

01-18-017-18W4M
3RD STG SUCTION BOTTLE
A0421914
REPORT # A#0421914_GRADY INSPECTION LTD VE UT INSP_31MAR2022

DATE 3/31/2022
CLIENT CNRL

Phone:403-793-7697
8 Sarah King Crt E Brooks, Alberta, T1R 0J8
grady.rustebakke@gmail.com



PRESSURE EQUIPMENT							AB-506 INTERVAL									
DISTRICT	AB - OIL & NATURAL GAS				SHELL	TUBE		Compressor Bottles in vibrating								
FACILITY	Armada Gas Plant			MAWT	300		F	GRADE		YEARS			REG			
A#	A0421914		YR	1997	MAWP	1315		psi	3	Equip	PSV	UT				
SERIAL #				PSV	870			psi		6	6	6	X			
CRN	N6378.2			PSV CRN	0G0449.2											
EQUIP#				SERVICED	3/21/2016											
STATUS	IN SERVICE			UNIT	K301			INSPECTION TYPE								
								VE	VI	MT	PT	ET	UT			
								X					X			
MANUFACTURER								BIMAC INDUSTRIES LTD.			INSPECTION RESULT:					
DH LSD								L	3	Ft	OD	.9	Ft	NCR-OPERATIONS		
REPAD								1	UNIQUE ID			NCR-REGULATORY/ADMIN				
4.2 mm) T-Required: (11.2 mm) CR: (.82 mm/yr) RL: (3.67 years)																
.8 mm) T-Required: (11.2 mm) CR: (.18 mm/yr) RL: (19.69 years)																
								ACTION ITEM RAISED								
								REPAIR REQUIRED								
SUITABLE FOR SERVICE												X				
RECOMMENDATIONS:																
VE Inspection: No Recommendations from the External Inspection.																

RESULTS OF INSPECTION:

VE Inspection:
Fit For Service. Vessel is in good visual condition.
UT Inspection:
-11% (-1.8 mm) wall loss found on Shell CML 15 Nominal: (15.1 mm) T-Previous: (16 mm) T-Actual: (14.2 mm) T-Required: (11.2 mm) CR: (.82 mm/yr) RL: (3.67 years)
-8% (-1.2 mm) wall loss found on Shell CML 20 Nominal: (15.1 mm) T-Previous: (16 mm) T-Actual: (14.8 mm) T-Required: (11.2 mm) CR: (.18 mm/yr) RL: (19.69 years)

SIGN OFF		API 510	EXP.	IPV	EXP.	INSPECTOR - PRIMARY	INSPECTOR - REVIEW	CLIENT SIGN OFF
INSPECTED BY	ToddM Mckenzie	97445	12/31/202	00133	7/13/2026			
REVIEWED BY	Ashley Rustebakke	60285	7/31/2024	966	6/16/2026			

Ultrasonic Report

LSD 01-18-017-18W4M

DH-LSD

Jurisdiction # A0421914

Serial #

Ultrasonic Report #: A#0421914_GRADY INSPECTION LTD VE UT INSP_31MAR2022

Date

3/30/2022

Facility

Armada Gas Plant


Field


Red Deer District

Phone:403-793-7697

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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 COMPRESSOR BOTTLE										
LIMITATIONS		Previous ultrasonic inspection data not obtained by Grady Inspection Ltd.										
RESULTS		-11% (-1.8 mm) wall loss found on Shell CML 15 Nominal: (15.1 mm) T-Previous: (16 mm) T-Actual: (14.2 mm) T-Required: (11.2 mm) CR: (.82 mm/yr) RL: (3.67 years) -8% (-1.2 mm) wall loss found on Shell CML 20 Nominal: (15.1 mm) T-Previous: (16 mm) T-Actual: (14.8 mm) T-Required: (11.2 mm) CR: (.18 mm/yr) RL: (19.69 years)										

Technician Name	Certification Body	Certification #	Expiry	Technician Signature			
3 ToddM	CGSB	9234					
				Client Name			
				Client Signature			

External Inspection - (Vessel)		Date	3/30/2022	Phone:403-793-7697	
LSD	01-18-017-18W4M	Facility	Armada Gas Plant	8 Sarah King Crt E Brooks, Alberta, T1R 0J8 grady.rustebakke@gmail.com	
DH-LSD		Field	Red Deer District		
Juristiction #	A0421914				

Fit For Service:	Fit For Service.
Inspection Summary:	Vessel is in good visual condition.
Recommendations:	No Recommendations from the External Inspection.

