

0118-017-18W4M
3RD STG DISCHARGE BOTTLE
A0421915
REPORT # A#0421915_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




RESULTS OF INSPECTION:


VE Inspection:
Fit For Service. PSV Service seal is broken.
UT Inspection:
No corrosion was found with the ultrasonic inspection.


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#	A0421915		YR	1997	MAWP	1315		psi	3	Equip	PSV	UT		
SERIAL #				PSV	1100		psi	6		6	6	X		
CRN	N6378.2			PSV CRN	01832.568									
EQUIP#				SERVICED	9/9/2020									
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	
												ACTION ITEM RAISED		
												REPAIR REQUIRED		
												SUITABLE FOR SERVICE		X
												RECOMMENDATIONS:		
												VE Inspection: Ensure spec blind does not cause restriction in PSV piping.		

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		Date	3/30/2022	Phone: 403-793-7697 8 Sarah King Crt E Brooks, Alberta, T1R 0J8 grady.rustebakke@gmail.com	
LSD	01-18-017-18W4M	Facility	Armada Gas Plant		
DH-LSD		Field	Red Deer District		
Jurisdiction # A0421915					
Serial #					
Ultrasonic Report #: A#0421915_GRADY INSPECTION LTD VE UT INSP_31MAR2022					

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		No corrosion was found with the ultrasonic inspection.										

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 8 Sarah King Crt E Brooks, Alberta, T1R 0J8 grady.rustebakke@gmail.com	
LSD	01-18-017-18W4M	Facility	Armada Gas Plant		
DH-LSD		Field	Red Deer District		
Jurisdiction #		A0421915			

Fit For Service:	Fit For Service.
Inspection Summary:	PSV Service seal is broken.
Recommendations:	Ensure spec blind does not cause restriction in PSV piping.

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. Vessel is indoors. Vessel is painted.
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 to compressor module by flange bolting.
Grounding:	Good	Ground Wire is secure Grounded through piping system
Gauges and Instrumentation:	Good	<div>Shell Gauge (- @)</div> <div>Temp Gauge (50 - 225 @ 500 F)</div> <div>Compressor is digitally monitored for pressure and temperature. No mechanical pressure gauge. Gauge is clear, colorless and correct for the MAWT.</div>
Pressure Protection:	Fair	The PSV Set Pressure (1100 psi) is suitable for the MAWP (1315 psi) Ensure spec blind does not cause restriction in PSV piping. PSV Service seal missing/broken (ABSA 524) AB-524 Edition 6, Revision 0 2017 3.0 Requirements: Adjustable parts of PRDs shall be sealed at the time of servicing and remain sealed during the operation [PESR 39(1)].
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

External Inspection - (Vessel)
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Code Variance:

PSV Data

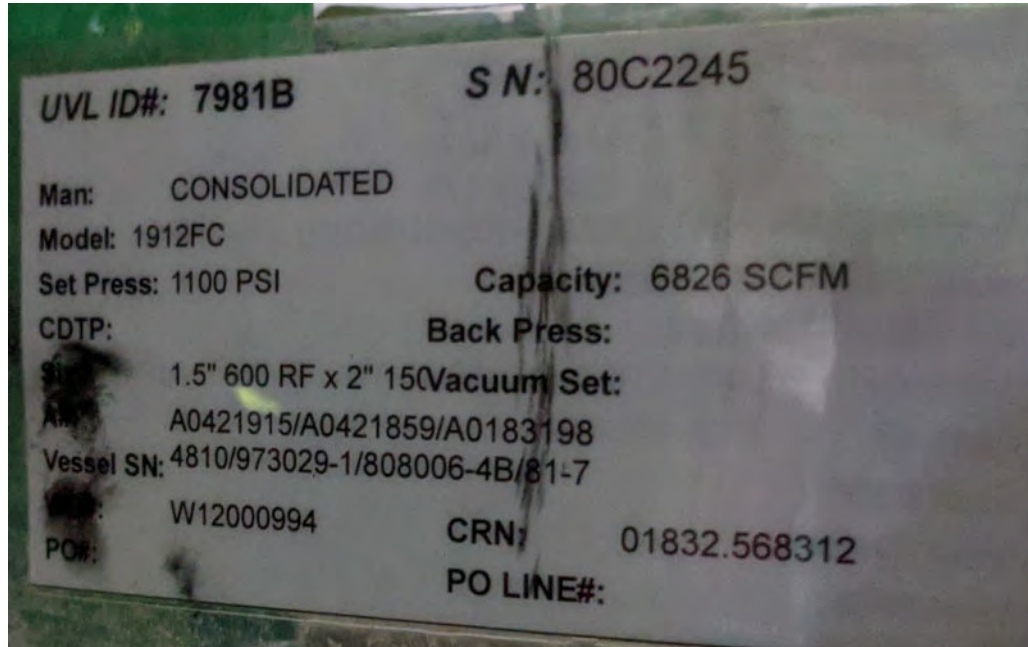
LSD 01-18-017-18W4M

FACILITY Armada Gas Plant

FIELD Red Deer District

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ASSOCIATED PRESSURE EQUIPMENT DATA

PV JUR/SER A0421915

SHELL **TUBE**

MAWP 1315 psi

PSV FIT FOR SERVICE STATEMENT

Not Fit For Service.

