

CEL Quality Services Ltd.

VISUAL INSPECTION

Tel: (403) 845-5881 • (403) 844-3341



Pressure Equipment Inspection

REPORT

Report#: A0620317-VE,UT-2022-03-28

Type of Inspection:	<input type="checkbox"/> INSTALLATION		<input checked="" type="checkbox"/> EXTERNAL		<input type="checkbox"/> INTERNAL		<input type="checkbox"/> IN SERVICE		<input checked="" type="checkbox"/> OUT OF SERVICE		<input type="checkbox"/> INVENTORY			
Date:	28/Mar/2022		Job #:				*all measurements are in inches unless otherwise stated *ns-not stated *na-not applicable							
Inspected By:	Ben Piers		CEL Job #:				Pre Purchase Inspection PO# E22-191-PO-01 Service PSV prior to returning to service No safe access to top head and upper shell portion No access to bottom drain elbow through skirt opening							
Client:	Pipestone Energy Corp.													
Owner:	Pipestone Energy Corp.													
Region:	Alberta													
Area:	Sunchild	Location/	Surface:	01-04-044-11w5										
Facility:	Compressor	LSD:	UWI/DH:											
Service:	Sweet	if other describe:												
Description:	<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Tank <input type="checkbox"/> Furnace <input type="checkbox"/> Boiler													
Unit #:	BU-640		Equip #:		V-300									
Equip. Name:	2PH. Glycol Contactor		Equip. Type:		Tower									
Jurisdiction #:	0620317		CRN:		ALD-12-004									
Manufacturer:	Alco Gas & Oil Production Equipment LTD.					Diameter OD (in):	67		Height/Length (in):	384				
Serial No.:	2011-8267-01		Year Built:		2012		<input checked="" type="checkbox"/> PSV on Vessel <input type="checkbox"/> Piping							
Volume:	ns		PSV Data:		<input type="checkbox"/> Isolation Valve(s) Installed <input type="checkbox"/> Car-sealed <input type="checkbox"/> CRN:									
Zones:	MAWP	Des. T	MDMT	Op.P	Op.T	Set P	Tag #	Manufacturer	Serial No.	In	Out	Capacity	Serv. Co.	Serv. Date
Shell Side:	2050	150	-50	0	70	1440	27131R	Farris	827444-1-DA	2	3	1019.4	RMV	Apr. 17, 2015
Coil Side:	na	na	na											
Units	PSI	F	F	PSI	F	PSI						M3/MIN		
Components:	Material	Nominal (in)	Sgl./Dbl/ Weld	Calc. Trim	Retire t	CA (in)	UT TML	Lowest t	Acc.	Ret.	Dia. (OD),(in)	RT	HT	
Shell:	SA-516-70MT	3.5				0.125	15	3.539	<input checked="" type="checkbox"/>	<input type="checkbox"/>	67	1	Yes	
Head:	SA-516-70MT	3.5				0.125	20	3.438	<input checked="" type="checkbox"/>	<input type="checkbox"/>	67			
Tube/Coil:									<input type="checkbox"/>	<input type="checkbox"/>				
Channel:									<input type="checkbox"/>	<input type="checkbox"/>				
Other									<input type="checkbox"/>	<input type="checkbox"/>				
Manway/Port:	Manway Size (in): 20		<input checked="" type="checkbox"/> Davit Arm Present		<input checked="" type="checkbox"/> Davit Arm Greased		<input checked="" type="checkbox"/> Double Nitted		Condition: Acceptable, secure and intact					
Nozzles:	<input checked="" type="checkbox"/> Reinforcement pads used		<input checked="" type="checkbox"/> Weep Holes Present		Comment: Acceptable, no leaks noted									
	<input checked="" type="checkbox"/> Piping well supported		<input checked="" type="checkbox"/> Joining as per code		Comment: Secure and intact									
Piping:	<input checked="" type="checkbox"/> PSV Piping		<input checked="" type="checkbox"/> Drains properly		<input checked="" type="checkbox"/> Well coated		Comment: Secure							
	<input checked="" type="checkbox"/> Inlet Piping		<input checked="" type="checkbox"/> Free from leaks		<input checked="" type="checkbox"/> Well coated		Comment: Secure							
	<input checked="" type="checkbox"/> Outlet Piping		<input checked="" type="checkbox"/> Free from leaks		<input checked="" type="checkbox"/> Well coated		Comment: Secure							