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. Paint is intact and well adhered to the vessel. Vessel is indoors.
Insulation / Cladding:	N/A	Non insulated vessel
Nozzles, Piping and Connections:	Good	Number of nozzles repaded: 1 Number of nozzles without repad: 1 Nozzles and piping in good visual condition
Buried Vessels:	N/A	Above Ground
Ladders, Platforms and Walkways:	N/A	No attached ladder or platform
Foundations and Supports:	Good	Anchor bolts fully engaged Building is secure Concrete is intact with no visible deficiencies
Shell:.	Good	No notable mechanical damage, areas of wear/fretting, distortion, misalignment or visible weld defects.
Saddles / Skirts:	Good	Vessel is mounted to compressor module by flange bolting.
Grounding:	Good	Ground Wire is secure Grounded through piping system
Gauges and Instrumentation:	Good	<div>Shell Gauge (- @) Temp Gauge (0 - 500 @ 75 F)</div> <div>Gauge is clear, colorless and correct for the MAWT. Compressor is digitally monitored for pressure and temperature. No mechanical pressure gauge found.</div>
Pressure Protection:	Fair	The PSV Set Pressure (870 psi) is suitable for the MAWP (1315 psi) PSV Due for Service, not yet exceeding six months or 10% of Interval AB 506 2014 11.4.1 Interval Deferral Notwithstanding the above, an inspection or PRV servicing interval may be deferred by the Inspector, without other approvals, based on a satisfactory review of the equipment history, when the period of time for which the item is to be deferred does not exceed 10 % of the inspection/servicing interval or six months, whichever is less.
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

PSV Data

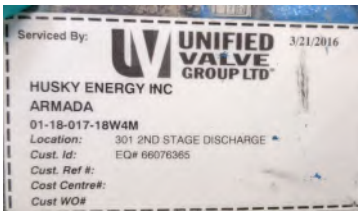
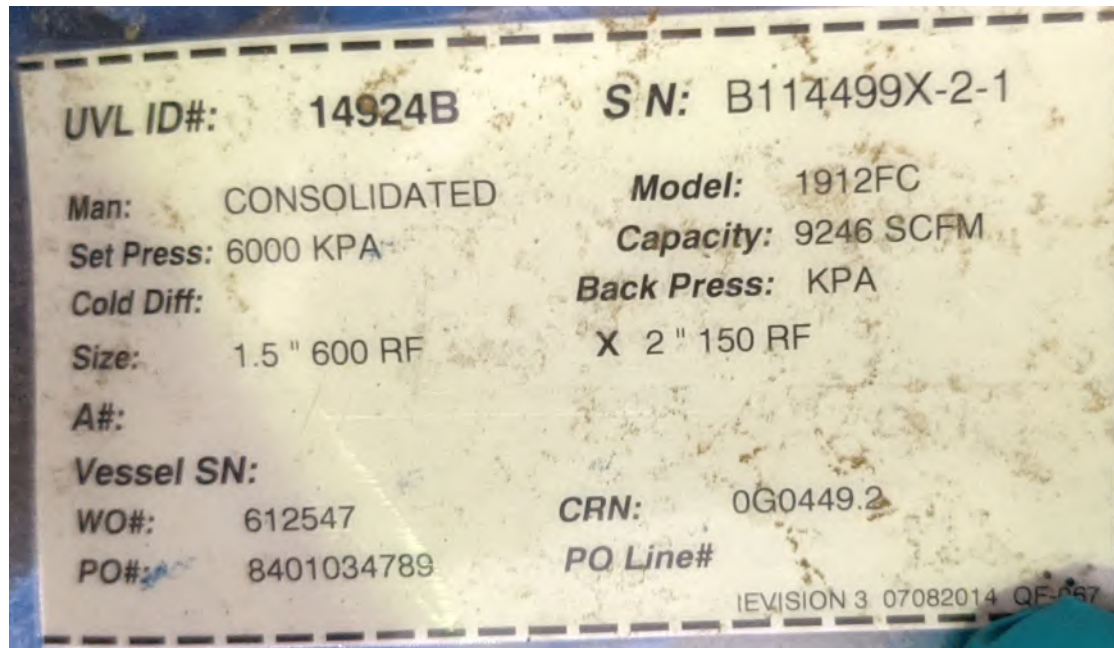
LSD

01-18-017-18W4M

FACILITY Armada Gas Plant

FIELD Red Deer District

Phone:403-793-7697

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ASSOCIATED PRESSURE EQUIPMENT DATA

PV JUR/SER A0421914

SHELL

TUBE

MAWP

1315

psi

PSV FIT FOR SERVICE STATEMENT

Fit For Service.

PSV STATIC DATA

MODEL 1912FC

SERIAL B114499X-2-1

MANUFACTURER CONSOLIDATED

TAG 14924B

CRN 0G0449.2

SEAL Y

SET PRES

870

psi

CAPACITY 9246

SCFM

SERVICE DATE

3/21/2016

SERVICE COMPANY

Unified Valve Group

T/F

UV

NB

F

UV

NB

SIZE

B VALVE

CARSEAL

INLET

1.5

N

OUTLET

2

N

PSV COMMENTS

PSV due for service at May TA

Overview Photo

LSD 01-18-017-18W4M
Jur # A0421914
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3/31/2022

