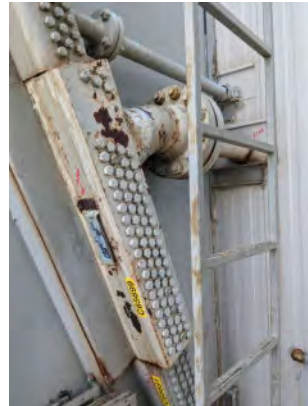


01-18-017-18W4M
2ND STG COOLER
808006.3BC65699
REPORT # 808006.3B_GRADY INSPECTION LTD VE UT INSP_30MAR2022

DATE 3/30/2022
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. Vessel is in good visual condition.
Minor fretting on piping from wall contact
UT Inspection:
No corrosion was found with the ultrasonic inspection.


PRESSURE EQUIPMENT							AB-506 INTERVAL						
DISTRICT	AB - OIL & NATURAL GAS				SHELL	TUBE		Air cooled heat exchangers					
FACILITY	Armada Gas Plant			MAWT	300		F	GRADE					
A#	YR	1980	MAWP	1315		psi	YEARS						
							Equip	PSV	UT		REG		
SERIAL #	808006.3B		PSV	870		psi	3	10	6	10	X		
CRN	D6028.23		PSV CRN	0G0449.2			INSPECTION TYPE						
EQUIP#			SERVICED	3/21/2016			VE	VI	MT	PT	ET	UT	
STATUS	IN SERVICE		UNIT				X					X	
MANUFACTURER	AIR-X-CHANGERS						INSPECTION RESULT:						
DH LSD				L	Ft	OD	.43	Ft	NCR-OPERATIONS				
REPAD	UNIQUE ID C65699						NCR-REGULATORY/ADMIN						
							ACTION ITEM RAISED				X		
							REPAIR REQUIRED						
							SUITABLE FOR SERVICE				X		
							RECOMMENDATIONS:						
							VE Inspection: Mitigate pipe fretting						

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	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 #					
Serial #	808006.3B	Ultrasonic Report #: 808006.3B_GRADY INSPECTION LTD VE UT INSP_30MAR2022			

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 AERIAL COOLER										
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				Dustin Rumohr
				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 #					

Fit For Service:	Fit For Service.
Inspection Summary:	Vessel is in good visual condition. Minor fretting on piping from wall contact
Recommendations:	Mitigate pipe fretting

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:	N/A	Non insulated vessel
Nozzles, Piping and Connections:	Fair	Fretting from building wall on in/out piping
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:	N/A	<div>Shell Gauge (- @)Temp Gauge (- @)</div> <div>Compressor is digitally monitored for pressure and temperature.</div>
Pressure Protection:	Good	The PSV Set Pressure (870 psi) is suitable for the MAWP (1315 psi)
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

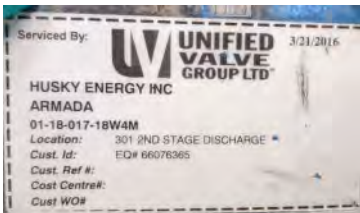
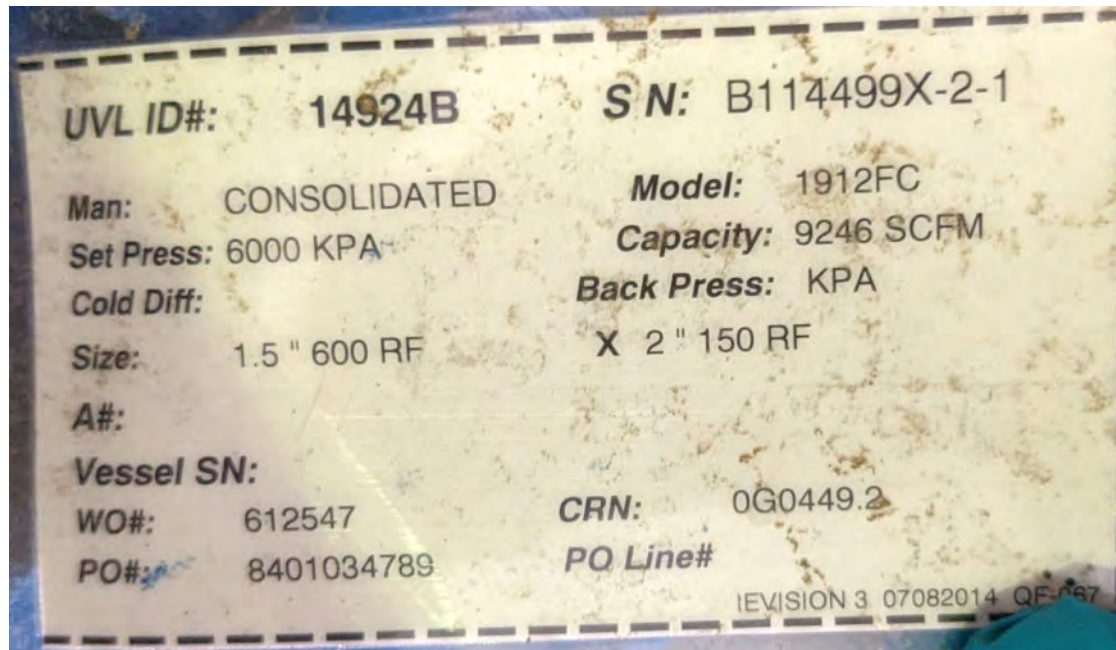
LSD

