



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB RAE27028	Inspection Type	VE / UT / PSV		
Equipment Type	Blowcase/Separator Bridle	Location	27 DURUM DRIVE, AB MIDSTREAM YARD		
Tag/Equip.		LSD	AB		
Status	Not in Service	Downhole LSD			
Manufacturer	Ips Manufacturing Limited	Area			
Serial Number	F-2269-001CG	Year Built	2004		
CRN #	0H6091.2	Service	Sour		
Comp/Unit Id	UNIT 1378	Manway	None		
Nat.Board #		Coating			
Interim Insp'n		Interim Type			
Next Thorough Insp	2030	Next Insp Type	VE / UT / PSV		
Length		Height			
Volume	Capacity	Client Reference			
Owner	Midstream Equipment	RT	100%	HT	YES
Foreman		RAE Job No.	PR0004443		
ABSA	Plant: R    Vessel: P    Process: W    Special: Z	ASME	Sec. VIII div. 1		
History Log	Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

<b>Component</b>	Shell				
<b>MAWP</b>	1480.0 PSI @ 100 °F		<b>MDMT</b>	-20 °F @ 1480.0 PSI	
<b>Material</b>			<b>Material Thickness</b>	0.562 in	
<b>Diameter</b>	6.625 in		<b>Length</b>	48 in	
<b>Corrosion Allowance</b>	0.125 in				



<b>Valve Tag No</b>	1378 - BLOWCASE PSV	<b>Relief Type</b>	Relief Valve
<b>Manufacturer</b>	Mercer	<b>Set Pressure</b>	1480.000 PSI
<b>Serial Number</b>	10520	<b>Capacity</b>	3007 SCFM
<b>Model</b>	91-17D511714ES	<b>Last Service</b>	Aug 12, 2015
<b>CRN</b>	0G2606.5C	<b>Next Service</b>	2019
<b>Service Co.</b>	UNIFIED VALVE	<b>Service Interval</b>	48 Months
<b>Service Co. Tag</b>	74238G	<b>Inlet Size</b>	1 in
<b>ASME Stamp</b>	UV	<b>Outlet Size</b>	1 in
<b>NB Stamp</b>	YES	<b>Connection</b>	Threaded
<b>Relief Dest.</b>	To Flare	<b>Valve Loc.</b>	On Piping
<b>Comments</b>		<b>Client Reference</b>	

<b>Valve Tag No</b>	1378 - SEP PSV	<b>Relief Type</b>	Pressure Safety Valve
<b>Manufacturer</b>	Mercer Valve	<b>Set Pressure</b>	1480.000 PSI
<b>Serial Number</b>	103248	<b>Capacity</b>	11844 SCFM
<b>Model</b>	81-43251P27G215	<b>Last Service</b>	Aug 12, 2015
<b>CRN</b>	0G2606.5C	<b>Next Service</b>	2019
<b>Service Co.</b>	UNIFIED VALVE	<b>Service Interval</b>	48 Months
<b>Service Co. Tag</b>	74197G	<b>Inlet Size</b>	2 in
<b>ASME Stamp</b>	UV	<b>Outlet Size</b>	2 in
<b>NB Stamp</b>	YES	<b>Connection</b>	Threaded
<b>Relief Dest.</b>	To Flare	<b>Valve Loc.</b>	On Vessel
<b>Comments</b>		<b>Client Reference</b>	



<b>Component</b>	Heads		
<b>Material</b>	SA-234-WPB	<b>Material Thickness</b>	0.562 in
<b>Corrosion Allowance</b>	0.125 in		

**Comments**

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

INS-624B Unfired Pressure Vessels Procedure

INS-645B PRV Inspection 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:2 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 generally in serviceable condition and well supported.

The building was well lit.

The checker plate steel floor was clean and in serviceable condition.

The doors and windows functioned well and were in serviceable condition.

The cladding was generally in serviceable condition.

There were no combustibles in the building.

There was generally good access to the equipment in the building.

The building structure was level.

The ground wire was securely attached to the building structure.

The building was supported by a skid mounted on pilings.

**2025 Observations**

The building was identified by the unit number written on the door

No additional observations since last 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 attached piping was generally in serviceable condition.  
The piping was sufficiently supported.  
There was no damage, distortion or stress evident on the piping.  
The piping was not insulated.  
The piping was painted and the paint was generally in serviceable condition.  
There was minor scattered external corrosion on the piping surfaces.  
The piping connections showed no signs of leakage and appeared to be in serviceable condition.

### 2025 Observations

It was noted that the piping was disassembled in areas.  
The piping shall be re-assembled prior to placing the unit into service.

Figure: 4



PIPING FROM BLOWCASE

Figure: 5



PIPING FROM BLOWCASE





### PSV Observations

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

Protected by separator and blowcase PSV's.

PSV's for the separator, blowcase and fuel gas scrubber were all located just above the separator as the picture shows.

### 2025 Observations

The PSV is due for servicing and shall be serviced prior to placing the unit into service.

