



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB 0497008	Inspection Type	VE / UT / PSV		
Equipment Type	Blowcase	Location	27 DURUM DRIVE, AB MIDSTREAM YARD		
Tag/Equip.		LSD	AB		
Status	Not in Service	Downhole LSD			
Manufacturer	Ips Manufacturing Limited	Area			
Serial Number	V-2269-002	Year Built	2004		
CRN #	P5438.2	Service	Sour		
Comp/Unit Id	UNIT 1378	Manway	None		
Nat.Board #		Coating	No		
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	1	HT	YES
Foreman		RAE Job No.	PR0004443		
ABSA	Plant: Z Vessel: P Process: W Special: Z	ASME	Sec. VIII div. 1		
History Log	AB-10 - internal enry - Vessel NIS - entered June 9, 2012 Certificate of Inspection Permit dated August 25, 2012 - entered August 28, 2012 AB-10 - internal entry - vessel NIS - entered September 10, 2012				
	Record transferred from Terra Energy to Midstream Equipment (RAE Admin, 21-Jan-2025) Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell				
MAWP	1480.0 PSI @ 100 °F			MDMT	-20 °F @ 1480.0 PSI
Material			Material Thickness	1.219 in	
Diameter	16 in		Length	50 in	
Corrosion Allowance	0.125 in				



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

Component	Heads		
Material		Material Thickness	1.1 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

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 TO BLOWCASE DISASSEMBLED

Figure: 5



CONDENSATE OUTLET PIPING

Figure: 6



CONDENSATE PIPING TO SEPARATOR BRIDLE



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 associated piping inside the building.

The PSV was mounted in the vertical position, securely attached to the piping, and in serviceable condition.

The nameplate was securely attached, but was not legible as it was against the wall.

The set pressure was acceptable for the vessel.

The service tag was securely attached.

The PSV seal wire was attached and intact.

The vent size was adequate and vent lines were positioned safely.

The outlet piping provided positive drainage for the PSV.

There were no valves on the PSV piping.

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

NCR- PSV was 1 year overdue for service.

2025 Observations

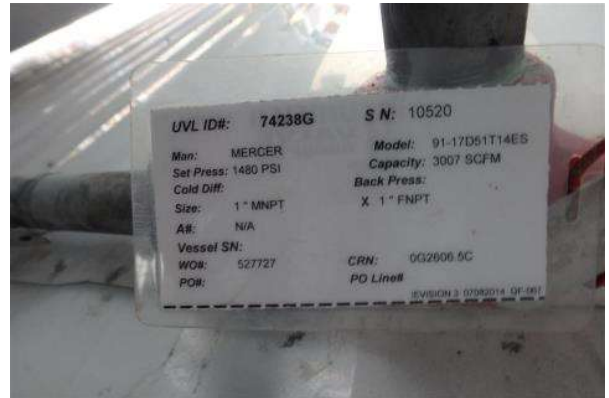
The PSV is due for servicing and shall be serviced prior to placing the unit into service.

Figure: 7



PSV

Figure: 8



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 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 2 saddles.
There are no structural attachments on vessel.

2025 Observations

No additional observations since last inspection.

