

01-18-017-18W4M
FUEL GAS SEPARATOR
79-957-61C87380
REPORT # 79-957-61_GRADY INSPECTION LTD VE UT INSP_1APR2022

DATE 4/1/2022
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. Ground not confirmed.
NCR. Check valve on PSV discharge piping causing restriction
UT Inspection:
No corrosion was found with the ultrasonic inspection.


PRESSURE EQUIPMENT										AB-506 INTERVAL																																																											
DISTRICT					SHELL					TUBE					Fuel gas scrubbers																																																						
FACILITY					ARMADA					MAWT					100					F					GRADE		YEARS			REG																																							
A#					YR					1978					MAWP					275												psi					Equip			PSV			UT																										
SERIAL #					79-957-61										PSV					150												psi					10			6			10			X																							
CRN					D2845.2										PSV CRN					0G8841.5C										INSPECTION TYPE																																							
EQUIP#										SERVICED					6/7/2017																																																						
STATUS					IN SERVICE					UNIT					K101										VE		VI		MT		PT		ET		UT																																		
MANUFACTURER					DACRO INDUSTRIES INC																				X										X																																		
DH LSD										L					4.5					Ft					OD					.55					Ft					INSPECTION RESULT:																													
REPAD					0					UNIQUE ID					C87380																														NCR-OPERATIONS					X																			
																																																		NCR-REGULATORY/ADMIN																			
																																																		ACTION ITEM RAISED																			
																																																		REPAIR REQUIRED																			
																																																							SUITABLE FOR SERVICE					X									
																																																												RECOMMENDATIONS:									
																																																																	VE Inspection: Remove Check valve on PSV discharge line.				

SIGN OFF		API 510	EXP.	IPV	EXP.	INSPECTOR - PRIMARY	INSPECTOR - REVIEW	CLIENT SIGN OFF
INSPECTED BY	ToddM Mckenzie	97445	12/31/2022	00133	7/13/2026			
REVIEWED BY	Ashley Rustebakke	60285	7/31/2024	966	6/16/2026			

Ultrasonic Report		Date	4/1/2022	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 #					
Serial #	79-957-61				
Ultrasonic Report #: 79-957-61_GRADY INSPECTION LTD VE UT INSP_1APR2022					

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 FUEL GAS SEPARATOR										
LIMITATIONS		Calculations performed with the known variables from a vessel with the same CRN.										
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	4/1/2022	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 #					

Fit For Service:	Fit For Service.
Inspection Summary:	Ground not confirmed. NCR. Check valve on PSV discharge piping causing restriction
Recommendations:	Remove Check valve on PSV discharge line.

External Inspection Items	G/F/P	Comments
General Condition:	Good	No notable external corrosion, mechanical damage, areas of wear/fretting, distortion, misalignment, current leaks, 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	Nozzles and piping in good visual condition There is 2 non rep added nozzles and zero repadded nozzles.
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 external corrosion, mechanical damage, areas of wear/fretting, distortion, misalignment, current leaks, or visible weld defects.
Saddles / Skirts:	Good	Saddle is in good visual condition
Grounding:	N/A	Not confirmed
Gauges and Instrumentation:	Good	<div>Shell Gauge (0 - 300 @ 135 psi) Temp Gauge (- @)</div> <div>Gauge is clear, colorless and correct for the MAWP.</div>
Pressure Protection:	Poor	PSV set pressure of 150 PSI is suitable for MAWP of 275PSI Restriction noted in PSV discharge piping with check valve installed.
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:		

PSV Data

LSD

01-18-017-18W4M

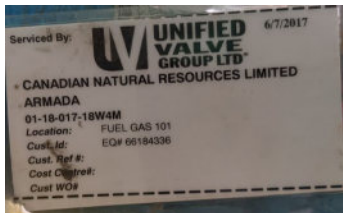
FACILITY Armada Gas Plant

FIELD Red Deer District

Phone:403-793-7697

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INSPECTION LTD

UVL ID#:	38071B	S N:	699145
Man:	MERCER	Model:	91-23F51V09U1
Set Press:	150 PSI	Capacity:	908 SCFM
Cold Diff:		Back Press:	PSI
Size:	1 " MNPT	X	1.5 " FNPT
A#:			
Vessel SN:			
WO#:	613111	CRN:	0G8841.5C
PO#:		PO Line#	
REVISION 3 / 7082014 QF-01			



ASSOCIATED PRESSURE EQUIPMENT DATA

PV JUR/SER 79-957-61

SHELL TUBE

MAWP 275 psi

PSV FIT FOR SERVICE STATEMENT

Not Fit For Service.