FACILITY

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Nameplate



Overview



Alternate Overview



Temperature Gauge

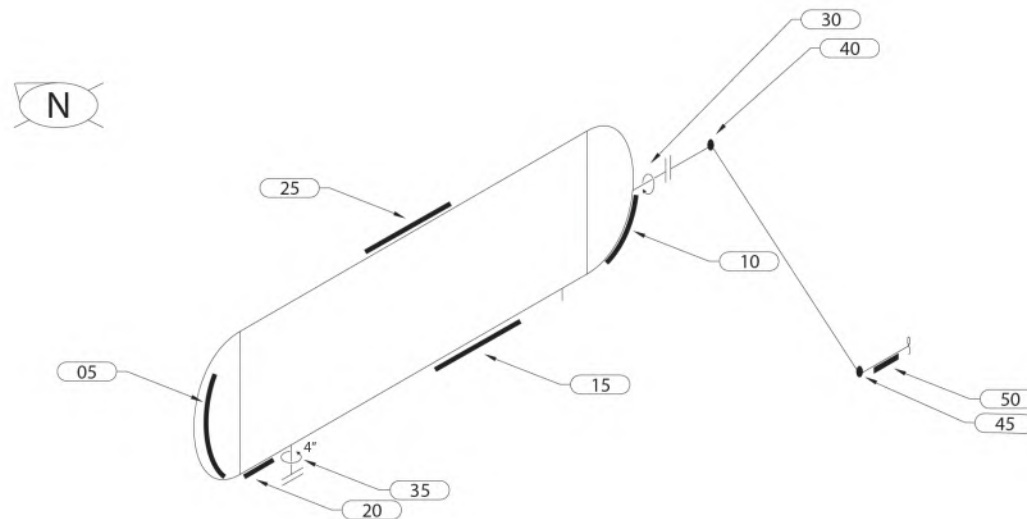
Phone:403-793-7697

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Ser #

Ser #	Inspection Dates and Thickness Values (mm)																	% Norm Wall Loss	Corrosion Rates			Rem Life Date	Rem Life (yrs)	Next Insp Date	Insp Int (yrs) Inspection Comments	
CML#	Norm	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						



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LSD 01-18-017-18W4M FACILITY Armada Gas Plant
DH-LSD FIELD Red Deer District
Jur # A0421914 DWG 1 Location:
Ser #

Phone:403-793-7697

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Ser #	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	Rem Life (yrs)	Next Insp	Insp Int (yrs)	Inspection Comments		
													Date	Min Ave	Date	Min Ave	Date	Min Ave	Date	Min Ave			ST	LTn	LTi	Date						
05	13.1	13.1	9.3		9.3	9.3		Head		UG32HeadEll	1315		5/18/07	14.9	15.5			11/28/17	15.0	3/31/22	14.1	15.0	4	-7%	0.21	0.05				3/29/2028	6.0	
10	13.1	13.1	9.3		9.3	9.3		Head		UG32HeadEll	1315		5/18/07	14.6	15.2			11/28/17	14.1	3/31/22	14.1	15.0	4	-7%						3/29/2028	6.0	
15	15.1	15.0	22.5		11.2	11.2		Shell		UG27ShellInt	1315		9/23/15	16.0	16.3					11/28/17	14.2	14.6	2	6%	0.82				3.7	11/27/2023	6.0	
20	15.1	15.0	22.5		11.2	11.2		Shell		UG27ShellInt	1315		9/23/15	16.0	16.2					3/31/22	14.8	15.0	2	2%	0.18				19.7	3/29/2028	6.0	
25	15.1	15.0	22.5		11.2	11.2		Shell		UG27ShellInt	1315		9/23/15	14.7	14.9					3/31/22	14.0	14.4	2	7%	0.11		7/9/2048		3/29/2028	6.0		
30	17.1			5.3		5.3		Nozzle	4" XXS ----(17.1mm)	UG45Nozzle	1315		9/23/15	17.4	17.8			11/28/17	17.5	3/31/22	16.7	17.5	3	2%	0.18	0.11	3/16/2084		3/29/2028	6.0		
35	17.1			5.3		5.3		Nozzle	4" XXS ----(17.1mm)	UG45Nozzle	1315		9/23/15	17.3	17.9			11/28/17	17.4	3/31/22	16.5	17.5	3	4%	0.21	0.12	5/10/2076		3/29/2028	6.0		
40	8.6	7.5	3.1	2.3	3.8	3.8		Elbow	4" XS 80--(8.6mm)	API570	1315		9/23/15	8.6	8.6					3/31/22	8.1	8.5	2	6%	0.08				3/29/2028	6.0		
45	8.6	7.5	3.1	2.3	3.8	3.8		Elbow	4" XS 80--(8.6mm)	API570	1315		9/23/15	9.5	9.7					3/31/22	8.9	9.2	2	-3%	0.09				3/29/2028	6.0		
50	8.6	7.5	3.1	2.3	3.8	3.8		Pipe	4" XS 80--(8.6mm)	API570	1315		9/23/15	8.6	8.7					3/31/22	8.2	8.5	2	5%	0.06				3/29/2028	6.0		