Figure: 9



VESSEL

Figure: 10



NAMEPLATE



Figure: 11



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 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. 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 25, 2025		<h1 style="text-align: center;">UT Report</h1>								
			Report Number:		IG000080										
			Page:		1 of 5										
Client:		Midstream Equipment		Job Number:		PR0004443									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		0497008		Client Representative:		Joe Davis									
Equipment Description:		Blowcase		Client Contact:		joe.davis@midstreamequipment.com									
Serial / Tag Number:		V2269-002		Unit Number:		UNIT 1378									
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 blowcase 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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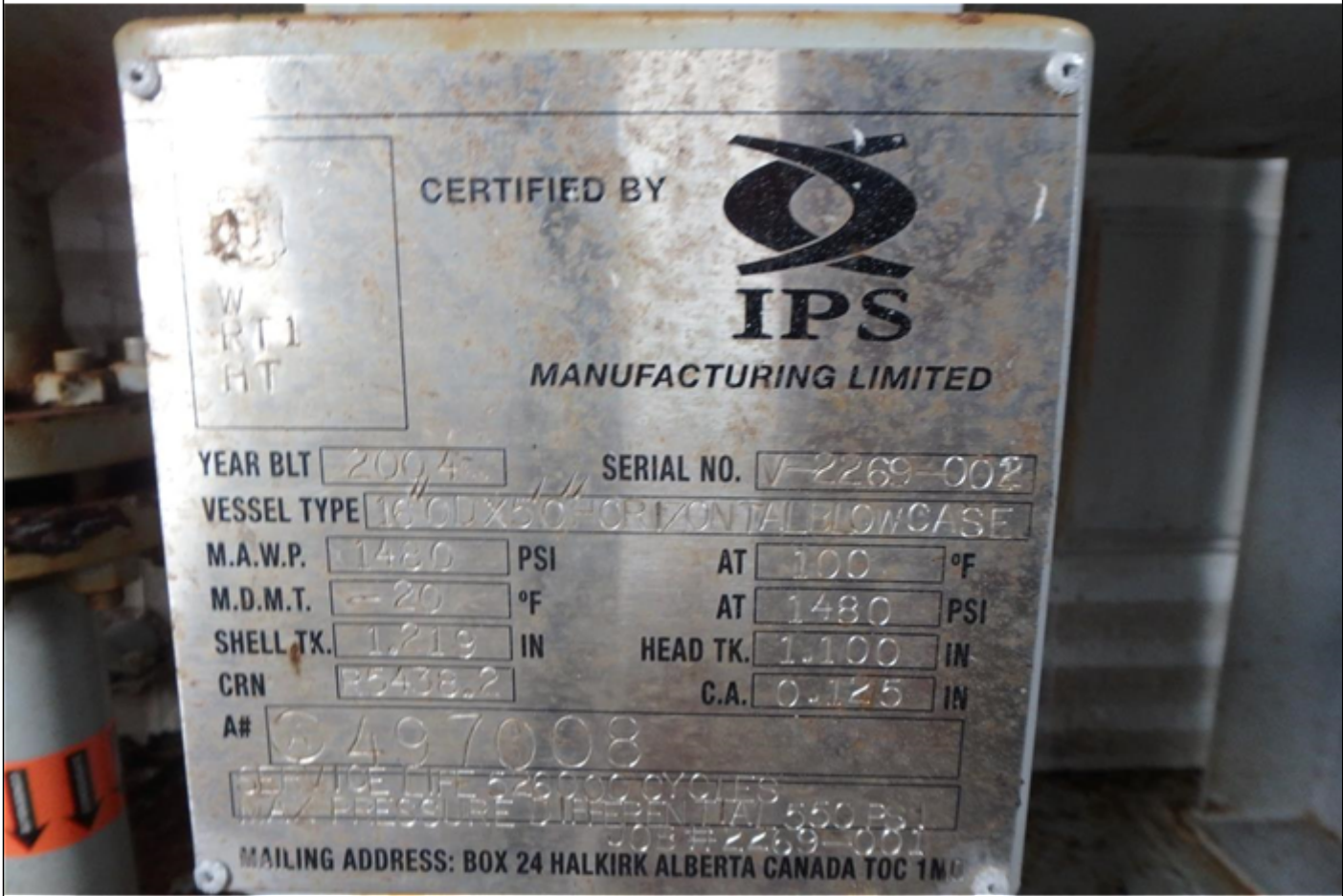
UT Report



Vessel Overview



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Nameplate



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June 25, 2025

Report Number:

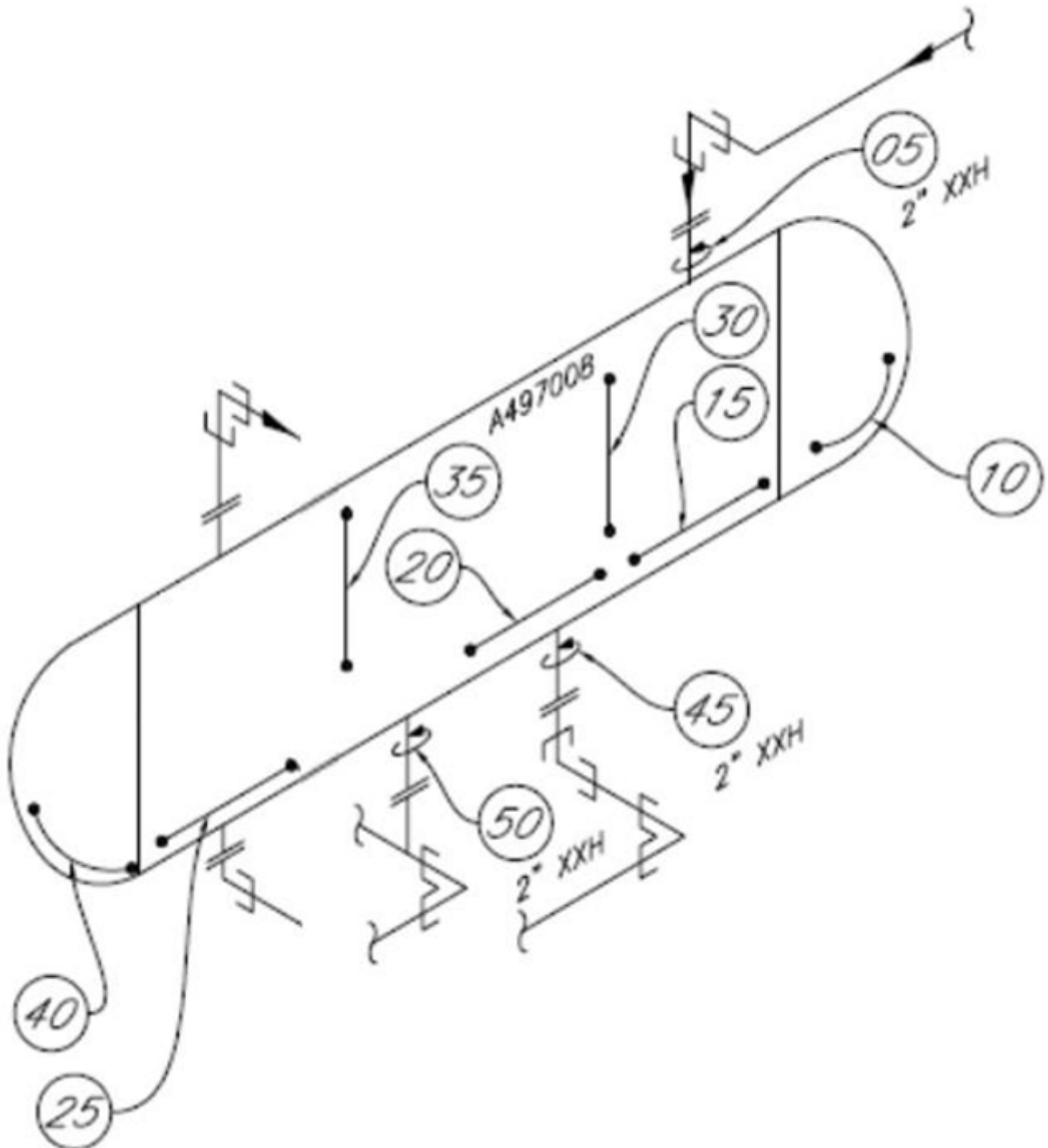
IG000080

Page:


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UT Report

ISO Drawing



ISO





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								Report Number:		IG000080				
								Page:		5 of 5				
UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	2	XXH	Nozzle				Nom	0.436	Mil	0.054	CA	N/S	Min:	0.449
	0.468	0.449	0.452	0.455									Avg:	0.456
10	Head						Nom	1.100	Mil	0.010	CA	0.125	Min:	1.210
	1.249	1.221	1.222	1.221	1.219	1.221	1.219	1.220	1.210	1.229			Avg:	1.223
15	Bottom Shell						Nom	1.219	Mil	0.010	CA	0.125	Min:	1.295
	1.295	1.302	1.303	1.311	1.325	1.319							Avg:	1.309
20	Bottom Shell						Nom	1.219	Mil	0.010	CA	0.125	Min:	1.253
	1.265	1.266	1.253	1.257	1.257	1.262	1.270	1.266	1.269	1.269			Avg:	1.263
25	Bottom Shell						Nom	1.219	Mil	0.010	CA	0.125	Min:	1.246
	1.246	1.246	1.246	1.263	1.267	1.260	1.249						Avg:	1.254
30	Mid Shell						Nom	1.219	Mil	0.010	CA	0.125	Min:	1.263
	1.263	1.290	1.285	1.294	1.287	1.284	1.278	1.290	1.280	1.276			Avg:	1.283
35	Mid Shell						Nom	1.219	Mil	0.010	CA	0.125	Min:	1.245
	1.264	1.267	1.265	1.254	1.254	1.263	1.245	1.249	1.256	1.274			Avg:	1.259
40	Head						Nom	1.100	Mil	0.010	CA	0.125	Min:	1.212
	1.225	1.229	1.212	1.223	1.237	1.245							Avg:	1.229
45	2	XXH	Nozzle				Nom	0.436	Mil	0.054	CA	N/S	Min:	0.446
	0.453	0.461	0.470	0.446									Avg:	0.458
50	2	XXH	Nozzle				Nom	0.436	Mil	0.054	CA	N/S	Min:	0.449
	0.460	0.464	0.459	0.449									Avg:	0.458

Irwin Garcia

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)

<table><tr><th>Method</th><th>Level</th><th>Expiry Date</th></tr><tr><td>UT</td><td>1</td><td>30-Sep-29</td></tr><tr><td>MT</td><td>2</td><td>30-Sep-29</td></tr><tr><td colspan="2">Corrective Lenses Required:</td><td><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td></tr><tr><td>By:</td><td colspan="2">Zong Jun Wang</td></tr><tr><td>Title:</td><td colspan="2">NDE Level 3</td></tr><tr><td>Signature:</td><td colspan="2"></td></tr><tr><td>Date:</td><td colspan="2">30-Sep-24</td></tr></table>			Method	Level	Expiry Date	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		<div> RAE Engineering and Inspection Ltd.</div> <div>Certification Record This is to certify that: 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>
Method	Level	Expiry Date																									
UT	1	30-Sep-29																									
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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

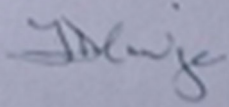
Block #2

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