



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB 0555727	Inspection Type	VE / UT / PSV		
Equipment Type	Horizontal Separator	Location	27 DURUM DRIVE, AB (MIDSTREAM YARD)		
Tag/Equip.		LSD	AB		
Status	Not in Service	Downhole LSD			
Manufacturer	Toromont Energy Systems Inc	Area			
Serial Number	31321S1	Year Built	2006		
CRN #	T7688.23	Service	Sour		
Comp/Unit Id	UNIT 1057	Manway	None		
Nat.Board #		Coating	Painted		
Interim Insp'n		Interim Type			
Next Thorough Insp	2030	Next Insp Type	VE / UT / PSV		
Length		Height			
Volume	43 ft ³	Client Reference			
Owner	Midstream Equipment	RT	1	HT	YES
Foreman		RAE Job No.	PR0004439		
ABSA	Plant: R Vessel: K Process: W Special: Z	ASME	Sec. VIII div. 1		
History Log	AB-10 - vessel purchased - dated April 10, 2017 - entered May 12, 2017. Certificate of Inspection Permit - dated October 6, 2011 - entered May 12, 2017. U1A - entered May 12, 2017. AB-83 - entered May 12, 2017. AB-10 - Relocated. Internal entry October 2017 AB-10 - Vessel Relocated and Returned to Service. Internal entry 2019-01-10 AB-10 - Relocated - 2021-10-14 AB-10 - Not in Service and Relocated - internal entry May 2025 Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell
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MAWP	655.0 PSI @ 300 °F		MDMT	-20 °F @ 655.0 PSI
Material	SA-516-70N	Material Thickness	0.625 in	
Diameter	28.75 in	Length	102 in	
Corrosion Allowance	0.125 in			

Valve Tag No	1057 - SEP PSV	Relief Type	Pressure Safety Valve
Manufacturer	Farris	Set Pressure	655.000 PSI
Serial Number	497019-2-KE	Capacity	2638 SCFM
Model	27EA34-M20	Last Service	Aug 2, 2023
CRN	0G0386.9C	Next Service	2027
Service Co.	Unified	Service Interval	48 Months
Service Co. Tag	99146G	Inlet Size	1 in
ASME Stamp	UV	Outlet Size	1 in
NB Stamp	YES	Connection	Threaded
Relief Dest.	To Atmosphere	Valve Loc.	On Piping
Comments		Client Reference	

Component	Ends 2:1 Concave		
Material	SA-516-70N	Material Thickness	0.688 in
Corrosion Allowance	0.125 in		

Comments

The following RAE Procedure(s) was/were used in inspecting this vessel:

INS-624B Unfired Pressure Vessels Procedure

NDE Technical Manual

The unit was located at the Midstream Equipment yard located just east of Chestermere, AB.

The unit was not in-service at the time of inspection.



Building Observations

Number of Access Doors:1 Building Supported by: Skid
Gas test port: No Gas Detection: Yes
Fire eye: No Catalytic Heater: Yes
Lighting: Good Floors : Checker plate steel
Drainage/Condition: Acceptable
Equipment placed ergonomically: Yes

The building was in good condition and there were no signs of damage.
The building was level and there were no structural concerns.
All points of access were complete with platforms.
The building ground wire was installed as well.
There were no concerns with the building itself.

2025 Observations

Building was identified by the Midstream Unit number written on the door
No additional comments since previous inspection.

Figure: 1



BUILDING

Figure: 2



UNIT NUMBER

Figure: 3



FLOOR



Piping Observations

General condition: Acceptable

Mechanical connections acceptable for service?: Acceptable

Clad: No Painted: Yes Insulated: No

Are there any dead legs: No

Support type: U-Bolt

Supported adequately: Yes

The inlet and outlet piping as well as the piping associated with the vessel were in place and properly bolted and supported.

The piping was coated and in serviceable condition.

There was no evidence of pipe strain due to poor fit up.

There were no concerns with the piping.

2025 Observations

There was noted minor scattered external corrosion on the piping.

