING AS POSSIBLE FOR WORST CASE TMIN CALCULATIONS, may have to check with operations personnel).

Is there a Long Seam?

Any stamping pertaining to materials of construction?

****Diameter****(strap equipment): _____

Pressure (highest the equip. sees in the process and/or check PSV setting if available) _____psi

Temperature (highest the equipment would ever see in the process) _____

Approximate Date built or installed (check associated equipment or info at facility) ____2006____

Any other pertinent information: ____Design data with mfg. data reports provided.____

PRESSURE VESSEL INVENTORY

ORIGINAL VESSEL NAMEPLATE/STAMPING INFORMATION

Code stamp: ☐ U stamp ☐ U2 stamp ☐ UM stamp ☐ API-ASME ☒ No stamp



SUPPLEMENTAL VESSEL NAMEPLATE/STAMPING INFORMATION

Repair stamp: ☐ R stamp ☐ Other Stamp ☐ No stamp

Repaired By _____ Date of Repair _____

Nat'l Bd. R-Certification No. _____

Other Stamping Information: _____

VESSEL DOCUMENTATION

Manufacturer Data Sheets: ☐ ASME U-1 or U-1A Forms ☐ U2 or U4 Supplemental Forms

☐ Documentation relating to repair/alteration/rerating work: (R-1 form, calculations, revised drawings, inspection reports, etc.)

Name: Robert W. Menke Date: 03/22/2012

API 570 Piping External Inspection

Company Name: FMC Technologies Completion	Facility Name: PA District
Line Name/Number: LH-0011 C1-C2	
Size/Sched. Of Pipe: 3.500"	Eq/Circ. ID:
Service/System:	Piping Class ☐ 1 ☐ 2 ☐ 3 ☐ Other
Design Pressure: 5000 psi	Materials: ☒ CS ☐ SS ☐ Other
Design Temperature: 392°F	Note Stamping (If Any)
P&ID#:	Flange Rating: 2500#

Reason for Inspection: ☐ Initial API-570 on Stream Inspection.

☒ Scheduled API-570 External Inspection. ☐ Other:

Testing Performed:

☒ Visual ☒ UT ☐ PT ☐ MT ☐ Other:

Comments:

Insulation Observations:	Comments:
☐ Serviceable ☒ Not Insulated ☐ Missing/Damaged ☐ CUI Identification ☐ Corrosion Present (Describe) ☐ Other ☒ No Issues	Coils are not insulated.

Coating Condition:	Comments:
☐ Good ☒ Fair, Some Blistering/Peeling ☒ Corrosion Present (Describe) ☒ Other ☐ No Issues	Coils have heavy surface corrosion present, but no pitting located.

Loss of Containment:	Comments:
☐ Fluid Loss (Indicate How Much) ☐ Seeping or Evidence of Past Leakage ☐ Dripping (Size of Drops/Drops Per Minute) ☐ Leaking (Size of Stream, Noise Level, etc.) ☐ Clamps ☒ Other ☐ None Identified	Vessel was not in-service during this inspection.

Condition of Welds:	Comments:
☒ Welds Are Full, Smooth and Well Profiled ☐ Incomplete Fusion/Penetration ☐ Crack Located Near Weld Seam ☐ Weld Does Not Appear to Be Original ☐ Joints-Misaligned ☐ Undercut ☒ Other ☐ No Issues	Heavy surface corrosion was present on some welds.

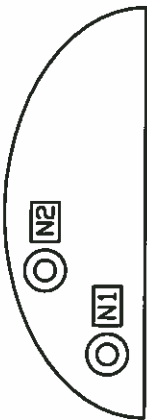
Relief Device:	Comments:
☐ PSV ☐ No PSV ☐ Rupture Disk ☐ Atmospheric ☐ No Relief Device Identified For This Equipment ☐ Tag Secure and Legible ☐ Set Pressure At Or Below MAWP ☐ Block Valve Not Locked/Car Sealed In Open Position ☐ Improper Drain Hole/Weather Cap On Atmos. Discharge ☐ Obstruction (i.e. Debris) ☐ Relief Installed In A Position Other Than Horiz. Or Upright ☒ Other ☐ No Issues	No PSV was located, vessel was not in-service during this inspection.

Supports/Hangers:	Comments:
☒ In Serviceable Condition ☐ Foundation Is Damaged ☐ Additional Support Needed ☐ Hanger/Support Is Distorted/Broken/Missing ☐ Pipe Slide Or Shoe Is Off Of The Support ☐ Makeshift Support ☐ Loose Support Needed To Be Tightened ☐ Fireproofing Missing Or Damaged ☐ Support/Hanger Is Corroded ☐ Other ☒ No Issues	There are (2) vertical supports. Welds are full with a good weld profile.

Flanged Connections:	Comments:
☒ Bolting Serviceable ☐ Short, Missing Or Damaged Bolting ☐ Nuts Lack Full Engagement ☒ Flanges Serviceable ☐ Flange Material Or Rating Inconsistent For System ☐ Flanges Deformed Or Damaged ☒ Corrosion Present (Describe) ☐ Gaskets ☐ Flange Rating Issues ☐ Other ☒ No Issues	Surface corrosion is present on bolting.

Mechanical Observations:	Comments:
☐ Deadleg ☐ Damaged Flex Hose ☐ Crack ☐ Biological Growth ☐ Threaded Exposed ☐ Threaded Connections Not Seal Welded ☐ Expansion Joint Issues ☐ Low Point Without Drain ☐ Open Ended ☐ Vibration (Excessive) ☐ Weep hole ☐ Other ☒ No Issues	

NAMEPLATE INFO	
MFG	TARA OILFIELD SERVICES LTD.
SERIAL NUMBER	05-129C
ALBERTA REG. #	537501
DATE BUILT	2006
DESIGN P & T	5000 psi @ 392°
NOTE	CRN # T5045.2



4 READINGS TAKEN AROUND THE CIRCUMFERENCE OF THE STRAIGHT PIPE, ONLY THE LOWEST WAS RECORDED.

CAL - 2 PT . 500 - . 750'

BUSINESS UNIT	FMC TECHNOLOGIES COMPLETION
EQ/CIRC ID #	LH-0011-C1
EQUIP NAME	LINE HEATER (WITH 2 COILS)
DWG #	LH-0011-C1

DESC: COIL 1 ON LINE HEATER
DWG#: LH0011-C1-1.01-39.01

Corrosion Monitoring Eq/Circ ID Analysis Report

Eaton Inspection Services
1595 So Hwy 150, Suite F, Evanston, WY 82930
Phone 307-789-3540 FAX 307-789-2822