	<input checked="" type="checkbox"/> Drain Piping		<input checked="" type="checkbox"/> Free from leaks		<input checked="" type="checkbox"/> Well coated		Comment: Secure							
	<input checked="" type="checkbox"/> Instrumentation Piping		<input checked="" type="checkbox"/> Free from leaks/kinks		Comment: Secure and intact									
	<input checked="" type="checkbox"/> Process Fluid Identified		<input checked="" type="checkbox"/> Flow direction marked		Comment: Lean Glycol, Rich Glycol									
Valves:	<input checked="" type="checkbox"/> Manual Isolation Valve		<input checked="" type="checkbox"/> Free from leaks		Comment: Acceptable, no leaks noted									
	<input checked="" type="checkbox"/> Automated Control Valve		<input checked="" type="checkbox"/> Free from leaks		Comment: Acceptable, no leaks noted									
	<input checked="" type="checkbox"/> Vents and Drains Plugged		Comment: Acceptable, no leaks noted											
Gauges:	<input checked="" type="checkbox"/> Pressure		Condition:		Clear and intact x1									
	<input checked="" type="checkbox"/> Temperature		Condition:		Clear and intact x1									
Sight Glass:	<input checked="" type="checkbox"/> Fluid Level		Condition:		Clear and intact x1									
Orientation:	Vertical		Foundation:		<input type="checkbox"/> Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Timber		<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other:		Condition: Skid secure and level on piles					
Support:	<input type="checkbox"/> Saddle		<input type="checkbox"/> Seal-welded		<input type="checkbox"/> Free to move		Condition:							
	<input checked="" type="checkbox"/> Skirt		<input checked="" type="checkbox"/> Free of debris		Comment:		Bolted to skid floor, 1 Bolt missing Condition: Secure and level							
	<input type="checkbox"/> Hangers		<input type="checkbox"/> Secure		Comment:		Condition:							
	<input type="checkbox"/> Other		Specify:				Electrical Grounding:		<input type="checkbox"/> Direct <input checked="" type="checkbox"/> Indirect <input type="checkbox"/> None					
Overall:	General condition:		Suitable for continued service		Condition: Acceptable									
Ext. Surface:	<input checked="" type="checkbox"/> Painted		<input type="checkbox"/> Insulated		<input type="checkbox"/> Fire-proofed		<input checked="" type="checkbox"/> Cladded		<input type="checkbox"/> Other:		Condition: Paint and cladding are acceptable			
Ext. Fixtures:	<input type="checkbox"/> Ladder		<input type="checkbox"/> Platform(s)		<input type="checkbox"/> Other:		Condition: None							
Int. Surface:	<input type="checkbox"/> Coated		<input type="checkbox"/> Lined		<input type="checkbox"/> Thermal sprayed		<input type="checkbox"/> Cladded		<input type="checkbox"/> Welded overlay		Condition: External Inspection Only			
Int. Fixtures:	<input type="checkbox"/> Baffle		<input type="checkbox"/> Float		<input type="checkbox"/> Impingement		<input type="checkbox"/> Weir		<input type="checkbox"/> Vortex Breaker		Condition: External Inspection Only			
Recommended Actions:														
Service the PSV prior to returning to service.													NCR#:	
Replace the missing bolt in the vessel skirt.														
Summary Comment:		Vessel found to be acceptable for service.						Inspection interval:		Set by Chief Inspector				
Additional notes on continuation page:		<input checked="" type="checkbox"/>		Report No.		See next page		Quality Check:						
Equipment is suitable for continued service:		<input checked="" type="checkbox"/>						Signature of Inspector: Ben Piers						
Inspector Certificate No: IPV #000770								Received by: (print)						
Terms and Conditions: Refer to "Scope of Services" and "Standard of Care"								Received by: (sign)						