Figure: 4



INLET PIPING

Figure: 5



OUTLET PIPING



Figure: 6



PIPING TO BLOWCASE

PSV Observations

Drainage : Acceptable	Supports : Acceptable
Bolting : Acceptable	Seal wire : Acceptable
Gasket : Acceptable	Service tag : Acceptable
CRN : Acceptable	Set pressure : Acceptable
Installation vertical : Yes	Required Capacity : Not verified
PSV block valves : No	
PSV service report available : No	

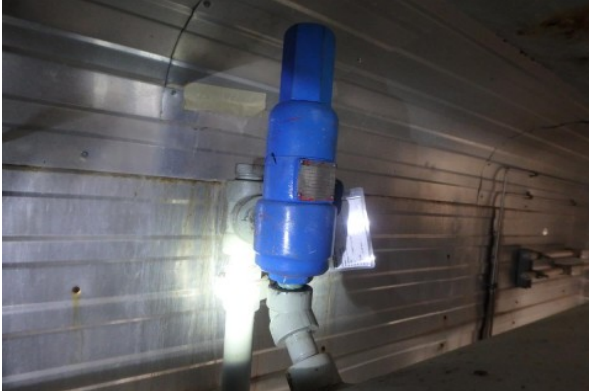
The PSV was located on the associated piping.
The PSV was in serviceable condition, securely mounted in the vertical position.
The nameplate was securely attached and legible.
The service tag was securely attached and legible.
The set pressure was acceptable for the vessel MAWP.
The seal wire was attached and intact.
There were no reductions in vent line size, or visible restrictions in flow.

2025 Observations

No additional comments since previous inspection.



Figure: 7



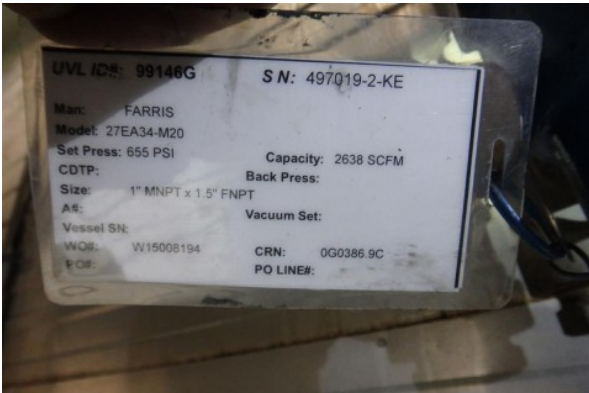
PSV

Figure: 8



NAMEPLATE

Figure: 9



SERVICE TAG



External Observations

Installation : In Building	Support Structure : Saddles
Grounded : Yes	Securement Type : Bolted
Drains :Automatic	Securement Condition : Acceptable
Attachments : Yes	Ladders/Platforms : N/A
CUI checked : Yes	External Covering : Coated
Vessel Orientation : Horizontal	
Manway : No	
Certificate of inspection permit : Yes	
Nameplate attached and legible : Yes	

The vessel was located inside a building.
The nameplate was legible and securely attached.
The exterior was fully painted, and the paint was in serviceable condition.
The heads and shell appeared to be in serviceable condition.
There was no damage, distortion, or stress evident on piping connections.
The vessel was adequately supported, with no makeshift structural attachments on any of the pressure containing components.

2025 Observations

No additional comments since previous inspection.

Figure: 10



VESSEL

Figure: 11



NAMEPLATE



Figure: 12



LEVEL GAUGE

Figure: 13



SUPPORT

Internal Observations

There was no internal inspection performed at the time of inspection.

UT1 Observations

See attached UT Report. UT results were reviewed and found to be acceptable.

Recommendations

1. The vessel is fit-for-service.
2. A permanent Midstream unit label should be affixed to the building door.
3. There should be an installation inspection of the unit after being installed on site to ensure no damage occurred during shipping and to verify proper installation.