Report Date: 12/24/2015

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011
Eq/Circ ID: LH0011-C1
Eq Type: VESSEL
Class:
CM RBI:
Design Code: B31.3

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: LH-0011 COIL 1; SN:05-129C

Summary: Group Name: Insp. Due Date = 12/03/2016
Pred. Ret. Date = 03/24/2026

Group Description:
PCR = 0.1 MPY
Rem. Life (from last survey 12/04/2015) = 10.3 yrs

0 C.A. Status: NO
Total Caution TMLs = 5

TML No	Location	Ctn TML	First Survey Thick	First Survey Nt	First Date	Previous Survey Thick	Previous Survey Nt	Previous Date	Last Survey Thick	Last Survey Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date	
1.01	STR	N	0.602		03/08/2011	0.586		09/22/2014	0.596	DA	12/04/2015	0	1.3	0	16.6	0.401	P	1.3	11/09/2165	12/03/2016
2.01	STR	N *	0.576		03/08/2011	0.579		09/22/2014	0.568	DA	12/04/2015	9.2	1.7	1.7	35.6	0.401	P	9.2	01/24/2034	12/03/2016
3.01	STR	N	0.580		03/08/2011	0.546		09/22/2014	0.565	DA	12/04/2015	0	3.2	4.1	65.2	0.401	P	3.2	02/23/2067	12/03/2016
4.01	END	N	0.672		03/08/2011	0.638		09/22/2014	0.707	DA	12/04/2015	0	0	0	9.6	0.401	P	0.1	12/19/4015	12/03/2016
5.01	END	N	0.631		03/08/2011	0.608		09/22/2014	0.616	DA	12/04/2015	0	3.2	4.3	10.7	0.401	P	3.2	01/31/2083	12/03/2016
6.01	END	N	0.712		03/08/2011	0.701		09/22/2014	0.709	DA	12/04/2015	0	0.6	0	3.1	0.401	P	0.6	02/12/2529	12/03/2016
7.01	STR	N	0.579		03/08/2011	0.557		09/22/2014	0.568	DA	12/04/2015	0	2.3	3.3	59.3	0.401	P	2.3	06/29/2088	12/03/2016
8.01	STR	N *	0.597		03/08/2011	0.572		09/22/2014	0.559	DA	12/04/2015	10.8	8.0	7.0	45.1	0.401	P	10.8	07/18/2030	12/03/2016
9.01	END	Y *	0.706		03/08/2011	0.665		09/22/2014	0.637	DA	12/04/2015	23.3	14.6	8.7	23.3	0.401	P	23.3	01/18/2026	12/03/2016
10.01	END	N	0.623		03/08/2011	0.598		09/22/2014	0.610	DA	12/04/2015	0	2.7	3.2	20.2	0.401	P	2.7	04/19/2093	12/03/2016
11.01	END	N	0.689		03/08/2011	0.580		09/22/2014	0.656	DA	12/04/2015	0	7.0	9.1	90.1	0.401	P	7.0	05/04/2052	12/03/2016
12.01	STR	N	0.589		03/08/2011	0.612		09/22/2014	0.610	DA	12/04/2015	1.7	0	0	1.7	0.401	P	1.7	10/25/2138	12/03/2016
13.01	STR	N	0.609		03/08/2011	0.577		09/22/2014	0.568	DA	12/04/2015	7.5	8.6	4.4	9.0	0.401	P	8.6	05/02/2035	12/03/2016
14.01	END	Y *	0.693		03/08/2011	0.644		09/22/2014	0.621	DA	12/04/2015	19.2	15.2	9.5	19.2	0.401	P	19.2	05/18/2027	12/03/2016
15.01	END	N	0.653		03/08/2011	0.594		09/22/2014	0.622	DA	12/04/2015	0	6.5	6.0	41.5	0.401	P	6.5	11/28/2049	12/03/2016
16.01	END	N	0.705		03/08/2011	0.689		09/22/2014	0.685	DA	12/04/2015	3.3	4.2	0	4.5	0.401	P	4.2	07/10/2083	12/03/2016
17.01	STR	N	0.596		03/08/2011	0.577		09/22/2014	0.602	DA	12/04/2015	0	0	0.5	11.9	0.401	P	0.1	12/19/4015	12/03/2016
18.01	STR	N	0.595		03/08/2011	0.570		09/22/2014	0.588	DA	12/04/2015	0	1.5	2.7	7.4	0.401	P	1.5	07/13/2140	12/03/2016
19.01	END	N	0.727		03/08/2011	0.656		09/22/2014	0.681	DA	12/04/2015	0	9.7	4.4	20.0	0.401	P	9.7	10/12/2044	12/03/2016
20.01	END	N	0.630		03/08/2011	0.605		09/22/2014	0.598	DA	12/04/2015	5.8	6.7	5.1	26.1	0.401	P	6.7	04/24/2045	12/03/2016

Corrosion Monitoring Eq/Circ ID Analysis Report

Eaton Inspection Services
1595 So Hwy 150, Suite F, Evanston, WY 82930
Phone 307-789-3540 FAX 307-789-2822

Report Date: 12/24/2015

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011
Eq/Circ ID: LH0011-C1
Eq Type: VESSEL
Class:
CM RFI:
Design Code: B31.3

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: LH-0011 COIL 1; SN:05-129C

Summary:

Group Name:
Insp. Due Date = 12/03/2016
Pred. Ret. Date = 03/24/2026

Group Description:

RCR = 0.1 MPY
Rem. Life (from last survey 12/04/2015) = 10.3 yrs

O C.A. Status: NO
Total Caution TMLs = 5

TML No	Location	Ctn	First Survey Thick	First Survey Thick Nt	First Date	Previous Survey Thick	Previous Survey Thick Nt	Previous Date	Last Survey Thick	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thick	Rep TML	TML Retirement Date	TML Inspection Date	
21.01	END	Y *	0.659	03/08/2011	0.655	09/22/2014	0.578	DA	64.2	17.1	11.3	64.2	0.401	P	64.2	0.401	P	64.2	09/05/2018	12/03/2016
22.01	STR	N	0.576	03/08/2011	0.575	09/22/2014	0.594	DA	12/04/2015	0	0	0	0	0	32.0	0.401	P	0.1	01/20/3945	12/03/2016
23.01	STR	N	0.587	03/08/2011	0.547	09/22/2014	0.621	DA	12/04/2015	0	0	0	0	0	12.0	0.401	P	0.1	12/19/4015	12/03/2016
24.01	END	Y *	0.719	03/08/2011	0.680	09/22/2014	0.600	DA	12/04/2015	66.7	25.1	15.0	66.7	0.401	P	66.7	11/27/2018	12/03/2016	12/03/2016	
25.01	END	N	0.607	03/08/2011	0.585	09/22/2014	0.677	DA	12/04/2015	0	0	0	0	0	43.9	0.401	P	0.1	12/19/4015	12/03/2016
26.01	END	N	0.657	03/08/2011	0.655	09/22/2014	0.687	DA	12/04/2015	0	0	0	0	0	11.9	0.401	P	0.1	12/19/4015	12/03/2016
27.01	STR	Y *	0.560	03/08/2011	0.670	09/22/2014	0.544	DA	12/04/2015	105.1	3.4	0	105.1	0.401	P	105.1	04/14/2017	12/03/2016	12/03/2016	
28.01	STR	N *	0.551	03/08/2011	0.558	09/22/2014	0.545	DA	12/04/2015	10.8	1.3	0	27.3	0.401	P	10.8	04/01/2029	12/03/2016	12/03/2016	
29.01	END	N	0.693	03/08/2011	0.682	09/22/2014	0.667	DA	12/04/2015	12.5	5.5	1.0	12.5	0.401	P	12.5	03/13/2037	12/03/2016	12/03/2016	
30.01	END	N	0.627	03/08/2011	0.577	09/22/2014	0.595	DA	12/04/2015	0	6.7	7.0	34.4	0.401	P	6.7	11/12/2044	12/03/2016	12/03/2016	
31.01	END	N *	0.643	03/08/2011	0.642	09/22/2014	0.624	DA	12/04/2015	15.0	4.0	2.5	15.0	0.401	P	15.0	10/14/2030	12/03/2016	12/03/2016	
32.01	STR	N *	0.597	03/08/2011	0.572	09/22/2014	0.558	DA	12/04/2015	11.7	8.2	8.3	11.7	0.401	P	11.7	05/02/2029	12/03/2016	12/03/2016	
33.01	STR	N	0.567	03/08/2011	0.542	09/22/2014	0.598	DA	12/04/2015	0	0	0	60.5	0.401	P	0.1	01/20/3985	12/03/2016	12/03/2016	
34.01	END	N	0.717	03/08/2011	0.660	09/22/2014	0.668	DA	12/04/2015	0	10.3	2.2	16.1	0.401	P	10.3	11/02/2041	12/03/2016	12/03/2016	
35.01	END	N	0.661	03/08/2011	0.599	09/22/2014	0.611	DA	12/04/2015	0	10.5	8.9	23.7	0.401	P	10.5	12/01/2035	12/03/2016	12/03/2016	
36.01	END	N	0.670	03/08/2011	0.652	09/22/2014	0.685	DA	12/04/2015	0	0	0	61.7	0.401	P	0.1	12/19/4015	12/03/2016	12/03/2016	
37.01	STR	N	0.588	03/08/2011	0.546	09/22/2014	0.577	DA	12/04/2015	0	2.3	4.1	40.3	0.401	P	2.3	05/28/2092	12/03/2016	12/03/2016	
38.01	STR	N	0.594	03/08/2011	0.576	09/22/2014	0.572	DA	12/04/2015	3.3	4.6	4.5	17.8	0.401	P	4.6	01/29/2053	12/03/2016	12/03/2016	
39.01	STR	N	0.610	03/08/2011	0.576	09/22/2014	0.594	DA	12/04/2015	0	3.4	3.2	13.0	0.401	P	3.4	08/30/2072	12/03/2016	12/03/2016	

Eaton Inspection Services
1595 So Hwy 150, Suite F, Evanston, NY 82930
Phone 307-789-3540 FAX 307-789-2822

Report Date: 12/24/2015

Unit: LH-0011
Eq/Circ ID: LH0011-C1
Design Code: B31.3
Eq Type: VESSEL
Class:
CM RBI:

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: LH-0011 COIL 1; SN:05-129C

TML Corrosion Rates are each the Maximum of:
(A) -- Calculated Corrosion Rates x 1.00
(B) -- Default Corrosion Rate

:
:
Varies
0.1 MPY

Representative Corrosion Rate is the Maximum of:

(A) -- Average Corrosion Rate x 1.10 : Not Used.
(B) -- Average Max 25.0% of TMLs, Min of 2 : Not Used.
(C) -- Formula Corrosion Rate (Sigma = 1.28) : Not Used.
(D) -- Default Corrosion Rate : 0.1 MPY
Representative Corrosion Rate = 0.1 MPY

TML thickness readings have not been compensated for high temperatures.
TML thickness readings have not been compensated for growths.

TML Life calculations are based on the Representative TML Corrosion Rate using Short Term and Long Term Corrosion Rates.

Nominal thickness is used for TML corrosion rate calculations with less than 3 surveys.

Minimum time between inspections required for corrosion rate calculation is 3 months.

TML Inspection Interval is:
(A) -- 1.00 years.

Eq/Circ ID Last Survey Date is based on the LAST of the last 0% of TML survey dates (Min 1).