ULTRASONIC SURVEY REPORT

Report #: A0620317-VE,UT-2022-03-28					
<input type="checkbox"/> New Equipment UT Survey		<input checked="" type="checkbox"/> Existing Equipment UT Survey		<input type="checkbox"/> In-Service <input checked="" type="checkbox"/> Out of Service	
Client Job #:			CEL Job #:		
Client:	Pipestone Energy Corp.	Location:	Surface:	01-04-044-11w5	
Date:	28/Mar/2022		UW/DH:		
Region:	Alberta	Access Considerations:		Year-Round Access	
Area:	Sunchild	Scope of Inspection	<input type="checkbox"/> Inventory	<input checked="" type="checkbox"/> External	<input checked="" type="checkbox"/> UT
Facility:	Compressor				
Static Data					
Equipment Name:	2PH. Glycol Contactor		MAWP Shell (PSI):	2050	Pre/Post 1999: Post
Equipment #:	V-300		MAWP Tube (PSI):	na	Diameter (in): 67
Jurisdiction #:	0620317		MAWT Shell (F):	150	CA Head (in): 0.125
Manufacturer:	Alco Gas & Oil Production Equipment LTD.		MAWT Tube (F):	na	CA Shell (in): 0.125
Year Built:	2012		Shell Material:	SA-516-70MT	Nominal (in): 3.5
SN #:	2011-8267-01		Head Material:	SA-516-70MT	Nominal (in): 3.5
CRN #:	ALD-12-004		RT (Joint Eff): 1		
Acceptance Criteria & Specifications:		Client Evaluation			
Method					
Procedure:	USB-001, Rev 01		Mode:	<input checked="" type="checkbox"/> Zero Degree <input type="checkbox"/> Shear Wave	
Equipment Type:	DMS Go		Serial No:	12105442	Last Calibration: Jan 3, 2022
Transducer:	0.250"		Serial No:	90849	Type/Frequency: Dual / 5.0 MHZ
Cable Length (in):	72"		Couplant:	Echo Mix - water based powder mix	
Surface Condition:	<input type="checkbox"/> Clean Base Metal <input type="checkbox"/> As Ground <input type="checkbox"/> Machined <input type="checkbox"/> Sand Blast <input checked="" type="checkbox"/> Painted <input type="checkbox"/> Other:				
Cal Block(s):	SN#:	17-4164	Type:	1" 4 step Block	
Notes:					
Interval:	Set by Chief Inspector after review				

*NS=Not Stated

**NA=Not Applicable



CEL Quality Services Ltd.

