

	RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401		Inspection Date:		March 03, 2025		UT Report																		
			Report Number:		TAS000158																				
			Page:		1 of 5																				
Client:		Rare Oilfield Services		Job Number:		PR0004081																			
Facility:		Shop		Location/LSD:		Vegreville / RJV Gas Field Services																			
Equipment Number:		0592459		Client Representative:		Ron Gryba																			
Equipment Description:		Vertical 3 Phase Separator		Client Contact:		403-999-1175																			
Equipment Type:		Vessel		Measurment Unit:		Inch																			
JOB DESCRIPTION																									
Procedure:		NDE Technical Manual Rev 2 (NDE - 701B)																							
Acceptance Code:		ASME Sec. VIII Div. 1		Surface Condition:		Painted																			
Material:		Carbon Steel		Surface Temp:		0 - 120 °C																			
EQUIPMENT, TECHNIQUE & CALIBRATION																									
Instrument Mfr:		Waygate Tech		Model:		DMS Go+		S/N:		GOPLS22030098		Cal. Due:		2025-07-07											
Probe Model		Freq MHz		Angle		Dia. (In)		Probe Type		Manufacturer		Serial #		Cable Length		Vel. (m/sec)		Ref dB		Scan dB		Range (in)			
1		DA512		7.5		0		0.250		Dual		GE		21E0108P		4'		5850		60		As Needed		2.500"	
Cal Block S/N				1 or 2 Point Cal				Calibration Range				Couplant				Block Material									
1				21-3393				2				0.100" - 1.500"				UTX				Carbon Steel					

Scope:

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

Result:

The measurements obtained from CMLs 15, 40, and 45 showed signs of wall thinning, and the thicknesses were found to be below the mil tolerance as per ASTM specifications but were above the corrosion allowance.

The remaining measurements show no signs of wall thinning, internal corrosion, erosion, laminations, or inclusions at the time of inspection.

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

- Black** - Within ASME Tolerance
- Blue** - ≤ Nominal minus ASME Tolerance
- Red** - ≤ Nominal minus ASME Tolerance minus CA or ≤ Nominal minus ASME Tolerance (if CA = N/S)
- Orange**- Nominal Not Specified (N/S)



Flagged Locations								
#	NPS	Schedule	Side	Nom.	Mil.	CA	Ave.	Min.
15			Top Head	1.250	0.010	0.125	1.247	1.233
40			Bottom Head	1.250	0.010	0.125	1.239	1.229
45	2	XXH	Drain Elbow	0.436	0.054	0.125	0.396	0.379

Black - Within ASME Tolerance
Blue - ≤ Nominal minus ASME Tolerance
Red - ≤ Nominal minus ASME Tolerance minus CA or ≤ Nominal minus ASME Tolerance (if CA = N/S)
Orange- Nominal Not Specified (N/S)



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

Inspection Date: March 03, 2025
Report Number: TAS000158
Page: 3 of 5

UT Report

Photo Graphics



Nameplate



Overall View



RAE Engineering and Inspection Ltd.

www.raeengineering.ca

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

Inspection Date:

March 03, 2025

Report Number:

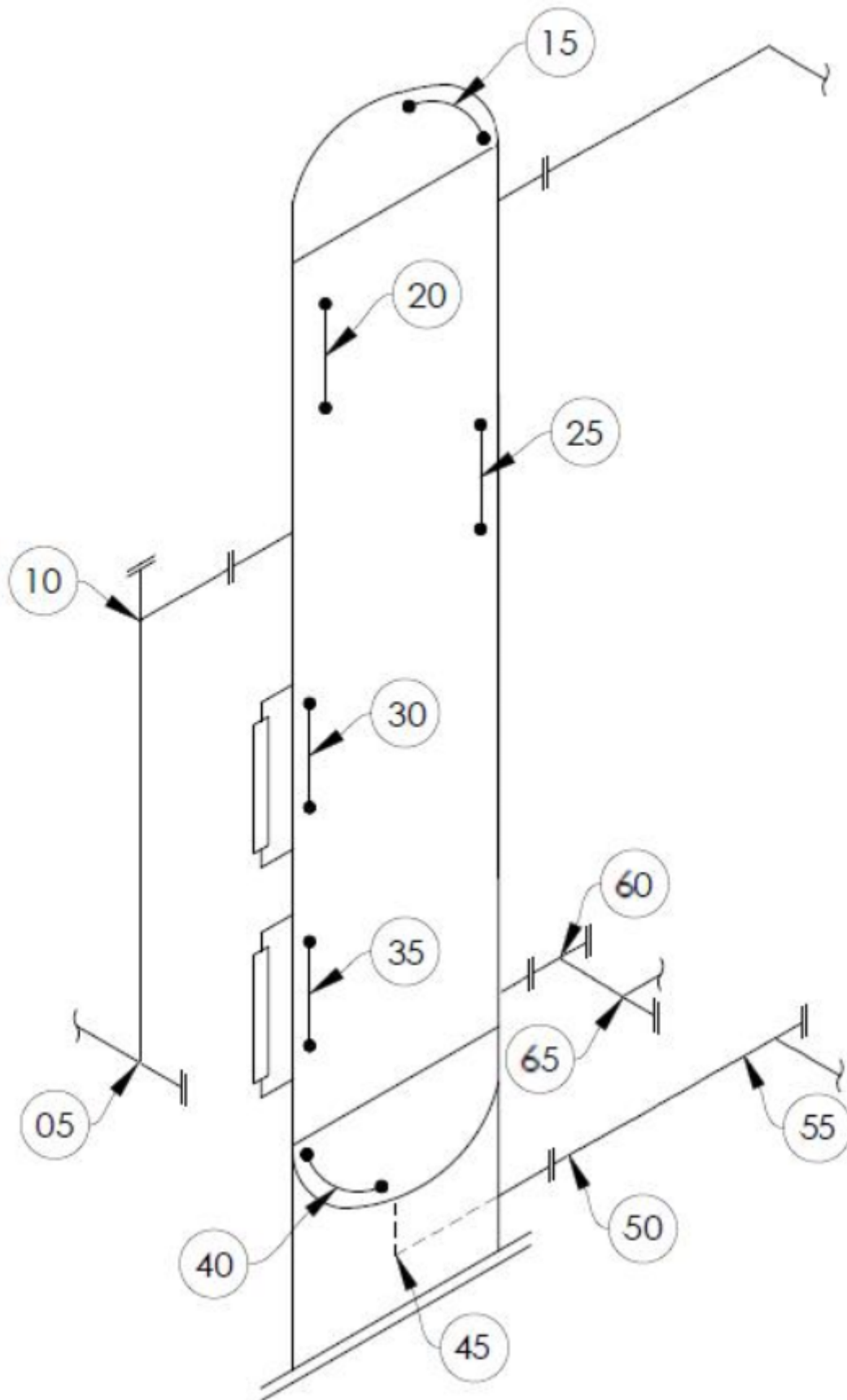
TAS000158

Page:

4 of 5

UT Report

ISO Drawing



ISO Drawing

UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	4	XH	Back of Tee				Nom	0.337	Mil	0.042	CA	N/S	Min:	0.308
	0.323	0.318	0.319	0.321	0.322	0.321	0.323	0.318	0.314	0.308	0.308	0.308	Avg:	0.317
10	4	XH	Back of Tee				Nom	0.337	Mil	0.042	CA	N/S	Min:	0.301
	0.309	0.316	0.315	0.311	0.308	0.310	0.311	0.304	0.304	0.303	0.302	0.301	Avg:	0.308
15	Top Head						Nom	1.250	Mil	0.010	CA	0.125	Min:	1.233
	1.250	1.248	1.242	1.244	1.242	1.245	1.245	1.246	1.246	1.254	1.233	1.266	Avg:	1.247
20	Top Shell						Nom	1.250	Mil	0.010	CA	0.125	Min:	1.258
	1.265	1.263	1.262	1.264	1.261	1.264	1.263	1.261	1.258	1.260	1.259	1.258	Avg:	1.262
25	Mid Shell						Nom	1.250	Mil	0.010	CA	0.125	Min:	1.263
	1.264	1.264	1.263	1.263	1.263	1.264	1.265	1.263	1.266	1.265	1.266	1.265	Avg:	1.264
30	Mid Shell						Nom	1.250	Mil	0.010	CA	0.125	Min:	1.262
	1.262	1.263	1.264	1.263	1.264	1.265	1.264	1.262	1.264	1.264	1.266	1.264	Avg:	1.264
35	Bottom Shell						Nom	1.250	Mil	0.010	CA	0.125	Min:	1.262
	1.264	1.263	1.263	1.262	1.262	1.262	1.263	1.264	1.267	1.264	1.264	1.263	Avg:	1.263
40	Bottom Head						Nom	1.250	Mil	0.010	CA	0.125	Min:	1.229
	1.290	1.236	1.235	1.238	1.229	1.233	1.234	1.237	1.237	1.235	1.230	1.231	Avg:	1.239
45	2	XXH	Drain Elbow				Nom	0.436	Mil	0.054	CA	0.125	Min:	0.379
	0.416	0.409	0.394	0.379	0.380								Avg:	0.396
50	2	XH	Circumferential				Nom	0.218	Mil	0.027	CA	N/S	Min:	0.223
	0.231	0.223	0.223	0.237									Avg:	0.229
55	2	XH	Circumferential				Nom	0.218	Mil	0.027	CA	N/S	Min:	0.223
	0.234	0.237	0.223	0.228									Avg:	0.231
60	2	XH	Back of Tee				Nom	0.218	Mil	0.027	CA	N/S	Min:	0.287
	0.307	0.325	0.328	0.331	0.328	0.318	0.323	0.319	0.312	0.309	0.302	0.287	Avg:	0.316
65	2	XH	Back of Tee				Nom	0.218	Mil	0.027	CA	N/S	Min:	0.253
	0.273	0.341	0.338	0.341	0.334	0.326	0.321	0.286	0.280	0.281	0.271	0.253	Avg:	0.304



**NDE-709D Thickness Gage Horizontal Linearity Certificate of Calibration**

Instrument Make: GE Transducer Make: Stresstel
Instrument Model: USM/DMS GO+ Transducer Model: FH2E
Instrument S/N: GOPLS22030098 Transducer S/N: 23A015YZ
Temperature: 21°C Couplant: UTX

Table 1: Thickness Gage Horizontal Linearity Data

CALIBRATION BLOCK S/N	CALIBRATION BLOCK THICKNESS (IN)	BACKWALL NUMBER	MEASURED LENGTH (IN)	DEVIATION (IN)	TOLERANCE (IN)	ACCEPTABLE
60764	0.050	1st	0.050	0	0.006	Yes
21-3393	0.100	1st	0.098	0.002	0.006	Yes
21-3393	0.200	1st	0.200	0	0.006	Yes
21-3393	0.300	1st	0.300	0	0.006	Yes
21-3393	0.400	1st	0.399	0.001	0.006	Yes
21-3393	0.500	1st	0.500	0	0.006	Yes
21-3393	1.00	2nd	1.000	0	0.006	Yes
21-3393	2.000	4th	2.002	0.002	0.006	Yes
21-3393	3.000	6th	3.000	0	0.006	Yes
21-3393	4.000	8th	4.000	0	0.006	Yes

Technician Name: Tyson ShewchukSignature: Tyson ShewchukDate: July 07/2024Calibration Due: July 07/2025