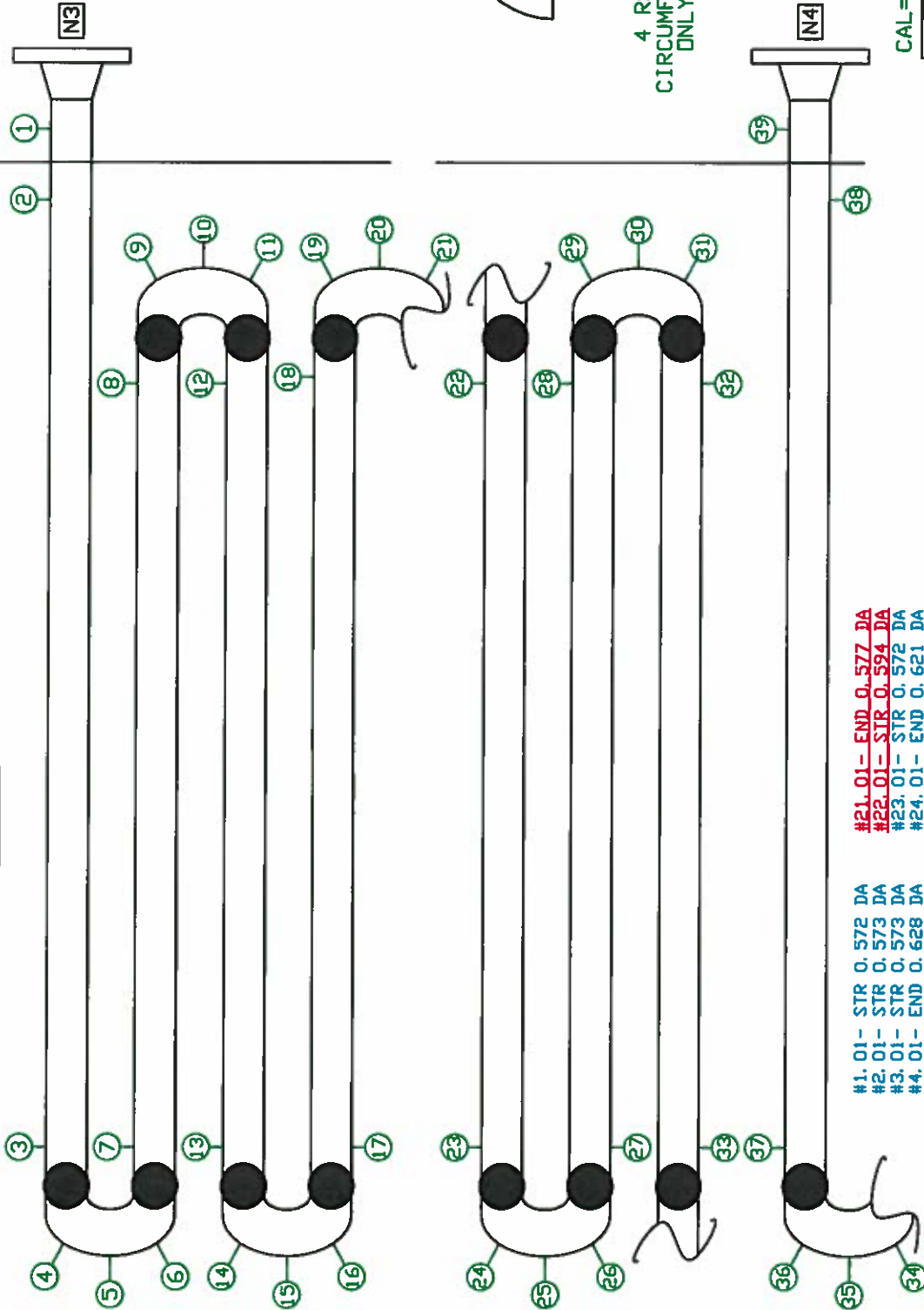
Eq/Circ ID Estimated life = 10.3 years from the most recent survey date.
(Estimated Life based on the ave of the earliest 25% (Min 6) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 03/24/2026

Recommended Eq/Circ UT/RT Inspection Date is 12/03/2016
UT/RT Inspection Interval is 1.00 years.

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining Life < 3.00 Years.
There are 5 Caution TMLs in this Eq/Circ ID.

EQUIP RETIREMENT DATE: 11/7/2022
NEXT INSPECTION IS DUE: 12/3/2016



4 READINGS TAKEN AROUND THE
CIRCUMFERENCE OF THE STRAIGHT PIPE.
ONLY THE LOWEST WAS RECORDED.

COIL #2

#1. 01- STR 0.572 DA
#2. 01- STR 0.573 DA
#3. 01- STR 0.573 DA
#4. 01- END 0.628 DA
#5. 01- END 0.542 DA
#6. 01- END 0.680 DA
#7. 01- STR 0.581 DA
#8. 01- STR 0.580 DA
#9. 01- END 0.631 DA
#10. 01- END 0.637 DA
#11. 01- END 0.663 DA
#12. 01- STR 0.584 DA
#13. 01- STR 0.530 DA
#14. 01- END 0.655 DA
#15. 01- END 0.558 DA
#16. 01- END 0.670 DA
#17. 01- STR 0.586 DA
#18. 01- STR 0.584 DA
#19. 01- END 0.698 DA
#20. 01- END 0.558 DA
#21. 01- END 0.577 DA
#22. 01- STR 0.594 DA
#23. 01- STR 0.572 DA
#24. 01- END 0.621 DA
#25. 01- END 0.604 DA
#26. 01- END 0.681 DA
#27. 01- STR 0.599 DA
#28. 01- STR 0.574 DA
#29. 01- END 0.638 DA
#30. 01- END 0.555 DA
#31. 01- END 0.665 DA
#32. 01- STR 0.605 DA
#33. 01- STR 0.583 DA
#34. 01- END 0.621 DA
#35. 01- END 0.573 DA
#36. 01- END 0.680 DA
#37. 01- STR 0.594 DA
#38. 01- STR 0.581 DA
#39. 01- STR 0.595 DA

CAL = CAL - 2 PT .500 - .750' VESSEL =

BUSINESS UNIT	FMC TECHNOLOGIES COMPLETION
EQ/CIRC ID #	LH-0011-C2
EQUIP NAME	LINE HEATER (WITH 2 COILS)
DWG #	LH-0011-C2

DESC: COIL 2 ON LINE HEATER
DWG#: LH0011-C2-1.01-39.01

NAMEPLATE INFO	
MFG	TARA DILFIELD SERVICES LTD.
SERIAL NUMBER	05-129C
ALBERTA REG. #	537501
DATE BUILT	2006
DESIGN P & T	5000 psi @ 392°F
NOTE	CRN # T5045.2

DA-501

Corrosion Monitoring Eq/Circ ID Analysis Report

Eaton Inspection Services
1595 So Hwy 150, Suite F, Evanston, WY 82930
Phone 307-789-3540 FAX 307-789-3822

Report Date: 12/24/2015

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011

Eq/Circ ID: LH0011-C2

Eq Type: VESSEL

Class:

CM RBI:

Design Code: B31.3

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: LH-0011 COIL 2; SN:05-129C

Summary: Group Name:

Insp. Due Date = 12/03/2016

Pred. Ret. Date = 11/07/2022

Group Description:

RCR = 0.1 MPY

Rem. Life (from last survey 12/04/2015) = 6.9 yrs

0 C.A. Status: NO

Total Caution TMLs = 10

TML No	Location	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date
1.01	STR	N	0.585	03/08/2011	0.583	09/22/2014	0.572 DA	12/04/2015	9.2	2.7	2.4	9.2	0.401 P	9.2	07/02/2034	12/03/2016
2.01	STR	N	0.570	03/08/2011	0.572	09/22/2014	0.573 DA	12/04/2015	0	0	0	0.4	0.401 P	0.1	01/19/3735	12/03/2016
3.01	STR	N	0.568	03/08/2011	0.563	09/22/2014	0.573 DA	12/04/2015	0	0	0	15.8	0.401 P	0.1	01/19/3735	12/03/2016
4.01	END	N	0.660	03/08/2011	0.639	09/22/2014	0.628 DA	12/04/2015	9.2	6.7	6.0	17.8	0.401 P	9.2	08/03/2040	12/03/2016
5.01	END	Y *	0.588	03/08/2011	0.581	09/22/2014	0.542 DA	12/04/2015	32.5	9.7	9.1	32.5	0.401 P	32.5	04/05/2020	12/03/2016
6.01	END	N	0.622	03/08/2011	0.602	09/22/2014	0.680 DA	12/04/2015	0	0	0	37.8	0.401 P	0.1	12/19/4015	12/03/2016
7.01	STR	N	0.602	03/08/2011	0.577	09/22/2014	0.581 DA	12/04/2015	0	4.4	2.3	14.2	0.401 P	4.4	10/23/2056	12/03/2016
8.01	STR	Y *	0.605	03/08/2011	0.618	09/22/2014	0.580 DA	12/04/2015	31.7	5.3	2.0	31.7	0.401 P	31.7	07/26/2021	12/03/2016
9.01	END	N	0.648	03/08/2011	0.633	09/22/2014	0.631 DA	12/04/2015	1.7	3.6	0	20.4	0.401 P	3.6	10/15/2079	12/03/2016
10.01	END	N	0.599	03/08/2011	0.571	09/22/2014	0.637 DA	12/04/2015	0	0	0	11.9	0.401 P	0.1	12/19/4015	12/03/2016
11.01	END	N	0.632	03/08/2011	0.571	09/22/2014	0.663 DA	12/04/2015	0	0	0	25.2	0.401 P	0.1	12/19/4015	12/03/2016
12.01	STR	Y *	0.590	03/08/2011	0.671	09/22/2014	0.584 DA	12/04/2015	72.5	1.3	0	72.5	0.401 P	72.5	06/12/2018	12/03/2016
13.01	STR	Y *	0.557	03/08/2011	0.556	09/22/2014	0.530 DA	12/04/2015	21.7	5.7	7.4	21.7	0.401 P	21.7	11/12/2021	12/03/2016
14.01	END	Y	0.737	03/08/2011	0.600	09/22/2014	0.655 DA	12/04/2015	0	17.3	9.7	48.9	0.401 P	17.3	08/08/2030	12/03/2016
15.01	END	Y *	0.593	03/08/2011	0.581	09/22/2014	0.558 DA	12/04/2015	19.2	7.4	6.1	19.2	0.401 P	19.2	02/05/2024	12/03/2016
16.01	END	N	0.653	03/08/2011	0.586	09/22/2014	0.670 DA	12/04/2015	0	0	0	24.1	0.401 P	0.1	12/19/4015	12/03/2016
17.01	STR	N	0.597	03/08/2011	0.590	09/22/2014	0.586 DA	12/04/2015	3.3	2.3	1.2	17.6	0.401 P	3.3	12/16/2071	12/03/2016
18.01	STR	N	0.600	03/08/2011	0.585	09/22/2014	0.584 DA	12/04/2015	0.8	3.4	3.1	13.0	0.401 P	3.4	09/20/2069	12/03/2016
19.01	END	N	0.640	03/08/2011	0.630	09/22/2014	0.698 DA	12/04/2015	0	0	0	18.9	0.401 P	0.1	12/19/4015	12/03/2016
20.01	END	Y *	0.609	03/08/2011	0.580	09/22/2014	0.558 DA	12/04/2015	18.3	10.8	8.3	18.3	0.401 P	18.3	07/01/2024	12/03/2016

Corrosion Monitoring Eq/Circ ID Analysis Report

Eaton Inspection Services
1595 So Hwy 150, Suite F, Evanston, WY 82930
Phone 307-789-3540 FAX 307-789-3822

Report Date: 12/24/2015

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011
Eq/Circ ID: LH0011-C2
Eq Type: VESSEL
Class:
CM RBI:
Design Code: B31.3

Flange Rating: 5295 lb/in²
Design Pressure: 5000 lb/in²
Design Temperature: 392 °F

Description: LH-0011 COIL 2; SN:05-129C

Summary: Group Name: Insp. Due Date = 12/03/2016
Pred. Ret. Date = 11/07/2022

Group Description:
RCR = 0.1 MPY
Rem. Life (from last survey 12/04/2015) = 6.9 yrs

