

01-18-017-18W4M
LOW TEMP SEPARATOR
A0190933 840-3293-04
REPORT # A#0190933_GRADY INSPECTION LTD VE UT INSP_2MAY2022

DATE	5/2/2022
CLIENT	CNRL

Phone:403-793-7697
PO Box 1173, Brooks,
Alberta, T1R 19B
grady.rustebakke@gmail.com




RESULTS OF INSPECTION:


VE Inspection:
Fit For Service. Vessel is in good visual condition.
UT Inspection:
No corrosion was found with the ultrasonic inspection.


PRESSURE EQUIPMENT							AB-506 INTERVAL												
DISTRICT	AB - OIL & NATURAL GAS				SHELL	TUBE		Refrigeration Vessels											
FACILITY	Armada Gas Plant				MAWT	100		F	GRADE										
A#	A0190933		YR	1984		MAWP	685				psi	YEARS				REG			
SERIAL #	840-3293-04			PSV								psi	Equip				PSV	UT	
CRN	F-0734.2			PSV CRN								3	10		5	10	X		
EQUIP#				SERVICED								INSPECTION TYPE							
STATUS	OUT OF SERVICE				UNIT	Refridge		VE	VI	MT	PT	ET	UT						
MANUFACTURER	ALCO GAS & OIL PRODUCTION EQUIPMENT LTD.							X						X					
DH LSD					L	7.6 Ft		OD	2.5		Ft	INSPECTION RESULT:							
REPAD	UNIQUE ID							NCR-OPERATIONS											
								NCR-REGULATORY/ADMIN											
								ACTION ITEM RAISED						X					
								REPAIR REQUIRED											
								SUITABLE FOR SERVICE						X					
								RECOMMENDATIONS:											
								VE Inspection: Install missing bolt on SE saddle anchor Cut more ports for CML access Install pressure gauge suitable for MAWP (685 psi) Inspect PSV after installation to confirm suitability											

SIGN OFF		API 510	EXP.	IPV	EXP.	INSPECTOR - PRIMARY	INSPECTOR - REVIEW	CLIENT SIGN OFF
INSPECTED BY	ToddM Mckenzie	97445	12/31/2023	001336	7/13/2026			
REVIEWED BY	Ashley Rustebakke	60285	7/31/2024	966	6/16/2026			

Ultrasonic Report		Date	3/28/2022	Phone: 403-793-7697 PO Box 1173, Brooks, Alberta, T1R 19B grady.rustebakke@gmail.com	
LSD	01-18-017-18W4M	Facility	Armada Gas Plant		
DH-LSD		Field	Red Deer District		
Jurisdiction #	A0190933				
Serial #	840-3293-04				
Ultrasonic Report #: A#0190933_GRADY INSPECTION LTD VE UT INSP_2MAY2022					

ULTRASONIC SET			COMPONENT DETAILS				CODE					
EQUIPMENT	CALIBRATION DUE	SERIAL NUMBER	MATERIAL GRADE	SURFACE PREP	TEMP	THICKNESS	CALIBRATION	EVALUATION				
EPOCH 600	2/25/2023	120388107	Carbon Steel	Painted	0C		ASME V	ASME VIII Div 1				
CALIBRATION BLOCK		PROBE						COUPLING		METHOD		
TYPE	SERIAL#	REF dB	SCAN dB	FREQ.	SIZE.	ANGLE	SERIAL #	TYPE	COUPLANT	CABLE	TECHNIQUE	PROCEDURE
10 Step Metric	14-2065	60	66	5 Mhz	0.25 "	0	15B00DU3	Dual	UT-X	6' BNC to Micro	LW Dual	UT01T1R4
SCOPE		As requested by Dustin Rumohr an ultrasonic inspection was completed on the SEPARATOR										
LIMITATIONS		None.										
RESULTS		No corrosion was found with the ultrasonic inspection.										

Technician Name	Certification Body	Certification #	Expiry	Technician Signature			
3 ToddM	CGSB	9234	12/15/2030				
				Client Name			
				Client Signature			

External Inspection - (Vessel)		Date	3/28/2022	Phone:403-793-7697 PO Box 1173, Brooks, Alberta, T1R 19B grady.rustebakke@gmail.com	
LSD	01-18-017-18W4M	Facility	Armada Gas Plant		
DH-LSD		Field	Red Deer District		
Jurisdiction #		A0190933			

Fit For Service:	Fit For Service.
Inspection Summary:	Vessel is in good visual condition.
Recommendations:	Install missing bolt on SE saddle anchor Cut more ports for CML access Install pressure gauge suitable for MAWP (685 psi) Inspect PSV after installation to confirm suitability

External Inspection Items	G/F/P	Comments
General Condition:	Good	No notable mechanical damage, areas of wear/fretting, distortion, misalignment, or visible weld defects.
External Coating:	Good	Vessel is in good visual condition.
Insulation / Cladding:	Good	Insulation is in good visual condition.
Nozzles, Piping and Connections:	Good	Nozzles and piping in good visual condition
Buried Vessels:	N/A	Above Ground
Ladders, Platforms and Walkways:	Good	Building secure
Foundations and Supports:	Good	Anchor bolts fully engaged
Shell:.	Good	No notable mechanical damage, areas of wear/fretting, distortion, misalignment or visible weld defects.
Saddles / Skirts:	Good	Saddle is in good visual condition
Grounding:	Good	Ground Wire is secure
Gauges and Instrumentation:	Fair	<div>Shell Gauge (0 - 600 @ psi) Temp Gauge (-40 - 160 @ F)</div> <div>Gauge is not suitable for MAWP Gauge is clear, colorless and correct for the MAWT.</div>
Pressure Protection:	N/A	PSV out for service at time of inspection
NDE Summary:	Good	No corrosion was found with the ultrasonic inspection.
Manway Davits/Quick Closure:	N/A	No Manway
Nameplate:	Good	Nameplate is legible and readily accessible and securely affixed
Code Variance:		