Figure: 6



SEPARATOR PSV

Figure: 7



SEPARATOR PSV NAMEPLATE

Figure: 8



SEPARATOR SERVICE TAG

Figure: 9



BLOWCASE PSV



Figure: 10



BLOWCASE SERVICE TAG

### External Observations

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

The vessel is located inside a building.  
The nameplate was legible and securely mounted to the vessel.  
The heads and shell appeared to be in serviceable condition.  
The vessel is not insulated.  
The vessel was fully painted and the paint was in serviceable condition.  
There was scattered minor corrosion visible on the vessel surfaces.  
There was no damage, distortion, or stress evident on piping connections.  
The vessel was horizontal and adequately supported by the associated separator/blowcase piping.  
There are no structural attachments on vessel.

### 2025 Observations

It was noted that the nameplate was hanging on by one rivet.  
The nameplate shall be properly secured.



Figure: 11



VESSEL

Figure: 12



NAMEPLATE

Figure: 13



NAMEPLATE TO BE RE-SECURED

### 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 provided
  - a) The PSV is serviced prior to placing the unit into service.
  - b) The piping is re-assembled prior to placing the unit into service.
2. Nameplate is to be re-secured to the vessel.
3. A permanent Midstream unit label should be affixed to the building door.
4. 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

	<b>RAE Engineering and Inspection Ltd.</b> www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401		Inspection Date:		June 25, 2025		<h1>UT Report</h1>								
			Report Number:		IG000081										
			Page:		1 of 4										
Client:		Midstream Equipment		Job Number:		PR0004443									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		RAE27028		Client Representative:		Joe Davis									
Equipment Description:		Sep/Blowcase Cage		Client Contact:		joe.davis@midstreamequipment.com									
Serial / Tag Number:		F2269-001CG		Unit Number:		UNIT 1378									
Equipment Type:		Vessel+Pipe		Measurment Unit:		Inch									
<b>JOB DESCRIPTION</b>															
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								
<b>EQUIPMENT, TECHNIQUE &amp; CALIBRATION</b>															
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 sep/blowcase cage 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.



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Phone: (780) 469-2401 Fax: (780)-469-2401

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# UT Report



Vessel Overview

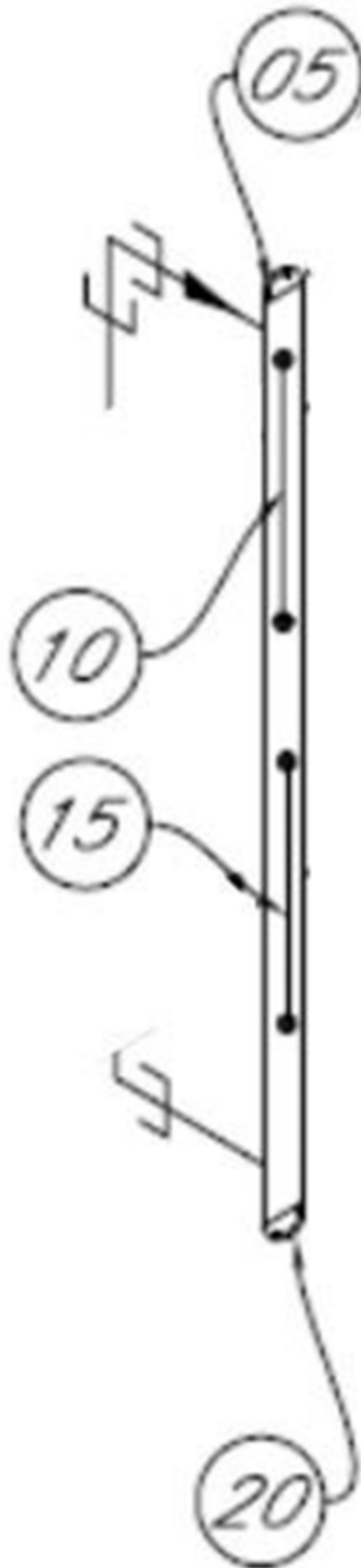


Nameplate




RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401	Inspection Date:	June 25, 2025	<b>UT Report</b>
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ISO Drawing



ISO



	RAE Engineering and Inspection Ltd.  www.raeengineering.ca  Phone: (780) 469-2401   Fax: (780)-469-2401							Inspection Date:		June 25, 2025			UT Report	
								Report Number:		IG000081				
								Page:		4 of 4				
UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	Head						Nom	0.562	Mil	0.010	CA	0.125	Min:	0.643
	0.762	0.718	0.655	0.643	0.676	0.689	0.654	0.645	0.694	0.739			Avg:	0.688
10	Mid Shell						Nom	0.562	Mil	0.010	CA	0.125	Min:	0.598
	0.602	0.604	0.605	0.607	0.603	0.598	0.600	0.600	0.598	0.598			Avg:	0.602
15	Mid Shell						Nom	0.562	Mil	0.010	CA	0.125	Min:	0.605
	0.605	0.608	0.609	0.609	0.610	0.610	0.609	0.607	0.608	0.611			Avg:	0.609
20	Head						Nom	0.562	Mil	0.010	CA	0.125	Min:	0.626
	0.720	0.673	0.627	0.626	0.635	0.690	0.722	0.774					Avg:	0.683



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> 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>	
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

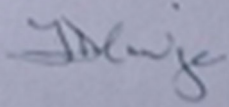
Block #2

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