0 C.A. Status: No
Total Caution TMLs = 10

TMU No	Location	Ctn	First Survey Thick	First Date	Previous Survey Thick	Previous Date	Last Survey Thick	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TMU Retirement Date	TMU Inspection Date
21.01	END	Y *	0.656	03/08/2011	0.580	09/22/2014	0.577	DA 12/04/2015	2.5	16.7	14.5	28.5	0.401	P 16.7	06/16/2026	12/03/2016
22.01	STR	Y *	0.579	03/08/2011	0.629	09/22/2014	0.594	DA 12/04/2015	29.2	0	0	29.2	0.401	P 29.2	07/13/2022	12/03/2016
23.01	STR	N *	0.597	03/08/2011	0.588	09/22/2014	0.572	DA 12/04/2015	13.3	5.3	4.9	14.9	0.401	P 13.3	10/10/2028	12/03/2016
24.01	END	N	0.622	03/08/2011	0.629	09/22/2014	0.621	DA 12/04/2015	6.7	0.2	0	6.7	0.401	P 6.7	09/29/2048	12/03/2016
25.01	END	N	0.603	03/08/2011	0.601	09/22/2014	0.604	DA 12/04/2015	0	0	0	9.3	0.401	P 0.1	12/19/4015	12/03/2016
26.01	END	N	0.661	03/08/2011	0.611	09/22/2014	0.681	DA 12/04/2015	0	0	0	15.4	0.401	P 0.1	12/19/4015	12/03/2016
27.01	STR	N	0.574	03/08/2011	0.574	09/22/2014	0.599	DA 12/04/2015	0	0	0	1.1	0.401	P 0.1	01/21/3995	12/03/2016
28.01	STR	N	0.580	03/08/2011	0.575	09/22/2014	0.574	DA 12/04/2015	0.8	1.3	2.2	19.0	0.401	P 1.3	12/07/2148	12/03/2016
29.01	END	N	0.602	03/08/2011	0.636	09/22/2014	0.638	DA 12/04/2015	0	0	0	0	0.401	P 0.1	12/19/4015	12/03/2016
30.01	END	Y *	0.611	03/08/2011	0.600	09/22/2014	0.555	DA 12/04/2015	37.5	11.8	6.6	37.5	0.401	P 37.5	01/11/2020	12/03/2016
31.01	END	N	0.622	03/08/2011	0.569	09/22/2014	0.665	DA 12/04/2015	0	0	0	16.1	0.401	P 0.1	12/19/4015	12/03/2016
32.01	STR	N	0.603	03/08/2011	0.600	09/22/2014	0.605	DA 12/04/2015	0	0	0	22.5	0.401	P 0.1	12/19/4015	12/03/2016
33.01	STR	N	0.593	03/08/2011	0.569	09/22/2014	0.583	DA 12/04/2015	0	2.1	0	13.0	0.401	P 2.1	07/20/2102	12/03/2016
34.01	END	N	0.684	03/08/2011	0.580	09/22/2014	0.621	DA 12/04/2015	0	13.3	7.2	42.6	0.401	P 13.3	06/16/2032	12/03/2016
35.01	END	N	0.595	03/08/2011	0.563	09/22/2014	0.573	DA 12/04/2015	0	4.6	3.5	9.3	0.401	P 4.6	04/18/2053	12/03/2016
36.01	END	N	0.596	03/08/2011	0.580	09/22/2014	0.680	DA 12/04/2015	0	0	0	10.7	0.401	P 0.1	12/19/4015	12/03/2016
37.01	STR	N	0.628	03/08/2011	0.571	09/22/2014	0.594	DA 12/04/2015	0	7.2	4.2	23.0	0.401	P 7.2	09/19/2042	12/03/2016
38.01	STR	N	0.596	03/08/2011	0.569	09/22/2014	0.581	DA 12/04/2015	0	3.2	2.5	28.5	0.401	P 3.2	02/23/2072	12/03/2016
39.01	STR	N	0.599	03/08/2011	0.575	09/22/2014	0.595	DA 12/04/2015	0	0.8	0.7	27.3	0.401	P 0.8	04/26/2258	12/03/2016

Eaton Inspection Services
 1595 So Hwy 150, Suite F, Evanston, WY 82930
 Phone 307-789-3540 FAX 307-789-2822

Report Date: 12/24/2015

Unit: LH-0011
 Eq/Circ ID: LH0011-C2
 Design Code: B31.3
 Eq Type: VESSEL
 Class:
 CM RBI:

(Report in Inches, Corrosion Rates in MPY)
 Analysis: Straight Line

Flange Rating: 5295 lb/in.
 Design Pressure: 5000 lb/in.
 Design Temperature: 392 °F

Description: LH-0011 COIL 2; SN:05-129C

TML Corrosion Rates are each the Maximum of:
 (A) -- Calculated Corrosion Rates x 1.00
 (B) -- Default Corrosion Rate

Varies
 0.1 MPY

Representative Corrosion Rate is the Maximum of:

(A) -- Average Corrosion Rate x 1.10
 (B) -- Average Max 25.0% of TMLs, Min of 2
 (C) -- Formula Corrosion Rate (Sigma = 1.28)
 (D) -- Default Corrosion Rate
 Representative Corrosion Rate = 0.1 MPY

Not Used.
 Not Used.
 0.1 MPY

TML thickness readings have not been compensated for high Temperatures.
 TML thickness readings have not been compensated for growths.

TML Life calculations are based on the Representative TML Corrosion Rate using Short Term and Long Term Corrosion Rates.

Nominal thickness is used for TML corrosion rate calculations with less than 3 surveys.

Minimum time between inspections required for corrosion rate calculation is 3 months.

TML Inspection Interval is:
 (A) -- 1.00 years.

Eq/Circ ID Last Survey Date is based on the LAST of the last 0% of TML survey dates (Min 1).

Eq/Circ ID Estimated life = 6.9 years from the most recent survey date.
 (Estimated Life based on the ave of the earliest 25% (Min 6) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 11/07/2022

Recommended Eq/Circ UT/RT Inspection Date is 12/03/2016
 UT/RT Inspection Interval is 1.00 years.

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining Life < 3.00 Years.
 There are 10 Caution TMLs in this Eq/Circ ID.



1595 So. Hwy 150, Suite F
Evanston, WY 82930

Inspections Performed for: FMC Technologies Completion	
Inspection Report for: LH-0011 Fuel Gas Scrubber	
Remaining Life: 20+ YRS	Date Last Inspected: 12/04/2015
Representative Corrosion Rate: 4.6 MPY	Next Inspection Due Date: 12/04/2015
Manufacturer: Lo Tech Manufacturing, Inc.	Mfg Serial #: 8285.26
Date Built: 2005	National Board #: None
Alberta registration #: None	Canadian Registration #: OH5148.21345

Fuel Gas Scrubber on LH-0011 Line Heater



PRESSURE VESSEL INVENTORY

☒ Code ☐ Code-invalidated ☐ Non-Code ☐ Unknown ☐ Code-Exempt

☐ High Consequence (HCO) ☐ Medium Consequence (MCO) ☐ Low Consequence (LCO)

VESSEL ID INFORMATION

Company Name : Pure Energy Services (USA) Inc.
Facility/Location Name : Grand Junction, CO
Field Name :
Equipment Number : LH-0011
Eq/Circ. ID : LH0011-FGS
Equipment Name/Service : (Line Heater) Fuel Gas Scrubber
Physical Location : In Grand Junction Yard
GPS Coordinates :

VESSEL DESCRIPTION AND SERVICE CONDITIONS

Type of Vessel: Vertical Scrubber

Vessel Size: 8.625" O.D.

Operating Pressure Range (psig): Not in service

Operating Temperature Range (°F): Not in service

Does the vessel have Internal Access? ☐ Yes ☒ No

Specify type of internal access, if available:

Vessel is located: ☐ Inside ☒ Outside ☐ Under Roof

MISCELLANEOUS VESSEL INFORMATION: (IF VESSEL HAS NO NAMEPLATE, PLEASE OBTAIN AS MUCH OF THE FOLLOWING AS POSSIBLE FOR WORST CASE TMIN CALCULATIONS, *may have to check with operations personnel*).