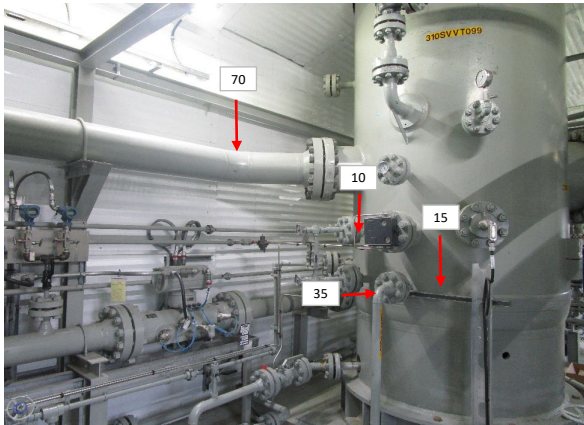


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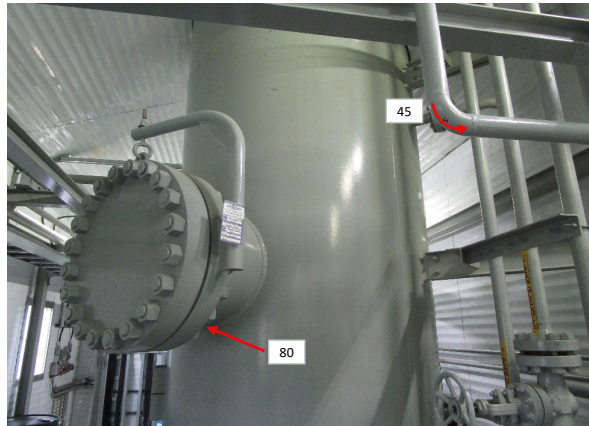
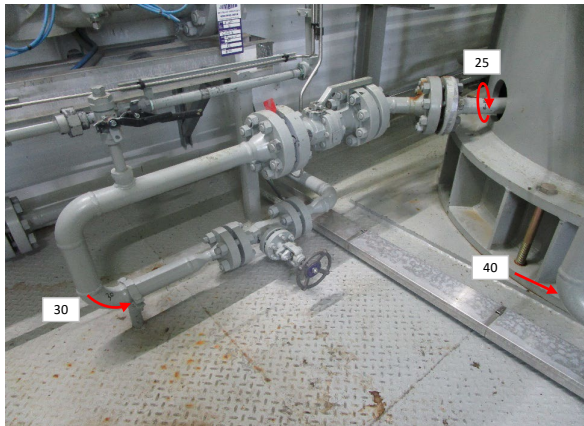
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A#: 0620317	S/N#: 2011-8267-01
or Other: V-300	



- TML 20 taken on bottom head of vessel



- TML 80 taken on the 6 O'Clock position on manway

Signature of Inspector:

Ben Piers

CEL Quality Services Ltd.

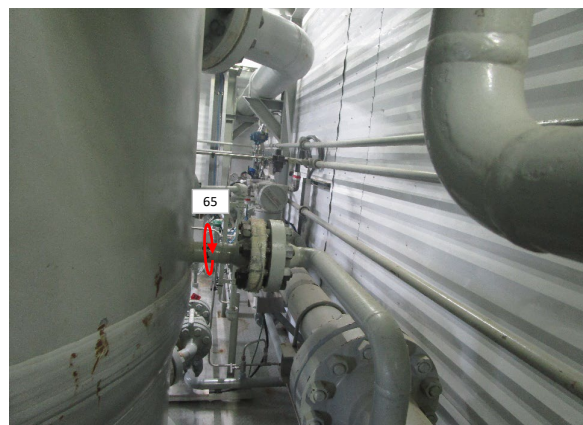
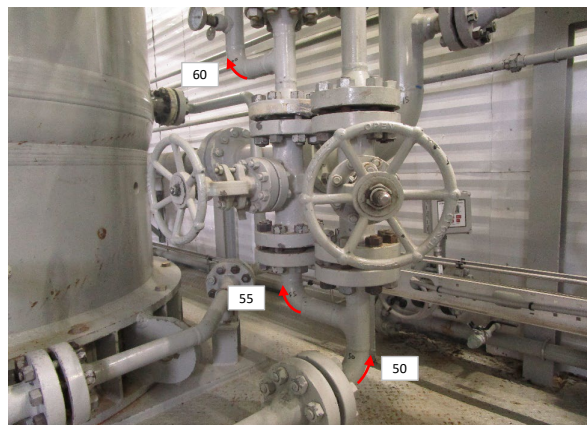


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ULTRASONIC SURVEY REPORT

UT Corrosion Survey Readings									
Date:	28-Mar-22	Area:	Sunchild	Equipment Name:	2PH. Glycol Contactor	Equipment #:	V-300		
Client:	Pipestone Energy Corp.	LSD:	01-04-044-11w5	Jurisdiction #:	0620317	SN #:	2011-8267-01	Job #:	