Irwin Garcia, P.Eng.
Alberta IPV #A-92199

ABSA ISI-PVPP# A-99351
API 510# 68250
CWB Level II# 12352
SNT UT1 MT2

Inspector: Bryce Motley

Inspector : Irwin Garcia

Reviewed By: Bryce Motley

	RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401		Inspection Date:		June 06, 2025		<h1>UT Report</h1>								
			Report Number:		IG000065										
			Page:		1 of 5										
Client:		Midstream Equipment		Job Number:		PR0004439									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		0555727		Client Representative:		Joe Davis									
Equipment Description:		Inlet Separator		Client Contact:		joe.davis@midstreamequipment.com									
Equipment Type:		Vessel+Pipe		Measurment Unit:		Inch									
JOB DESCRIPTION															
Procedure:		NDE Tech Manual Rev. 2025 (NDE - 701B)													
Acceptance Code:		ASME Sec. VIII Div. 1 / ASME B31.3		Surface Condition:		Painted									
Material:		Carbon Steel		Surface Temp:		0 - 120 °C									
EQUIPMENT, TECHNIQUE & CALIBRATION															
Instrument Mfr:		GE		Model:		DMS2		S/N:		01X121		Cal. Due:		2026-05-02	
Probe Model	Freq MHz	Angle	Dia. (In)	Probe Type	Manufacturer	Serial #	Cable Length	Vel. (m/sec)	Ref dB	Scan dB	Range (in)				
FH2E	7.5	0	0.250	Single	Stresstel	24E00NGM	6'	2369	60	As Needed	1				
Cal Block S/N			1 or 2 Point Cal		Calibration Range		Couplant		Block Material						
11-1200			2		0.100-1.500"		UTX		Carbon Steel						

Scope:

Conduct 0° straight beam ultrasonic testing on the inlet separator looking for any signs of wall thinning due to corrosion, erosion, laminations or inclusions.

Result:

The measurements obtained from the inspection locations showed the thicknesses of all the components inspected to be at or around nominal. There were no signs of wall thinning, internal corrosion, erosion, laminations or inclusions at the time of inspection. All piping measurements were within the 12.5% mill tolerance, as per ASTM specifications.

Please see the following pages for the pictures of nameplate, the overall view, the isometric drawings, and the thickness measurements.

Conclusion:

No concerns noted at the time of inspection.



RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401	Inspection Date:	June 06, 2025	UT Report
	Report Number:	IG000065	
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Vessel Overview



Nameplate



RAE Engineering and Inspection Ltd.
www.raeengineering.ca
Phone: (780) 469-2401 Fax: (780)-469-2401

Inspection Date:

June 06, 2025

Report Number:

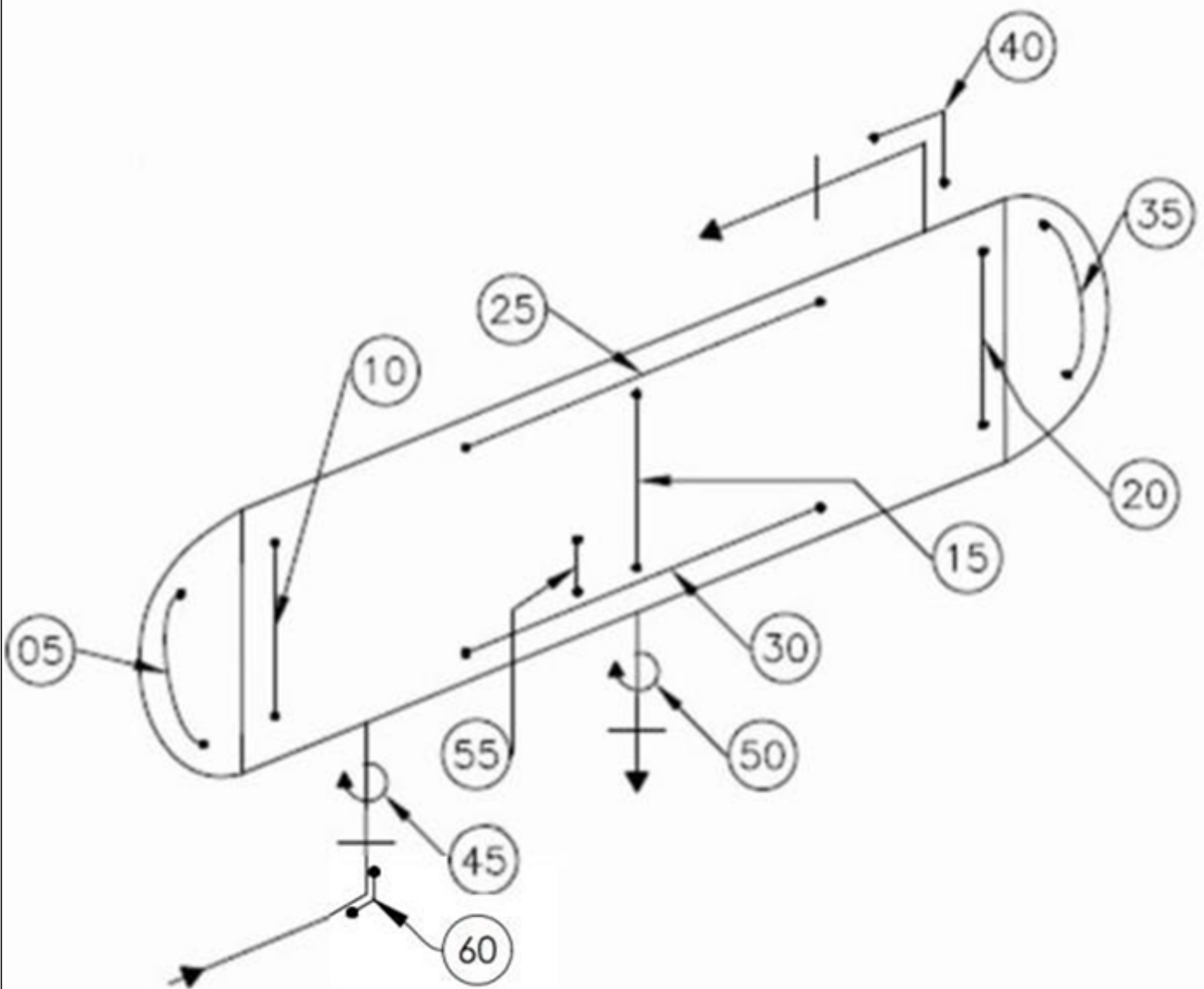
IG000065

Page:


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UT Report

ISO Drawing



ISO

		RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401						Inspection Date:		June 06, 2025		UT Report		
								Report Number:		IG000065				
								Page:		4 of 5				
UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	Head						Nom	0.688	Mil	0.010	CA	0.125	Min:	0.763
	0.773	0.779	0.788	0.770	0.771	0.769	0.767	0.763	0.770	0.779			Avg:	0.773
10	Mid Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.656
	0.658	0.661	0.659	0.658	0.657	0.656	0.659	0.662	0.659	0.668			Avg:	0.660
15	Mid Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.663
	0.669	0.669	0.669	0.665	0.665	0.665	0.666	0.667	0.665	0.663			Avg:	0.666
20	Mid Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.658
	0.668	0.669	0.668	0.665	0.665	0.663	0.661	0.660	0.658	0.662			Avg:	0.664
25	Top Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.664
	0.664	0.665	0.669	0.667	0.673	0.680	0.677	0.667	0.666	0.668			Avg:	0.670
30	Bottom Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.659
	0.662	0.661	0.661	0.663	0.659	0.664	0.665	0.665	0.664	0.663			Avg:	0.663
35	Head						Nom	0.688	Mil	0.010	CA	0.125	Min:	0.766
	0.789	0.781	0.787	0.787	0.777	0.771	0.766	0.767	0.766	0.775			Avg:	0.777
40	4	XXH	90° Elbow				Nom	0.674	Mil	0.084	CA	N/S	Min:	0.669
	0.732	0.712	0.701	0.669	0.677	0.699							Avg:	0.698
45	4	XXH	Nozzle				Nom	0.674	Mil	0.084	CA	N/S	Min:	0.680
	0.711	0.680	0.694	0.703									Avg:	0.697
50	2	XXH	Nozzle				Nom	0.436	Mil	0.054	CA	N/S	Min:	0.429
	0.456	0.429	0.450	0.432									Avg:	0.442
55	Mid Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.661
	0.664	0.662	0.662	0.661	0.661	0.661	0.663	0.668					Avg:	0.663
60	4	XH	90° Elbow				Nom	0.337	Mil	0.042	CA	N/S	Min:	0.328
	0.343	0.338	0.329	0.346	0.342	0.328							Avg:	0.338