Is there a Long Seam? ☐ Yes ☒ No

Any stamping pertaining to materials of construction? ☐ Yes ☐ No

****Diameter****(strap equipment): 8.625"

Pressure (highest the equip. sees in the process and/or check PSV setting if available) n/a psi

Temperature (highest the equipment would ever see in the process)

Approximate Date built or installed (check associated equipment or info at facility) 2005

Any other pertinent information:

PRESSURE VESSEL INVENTORY

ORIGINAL VESSEL NAMEPLATE/STAMPING INFORMATION

Code stamp: ☐ U stamp ☐ U2 stamp ☐ UM stamp ☐ API-ASME ☒ No stamp



SUPPLEMENTAL VESSEL NAMEPLATE/STAMPING INFORMATION

Repair stamp: ☐ R stamp ☐ Other Stamp ☐ No stamp

Repaired By _____

Date of Repair _____

Nat'l Bd. R-Certification No. _____

Other Stamping Information: _____

VESSEL DOCUMENTATION

Manufacturer Data Sheets: ☐ ASME U-1 or U-1A Forms ☐ U2 or U4 Supplemental Forms

☐ Documentation relating to repair/alteration/rerating work: (R-1 form, calculations, revised drawings, inspection reports, etc.)

Name: Robert W. Menke

Date: 03/22/2012

API 510 PRESSURE VESSEL EXTERNAL INSPECTION REPORT

Company Name: FMC Technologies Completion	
Field/Location: Evanston District	
Equipment Number: LH-0011	Eq/Circ. ID: LH0011-FGS
Equipment Name/Service: Fuel Gas Scrubber	
Physical Location: in Evanston Yard	
Manufacturer: Lo Tech Manufacturing, Inc.	Manufacturer Serial Number: 8285.26
Year Built: 2005	National board #: None
Alberta Registration #: None	Canadian Registration # : OH 5148.21345

Reason for Inspection: Scheduled API-510 External Inspection

Condition of Nameplate and/or Bracket: Nameplate is intact and legible. Nameplate is in good overall condition.

Internal Access: No

Corrosion Monitoring Locations (CMLs) and baseline thickness data established: Yes.

Grounding Device in Place and Secure?: N/A. The equipment is grounded through the skid. The line heater was not in service at the time of this inspection.

Condition of Foundation and Anchor Bolts: All (4) anchor bolts and nuts are in place and secure. The vessel has a flat bottom head which also serves as a baseplate. Baseplate has light surface corrosion present.

Condition of Steel Supports, Saddles, and Bolting: Shell to head attachment weld is smooth with a good weld profile.

Condition of Paint and/or Insulation: The paint is in good condition with no chipping or peeling. Vessel coating is in acceptable condition.

Condition of Nozzles, Flanges, Repads, and Weepholes: There is no evidence of flange leaks or leaks at any of the threaded connections. All threaded connections. Threaded coupling attachment welds are smooth with a good weld profile.

Condition of Welds; Head and Shell Metal Surfaces: All (exposed) metal surfaces are painted. There is no distortion or indication of corrosion beneath the paint coating. The pressure boundary welds have no visual weld defects.

Condition of Ladders, Stairways, and Brackets: N/A

If Equipment has Anomalous Data, did the Inspector check it? N/A

Is There a PSV on the Vessel? Yes

If yes, is it set at or below the MAWP? Yes

Date PSV last tested (if there is a tag on the valve): No, test tag present

Comments:

PSV had no test tag present. Per Hunter, the PSV is going in to get re-tested as of 11-18-2013

Recommendations:

None.

Repairs Needed:

None.

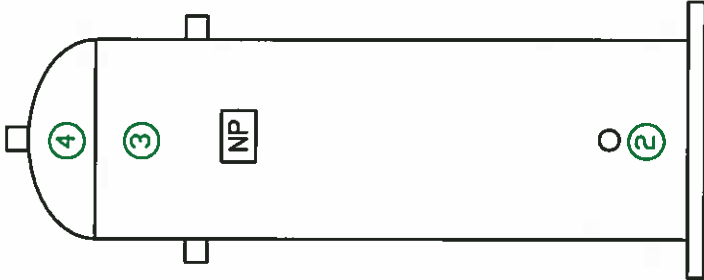
API 510 Inspector Signature
Robert W. Menke/BGW

API 510 Inspector Number
0131

Date
12/04/2015

EQUIP RETIREMENT DATE: 4/28/2057
NEXT INSPECTION IS DUE: 12/3/2016

- #2. 01- BTM SHELL-FRONT 0. 315 TC
- #2. 02- BTM SHELL-LEFT 0. 313 TC
- #2. 03- BTM SHELL-BACK 0. 311 TC
- #2. 04- BTM SHELL-RIGHT 0. 322 TC
- #3. 01- TOP SHELL-FRONT 0. 300 TC
- #3. 02- TOP SHELL-LEFT 0. 301 TC
- #3. 03- BTM SHELL-BACK 0. 306 TC
- #3. 04- TOP SHELL-RIGHT 0. 302 TC
- #4. 01- TOP HD-FRONT 0. 343 TC
- #4. 02- TOP HD-LEFT 0. 354 TC
- #4. 03- TOP HD-BACK 0. 344 TC
- #4. 04- TOP HD-RIGHT 0. 366 TC



TC-560

NAMEPLATE INFO	
MFG	LOTECH MANUFACTURING, INC.
SERIAL NUMBER	8285. 26
NATIONAL BOARD #	NONE
DATE BUILT	2005
DESIGN P & T	285 PSIG @ 650°F
NOTE	CRN # DH 5148. 21345 NO 'U' STAMP

CAL=

VESSEL=

BUSINESS UNIT	FMC TECHNOLOGIES COMPLETION
EQ/CIRC ID #	LH-0011-FGS
EQUIP NAME	FUEL GAS SCRUBBER
LOCATION	WITH LINE HEATER LH-0011
DWG #	LH0011-FGS

DESC: FUEL GAS SCRUBBER
DWG#: LH0011-FGS-2.01-4.04

Corrosion Monitoring Eq/Circ ID Analysis Report

Eaton Inspection Services
1595 So Hwy 150, Suite P, Evanston, WY 82930
Phone 307-789-3540 FAX 307-789-2822

Report Date: 12/24/2015

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Unit: LH-0011

Eq/Circ ID: LH0011-FGS

Eq Type: VESSEL

Class:

CM RBI:

Design Code: SB/D1

Flange Rating: 535 lb/in²
Design Pressure: 285 lb/in²
Design Temperature: 650 °F

Description: LH-0011 FUEL GAS SCRUBBER; SN: 8285.47

Summary: Group Name:

Insp. Due Date = 12/03/2016

Pred. Ret. Date = 04/28/2057

Group Description:

RCR = 4.6 MPY

Rem. Life (from last survey 12/04/2015) = 41.4 yrs

0 C.A. Status: NO
Total Caution TMLs = 0

TML No	Location	Ctn TML	First Survey Thick	First Survey Nt	First Date	Previous Survey Thick	Previous Survey Nt	Previous Date	Last Survey Thick	Last Survey Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TMU Retirement Date	TMU Inspection Date
2.01	BTM SHELL-FRONT	N	0.311 TC	03/08/2011	0.313 RR	0.315 TC	0.312 RR	11/18/2013	0.315 TC	0.312 RR	12/04/2015	0	0	0	1.7	0.197 U	0.1	12/13/3195	12/03/2016
2.02	BTM SHELL-LEFT	N	0.310 TC	03/08/2011	0.312	0.312	0.312	11/18/2013	0.312 RR	0.312 RR	12/04/2015	0	0	0	1.9	0.197 U	0.1	12/12/3165	12/03/2016
2.03	BTM SHELL-BACK	N	0.309 TC	03/08/2011	0.303	0.303	0.303	11/18/2013	0.303 RR	0.303 RR	12/04/2015	0	1.3	1.5	3.6	0.197 U	1.3	06/18/2097	12/03/2016
2.04	BTM SHELL-RIGHT	N	0.323 TC	03/08/2011	0.323 RR	0.322 TC	0.322 RR	11/18/2013	0.322 TC	0.322 RR	12/04/2015	0.5	0.2	0.2	0.5	0.197 U	0.5	12/06/2265	12/03/2016
3.01	TOP SHELL-FRONT	N *	0.308 TC	03/08/2011	0.313 RR	0.300 TC	0.300 TC	11/18/2013	0.300 TC	0.300 TC	12/04/2015	6.4	1.7	1.4	6.4	0.197 U	6.4	01/07/2032	12/03/2016
3.02	TOP SHELL-LEFT	N *	0.302 TC	03/08/2011	0.304	0.301 TC	0.301 TC	11/18/2013	0.301 TC	0.301 TC	12/04/2015	1.5	0.2	0.1	3.1	0.197 U	1.5	04/04/2085	12/03/2016
3.03	BTM SHELL-BACK	N *	0.308 TC	03/08/2011	0.310	0.306 TC	0.306 TC	11/18/2013	0.306 TC	0.306 TC	12/04/2015	2.0	0.4	0.3	2.2	0.197 U	2.0	06/04/2070	12/03/2016
3.04	TOP SHELL-RIGHT	N *	0.306 TC	03/08/2011	0.308	0.302 TC	0.302 TC	11/18/2013	0.302 TC	0.302 TC	12/04/2015	2.9	0.8	0.7	2.9	0.197 U	2.9	02/18/2052	12/03/2016
4.01	TOP HD-FRONT	N	0.331 TC	03/08/2011	0.328 RR	0.332 RR	0.332 RR	11/18/2013	0.332 RR	0.332 RR	12/04/2015	0	0	0	2.9	0.197 U	0.1	12/14/3365	12/03/2016
4.02	TOP HD-LEFT	N *	0.338 TC	03/08/2011	0.316	0.316 RR	0.316 RR	11/18/2013	0.316 RR	0.316 RR	12/04/2015	0	4.6	3.8	19.2	0.197 U	4.6	10/17/2041	12/03/2016
4.03	TOP HD-BACK	N	0.323 TC	03/08/2011	0.323 RR	0.329 RR	0.329 RR	11/18/2013	0.329 RR	0.329 RR	12/04/2015	0	0	0	0	0.197 U	0.1	12/14/3335	12/03/2016
4.04	TOP HD-RIGHT	N *	0.325 TC	03/08/2011	0.313	0.313 RR	0.313 RR	11/18/2013	0.313 RR	0.313 RR	12/04/2015	0	2.5	2.1	9.6	0.197 U	2.5	04/29/2062	12/03/2016

Eaton Inspection Services
1595 So Hwy 150, Suite F, Evanston, WY 82930
Phone 307-789-3540 FAX 307-789-2822

Report Date: 12/24/2015

Unit: LH-0011
Eq/Circ ID: LH0011-FGS
Design Code: S8/D1
Eq Type: VESSEL
Class:
CM RBI:

(Report in Inches, Corrosion Rates in MPY)
Analysis: Straight Line

Flange Rating: 535 lb/in²
Design Pressure: 285 lb/in²
Design Temperature: 650 °F

Description: LH-0011 FUEL GAS SCRUBBER; SN: 8285.47

TML Corrosion Rates are each the Maximum of:
(A) -- Calculated Corrosion Rates x 1.00
(B) -- Default Corrosion Rate

Varies
0.1 MPY

Representative Corrosion Rate is the Maximum of:

(A) -- Average Corrosion Rate x 1.00 : 1.8 MPY
(B) -- Average Max 25.0% of TMLs, Min of 2 : 4.6 MPY
(C) -- Formula Corrosion Rate (Sigma = 1.28) : 2.5 MPY
(D) -- Default Corrosion Rate : 0.1 MPY
Representative Corrosion Rate = 4.6 MPY

TML thickness readings have not been compensated for high temperatures.
TML thickness readings have been compensated for growths.

TML Life calculations are based on the Representative TML Corrosion Rate using Short Term and Long Term Corrosion Rates.

Nominal thickness is used for TML corrosion rate calculations with less than 3 surveys.

Minimum time between inspections required for corrosion rate calculation is 3 months.

TML Inspection Interval is:
(A) -- 1.00 years.

Eq/Circ ID Last Survey Date is based on the LAST of the last 0% of TML survey dates (Min 1).

Eq/Circ ID Estimated life = 41.4 years from the most recent survey date.
(Estimated Life based on the ave of the earliest 0% (Min 6) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 04/28/2057

Recommended Eq/Circ UT/RT Inspection Date is 12/03/2016
UT/RT Inspection Interval is 1.00 years.

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining Life < 3.00 Years.
There are 0 Caution TMLs in this Eq/Circ ID.