PSV STATIC DATA

MODEL 1912FC

SERIAL 80C2245

MANUFACTURER CONSOLIDATED

TAG 7981B

CRN 01832.568312

SEAL N

SET PRES 1100 psi

CAPACITY 6826 SCFM

SERVICE DATE 9/9/2020

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

Broken Service Seal

Overview Photo

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Date

3/31/2022

FACILITY

Armada Gas Plant

FIELD

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GRADY
INSPECTION LTD



Nameplate



Overview



Alternate Overview



Temperature Gauge

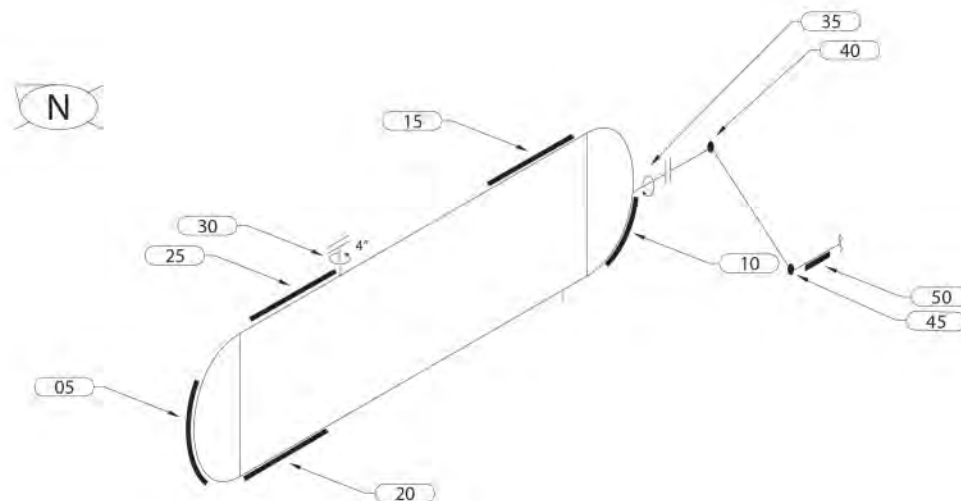
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Ser #

Ser #		Inspection Dates and Thickness Values (mm)																	%		Corrosion Rates			Rem Life		Next		Insp	
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	ST	LTn	LTi	Rem Life Date	Rem Life (yrs)	Insp Date	Insp (yrs)	Inspection Comments



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	Cor. Rates (mm/yr)	0.025 - 0.25	0.26 - 0.5
	30-50	>50		0.501 - 1	>1.0

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

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DH-LSD FIELD Red Deer District
Jur # A0421915 DWG 1 Location:
Ser #

Phone: 403-793-7697

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CML#	Nom CA/Tol		Inspection Dates and Thickness Values (mm)				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 Int (yrs)	Inspection Comments
			SFlag	STmin	PTmin	>Tmin					Date	Min Ave	Date	Min Ave	Date	Min Ave	Date	Min Ave			ST	LTn	LTi					
05	13.1	13.1	9.3		9.3	9.3	Head		UG32HeadElli	1315	5/18/07	12.2	15.2		11/28/17	17.5	3/31/22	14.7	15.5	4	-12%					3/29/2028	6.0	
10	13.1	13.1	9.3		9.3	9.3	Head		UG32HeadElli	1315	5/18/07	15.0	15.2		11/28/17	13.3	3/31/22	14.8	15.5	4	-13%					3/29/2028	6.0	
15	15.1	15.0	22.5		11.2	11.2	Shell		UG27ShellInt	1315	9/23/15	16.1	16.5		11/28/17	15.3	3/31/22	15.6	16.0	3	-3%					3/29/2028	6.0	
20	15.1	15.0	22.5		11.2	11.2	Shell		UG27ShellInt	1315	5/18/07	15.4	15.7		11/28/17	15.7	3/31/22	15.5	16.0	4	-3%					3/29/2028	6.0	
25	15.1	15.0	22.5		11.2	11.2	Shell		UG27ShellInt	1315	9/23/15	15.3	15.5							1	-1%					9/21/2021	6.0	
30	17.1			5.3		5.3	Nozzle	4" XXS ---- (17.1mm)	UG45Nozzle	1315	9/23/15	18.1	18.5		11/28/17	17.0	3/31/22	17.4	18.0	3	-2%					3/29/2028	6.0	
35	17.1			5.3		5.3	Nozzle	4" XXS ---- (17.1mm)	UG45Nozzle	1315	9/23/15	18.3	18.3		11/28/17	17.0	3/31/22	17.3	18.0	3	-1%					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	9.1	9.2				3/31/22	8.8	9.2	2	-2%	0.05				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	8.8	9.0				3/31/22	8.0	8.5	2	7%	0.12				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	9.0	9.1				3/31/22	8.5	8.7	2	1%	0.08				3/29/2028	6.0	