Overview Photo

LSD 01-18-017-18W4M
Jur # A0190933
Serial # 840-3293-04

Date

5/2/2022

FACILITY

Armada Gas Plant

FIELD

Red Deer District

Phone:403-793-7697

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Nameplate



Overview



Anchor Bolt



Missing Anchor Bolt

Overview Photo

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**Pressure Gauge****Temperature Gauge****Liquid Level**

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DH-LSD

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FACILITY Armada Gas Plant

FIELD Red Deer District

DWG 1

Location:

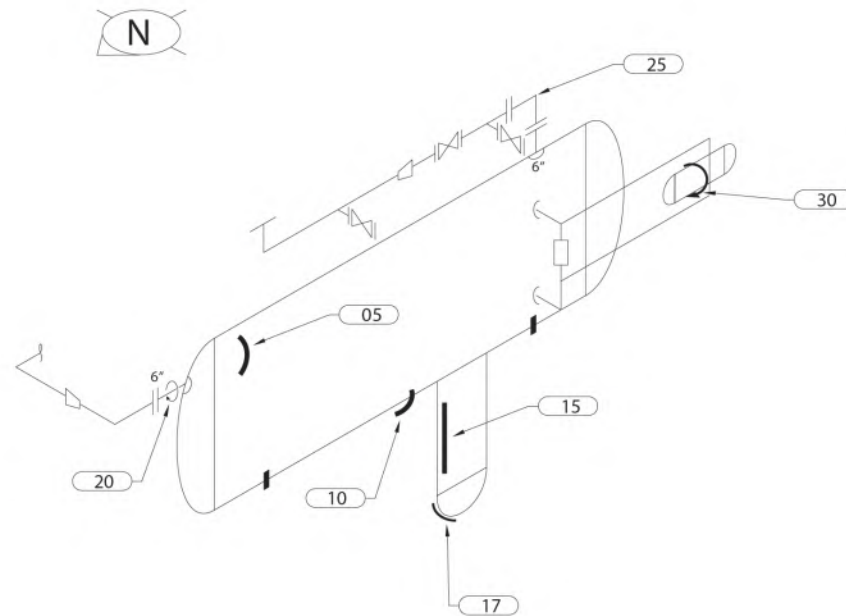
Phone:403-793-7697

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Inspection Dates and Thickness Values (mm)

CML#	Nom	CA/Tol	SFlag	STmin	PTmin	> Tmin	Comp	Type	Pipe Size	Code	MOP	Baseline		3rd Last		2nd Last		Last		# of Insp	Nom Wall Loss	Corrosion Rates			Rem Life Date	Rem Life (yrs)	Next Insp Date	Insp (yrs)	Inspection Comments
												Date	Min Ave	Date	Min Ave	Date	Min Ave	Date	Min Ave			ST	LTn	LTi					



CML	Min	Yrs	Date
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Nominal (mm)	Pipe Tolerance 12% (mm) Corrosion Allowance (mm)	API 574 Table 7 Flag Tmin	Pressure Tmin Structural Tmin
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%Nom -UT	10-20	20-30
	30-50	>50

Cor. Rates (mm/yr)	0.025 - 0.25	0.26 - 0.5
	0.501 - 1	>1.0

Calculated Failure (years)	3-5	2-3
	1-2	< 1

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Inspection Dates and Thickness Values (mm)																				%	Corrosion Rates			Rem	Rem	Next	Insp	Inspection
CML#	Nom	CA/Tol	SFlag	STmin	PTmin	> Tmin	Comp Type	Pipe Size	Code	MOP	Baseline Date	Min Ave	3rd Last Date	Min Ave	2nd Last Date	Min Ave	Last Date	Min Ave	# of Insp	Nom Wall Loss	ST	LTn	LTi	Life Date	Life (yrs)	Insp Date	Int (yrs)	
05	19.0	18.9	34.2		17.1	17.1	Shell		UG27ShellInt	685	9/15/17	19.9	19.9				5/2/22	19.9	20.1	2	-5%					4/29/2032	10.0	
10	19.0	18.9	34.2		17.1	17.1	Shell		UG27ShellInt	685	9/15/17	19.7	19.8				5/2/22	19.9	20.1	2	-5%					4/29/2032	10.0	
15	17.5	15.3	3.3	2.8	5.5	5.5	Pipe	12" -- 80--(17.5mm)	API570	685	9/15/17	12.7	13.0				5/2/22	12.5	12.8	2	29%	0.04		3/20/2183		4/29/2032	10.0	
17	8.7	8.7	6.6		6.6	6.6	Boot		UG32HeadElli	685	5/2/22	8.7	9.2							1	0%		0.00			4/29/2032	10.0	
20	18.2			6.2		6.2	Nozzle	6" -- 160--(18.2mm)	UG45Nozzle	685	5/2/22	16.9	17.5							1	7%		0.03	4/4/2337		4/29/2032	10.0	
25	7.1	6.2	3.3	2.8	2.9	2.9	Elbow	6" STD 40--(7.1mm)	API570	685	5/2/22	7.1	7.6							1	0%					4/29/2032	10.0	
30	8.6	7.5	3.1	2.3	2.0	2.3	Pipe	4" XS 80--(8.6mm)	API570	685	5/2/22	8.6	9.0							1	0%					4/29/2032	10.0	