01-18-017-18W4M

FACILITY Armada Gas Plant

FIELD Red Deer District

Phone: 403-793-7697

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grady.rustebakke@gmail.com**GRADY**
INSPECTION LTD

ASSOCIATED PRESSURE EQUIPMENT DATA

PV JUR/SER NB6249

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

Overview Photo

LSD 01-18-017-18W4M
Jur #
Serial # 808006.3B

Date

3/30/2022

FACILITY

Armada Gas Plant

FIELD

Red Deer District

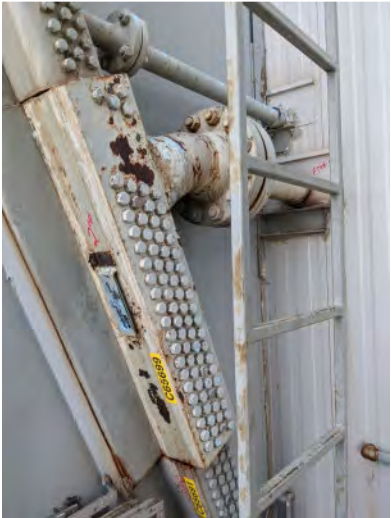
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GRADY
INSPECTION LTD



Nameplate



Overview



Alternate Overview



CNRL C Number

Overview Photo

LSD 01-18-017-18W4M
Jur #
Serial # 808006.3B

Date
FACILITY
FIELD

3/30/2022
Armada Gas Plant
Red Deer District

Phone: 403-793-7697

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Fretting

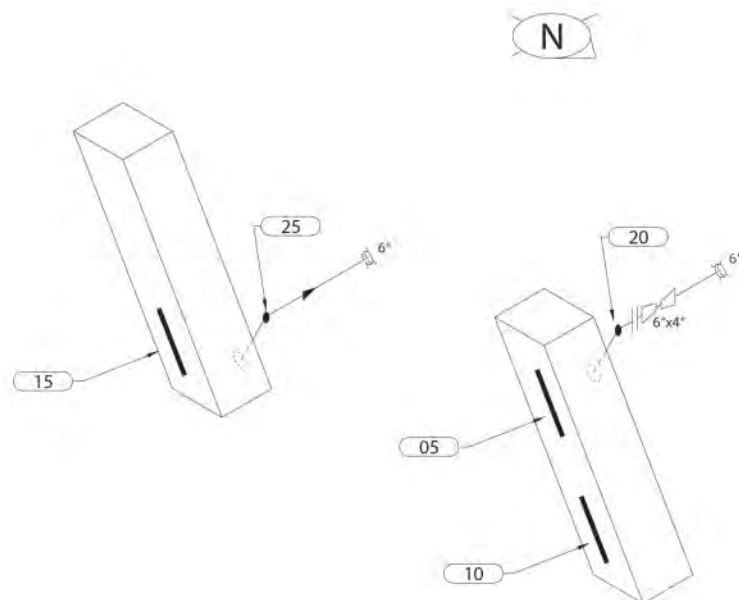
GRADY
INSPECTION LTD

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Jur # **DWG** 1 **Location:**

Ser # 808006.3B

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	Next Insp Date	Insp Int (yrs)	Inspection Comments
											Date	Min Ave	Date	Min Ave	Date	Min Ave	Date	Min Ave			ST	LTn	LTi				



CML	Min	Yrs	Date
-----	-----	-----	------

Nominal (mm)	Pipe Tolerance 12% (mm) Corrosion Allowance (mm)	API 574 Table 7 Flag Tmin	Pressure Tmin Structural Tmin
-----------------	---	------------------------------	----------------------------------

%Nom	10-20	20-30
-UT	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

REPORT # 808006.3B_GRADY INSPECTION LTD VE UT INSP_30MAR2022
LSD 01-18-017-18W4M FACILITY Armada Gas Plant
DH-LSD FIELD Red Deer District
Jur # DWG 1 Location:
Ser # 808006.3B

Phone: 403-793-7697

8 Sarah King Crt E Brooks, Alberta, T1R 0J8
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Ser #		808006.3B		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 Int (yrs)	Inspection Comments		
												Date	Min Ave	Date	Min Ave	Date	Min Ave	Date	Min Ave			ST	LTn	LTi							
05	6.0	5.3	3.1	2.3	3.8	3.8	Elbow		4" STD 40-- (6mm)	API570	1315	11/28/17	9.0	9.2						1	-50%						11/26/2027	10.0			
10	31.8	31.8	7.8		3.9	3.9	Shell			UG27ShellInt	1315	11/28/17	23.0	23.3						1	28%	0.23		10/5/2100		11/26/2027	10.0				
15	31.8	31.8	7.8		3.9	3.9	Shell			UG27ShellInt	1315	11/28/17	23.1	23.2						1	27%	0.23		2/27/2102		11/26/2027	10.0				
20	7.1	6.2	3.3	2.8	5.5	5.5	Elbow		6" STD 40-- (7.1mm)	API570	1315	11/28/17	7.1	7.8						1	0%					11/26/2027	10.0				