Vessel TML Readings															
	Baseline	# of Years	Previous	# of Years	Actual		MAWP (PSI)		Shell OD (in)	Shell Nom	Head Nom	Shell Stress	Head Stress	Joint Efficiency	Comments
	2012	10	2012	10	2022		2050		67	3.500	3.500	20000	20000	1.00	
TML ID	Baseline		Low	High	Low	High	OD (in)	ID (in)	STCR (in/YR)	LTCR (in/YR)	T min (in)	RL (YRS)	% Loss	Component	
0	3.500		3.576	3.608	3.576	3.608	67.000	60.000	0.0000	0.0000	3.2765	50+	0.00%	Shell	
5	3.500		3.554	3.582	3.554	3.582	67.000	60.000	0.0000	0.0000	3.2765	50+	0.00%	Shell	
10	3.500		3.585	3.593	3.585	3.593	67.000	60.000	0.0000	0.0000	3.2765	50+	0.00%	Shell	
15	3.500		3.539	3.584	3.539	3.584	67.000	60.000	0.0000	0.0000	3.2765	50+	0.00%	Shell	
20	3.500		3.438	3.607	3.438	3.607	67.000	60.000	0.0000	0.0062	3.1068	50+	1.77%	Head - Ellipsoidal	
80	2.313		2.315	2.322	2.315	2.322	20.000	15.375	0.0000	0.0000	0.8396	50+	0.00%	Manway	6 O'Clock band bottom of manway

Vessel Attachment Piping TML Readings																		
	Baseline	# of Years	Previous	# of Years	Actual		MAWP (PSI)		Shell OD (in)			Stress		Joint Efficiency				
	2012	10	2012	10	2022		2050		67			17100		1.00				
TML ID	Baseline		Low	High	Low	High	OD (in)	ID (in)	STCR (YR)	LTCR (YR)	T min (in)	RL (YRS)	% Loss	SCH	Nominal (in)	Attached Component	Type	Shape
25	0.343		0.342	0.375	0.342	0.375	2.375	1.689	0.0000	0.0001	0.1091	50+	0.29%	S160	0.343	Shell	Piping	360
30	0.343		0.370	0.377	0.370	0.377	2.375	1.689	0.0000	0.0000	0.1091	50+	0.00%	S160	0.343	Shell	Piping	90
35	0.343		0.353	0.387	0.353	0.387	2.375	1.689	0.0000	0.0000	0.1091	50+	0.00%	S160	0.343	Shell	Piping	90
40	0.343		0.328	0.377	0.328	0.377	2.375	1.689	0.0000	0.0015	0.1091	50+	4.37%	S160	0.343	Shell	Piping	90
45	0.343		0.313	0.373	0.313	0.373	2.375	1.689	0.0000	0.0030	0.1091	50+	8.75%	S160	0.343	Shell	Piping	90
50	0.343		0.350	0.388	0.350	0.388	2.375	1.689	0.0000	0.0000	0.1091	50+	0.00%	S160	0.343	Shell	Piping	90
55	0.343		0.326	0.361	0.326	0.361	2.375	1.689	0.0000	0.0017	0.1091	50+	4.96%	S160	0.343	Shell	Piping	90
60	0.343		0.338	0.383	0.338	0.383	2.375	1.689	0.0000	0.0005	0.1091	50+	1.46%	S160	0.343	Shell	Piping	90
65	0.436		0.426	0.476	0.426	0.476	2.375	1.503	0.0000	0.0010	0.0971	50+	2.29%	XXS	0.436	Shell	Piping	360
70	0.843		0.830	0.891	0.830	0.891	10.750	9.064	0.0000	0.0013	0.5854	50+	1.54%	S120	0.843	Shell	Piping	45
75	0.438		0.532	0.571	0.532	0.571	3.500	2.624	0.0000	0.0000	0.1695	50+	0.00%	S160	0.438	Shell	Piping	90

* All readings are in inches.



Inspector:	Ben Piers	Certifications:
Signature:	BEN PIERS	ASNT Level 2 UT(SB); CGSB UT Level 1 #18240



Scope of Services

The agreement of CEL Quality Services Ltd. to perform services extends only to those services provided for in writing. Under no circumstance shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of CEL Quality Services Ltd. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. CEL Quality Services Ltd. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by CEL Quality Services Ltd. In no event shall, CEL Quality Services Ltd., liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, CEL Quality Services Ltd. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by CEL Quality Services Ltd.