Irwin Garcia, P.Eng.
Alberta IPV #A-92199

Technician 1: Irwin Garcia

SNT RAE-710B-037 UT Level 1 (Expires Sep 30, 2029)
SNT RAE-710B-037 MT Level 2 (Expires Sep 30, 2029)



Method	Level	Expiry Date	<div><div>RAE Engineering and Inspection Ltd.</div><div>Certification Record</div><div>This is to certify that:</div><div>Irwin Garcia</div><div>The above named employee has satisfactorily met the qualification requirements of the RAE Engineering and Inspection Ltd. written practice that meets the requirements of ASNT recommended practice SNT-TC-1A 2020 edition</div><div>Certification No.: RAE-710B-037</div></div>	
UT	1	30-Sep-29		
MT	2	30-Sep-29		
Corrective Lenses Required:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
By:	Zong Jun Wang			
Title:	NDE Level 3			
Signature:				
Date:	30-Sep-24			



MetTech

Material Testing Equipment and Supplies

A division of 1067113 Alberta Ltd.

1, 3610 - 29 St. N.E. Calgary, Alberta T1Y 5Z7

Measurement Readings for Calibration of Thickness Gauges

Company: RAE Engineering & Inspection Ltd. - Calgary

Instrument: GE DMS2 UTG

Serial Number: 01X121

Date: 5/2/2025

Range Check against stated reference listed:

Nominal measure	Measured reading	
	Block # 1	Block # 2
1.000"	1.002 "	1.000 "
0.750"	0.752 "	0.751 "
0.500"	0.500 "	0.500 "
0.250"	0.250 "	0.250 "

Allowable tolerance +/- 0.004"

These readings were produced against stated reference block in house and are within the allowable tolerances.

Reference Standards

4 Step 4340 Imperial Steel

Serial # 07-5839

Heat/Lot # G10975K06

ASTM specification E-797

4 Step Imperial Steel

Serial # 11-3909

Heat/Lot # 227L511

ASTM specification E-797

These reference standards have been manufactured in accordance with applicable specifications, and were inspected with instruments calibrated in accordance with ANSI/NCSL Z540-1-94 and traceable to NIST.

Signed by:

Temperature: 21.2 °C

On this date: 5/2/2025

Rel. Hum. : 28%

Calibration report MET-STEP01 Revision 3 Apr 11/22

Phone: 270-7778

Calgary

Fax: 283-3552

Edmonton

Toll free: 1-888-283-3552



MetTech

Material Testing Equipment and Supplies

A division of 1067113 Alberta Ltd.

1, 3610 - 29 St. N.E. Calgary, Alberta T1Y 5Z7

Certificate of Calibration of Thickness Gauges

Company: Rae Engineering - Calgary

Instrument: GE DMS2 UTG

Serial Number 01X121 :

Date: 5/2/2025

This is to certify that the above instrument meets or exceeds manufacturer's specifications for THICKNESS RESOLUTION, and has been calibrated to reference standards manufactured and inspected in accordance with ISO 902 with instruments calibrated to ANSI/NCSL Z540 and traceable to National Institute of Standards and Technology (NIST).

Reference Standard: 4 Step Imperial Steel

Serial # 07 - 5839

Block #1

Serial # 11 - 3909

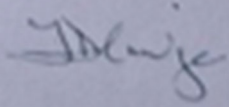
Block #2

These blocks have been manufactured in accordance with applicable specifications, and was inspected with instruments calibrated in accordance with ANSI/NCSL Z540 and traceable to NIST.

NIST certification reference # 11-83834 A & B

10-78221 A & B

Certificate of calibration is current for a period of 12 from date listed. Reference Standard Blocks are periodically cycled out of stock without notice.

Signed by: 

On this date: 5/2/2025