PSV STATIC DATA

MODEL 91-23F51V09U1

SERIAL 699145

MANUFACTURER MERCER

TAG 38071B

CRN 0G8841.5C

SEAL Y

SET PRES 150 psi

CAPACITY 908 SCFM

SERVICE DATE 6/7/2017

SERVICE COMPANY Unified Valve Group

T/F UV NB

T UV NB

SIZE B VALVE CARSEAL

INLET 1 N

OUTLET 1.5 N

PSV COMMENTS

Check valve on PSV discharge line causing restriction

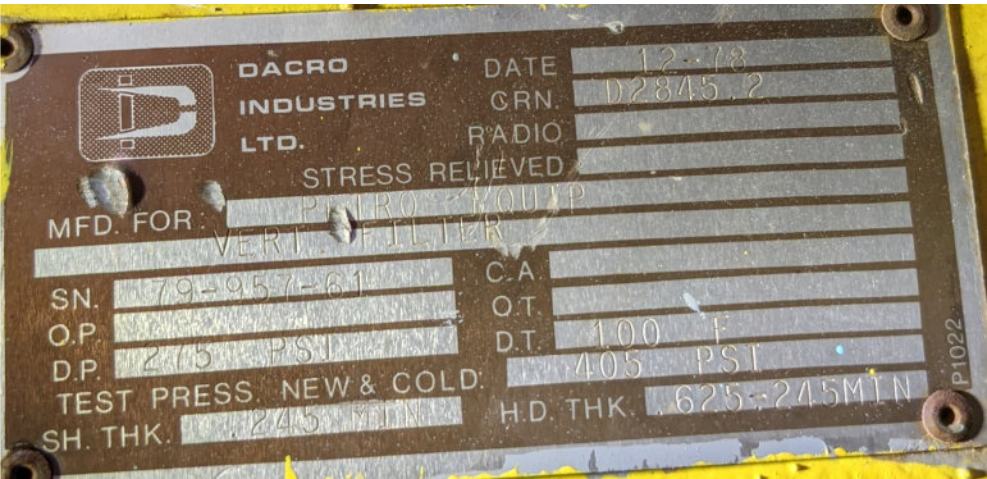
Overview Photo

LSD 01-18-017-18W4M
Jur #
Serial # 79-957-61

Date	4/1/2022
FACILITY	Armada Gas Plant
FIELD	Red Deer District

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Nameplate



Overview



Pressure Gauge

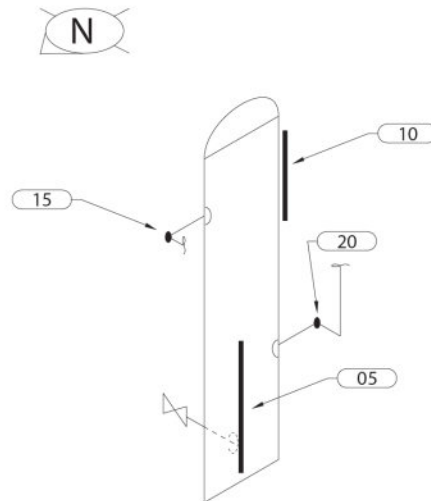
Phone:403-793-7697

FACILITY Armada Gas Plant

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GRADY
INSPECTION LTD

CML#	Nom	CA/Tot	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)	Int Inspection Comments
------	-----	--------	-------	-------	-------	-------	-----------	-----------	------	-----	----------	--	----------	--	----------	--	------	--	-----------	---------------	-----------------	--	--	---------------	----------------	----------------	------------	-------------------------



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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LSD 01-18-017-18W4M FACILITY Armada Gas Plant
DH-LSD FIELD Red Deer District
Jur # DWG 1 Location:
Ser # 79-957-61

Phone:403-793-7697

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Inspection Dates and Thickness Values (mm)																				% Nom Wall Loss	Corrosion Rates			Rem Life (yrs)	Next Insp Date	Insp Int (yrs)	Inspection Comments
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		ST	LTn	LTi	Rem Life Date			
05	6.2	6.2	4.1		2.1	2.1	Shell		UG27ShellInt	275	4/1/22	6.9	7.1						1	-11%					3/29/2032	10.0	
10	6.2	6.2	4.1		2.1	2.1	Shell		UG27ShellInt	275	4/1/22	6.9	7.1						1	-11%					3/29/2032	10.0	
15	3.9	3.4	2.5	1.8	0.4	1.8	Elbow	2" STD 40--(3.9mm)	API570	275	4/1/22	3.8	4.1						1	3%	0.00		3/13/2907		3/29/2032	10.0	
20	3.9	3.4	2.5	1.8	0.4	1.8	Elbow	2" STD 40--(3.9mm)	API570	275	4/1/22	4.1	4.4						1	-5%					3/29/2032	10.0	