

ALTEC INSPECTION LTD.

GENERAL INSPECTION FORM						
Company Name: Fuelled Family of Companies				Inspection Date: September 17 th , 2025		
Facility: N/A				Location (LSD): CNRL FSJ Meek's Boneyard		
Vessel Name & Equipment Number: Flare Knockout Drum						
Orientation: Horizontal <input checked="" type="checkbox"/> or Vertical <input type="checkbox"/>				Status: operating <input type="checkbox"/> or shut-in <input checked="" type="checkbox"/>		
External Inspection <input checked="" type="checkbox"/>				Commissioning Inspection <input type="checkbox"/> or Corporate Inspection <input checked="" type="checkbox"/>		
NON-CODE VESSEL NAMEPLATE DATA						
"A" or BC Registration Number: N/A				Company Tag # (if applicable):		
CRN Number: N/A				Associated PSV Tag # (if applicable):		
Vessel serial number: C7407 V1				Size (diameter x length- estimate if necessary): 100" OD x 20'0" S/S (Approx.)		
Shell thickness: 0.375" (Assumed)				Shell material: SA-516-70 (ASSUMED)		
Head thickness: 0.375" (Assumed)				Head material: SA-516-70 (ASSUMED)		
Tube wall thickness:				Tube material:		
Tube diameter:				Tube length:		
Channel thickness:				Channel material:		
MAWP	Shell: Atmospheric			Operating pressure	Shell:	
	Tubes:				Tubes:	
Design Temp.	Shell:			Operating temperature	Shell:	
	Tubes:				Tubes:	
Radiography:				Heat treatment: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Code parameters: Non-code				Joint efficiency (if on nameplate):		
Manufacturer: TORNADO TECHNOLOGIES INC.				Year built: N/A		
Corrosion allowance: N/A				Manway: Yes <input checked="" type="checkbox"/> Size: 20" (Estimated) No <input type="checkbox"/>		
SAFETY VALVE NAMEPLATE DATA						
Location	Set Pressure	Model / Serial #	Capacity (ie:SCFM/GPM,etc)	Size (Inlet x Outlet)	Manufacturer	Set Date (dd/mm/yyyy)
Atmospheric Non-code Vessel						
SERVICE CONDITIONS-INDICATE ALL THAT APPLY						
Sweet <input checked="" type="checkbox"/>	Sour <input checked="" type="checkbox"/>	Oil <input type="checkbox"/>	Gas <input checked="" type="checkbox"/>	Water <input checked="" type="checkbox"/>		
Amine <input type="checkbox"/>	LPG <input type="checkbox"/>	Condensate <input checked="" type="checkbox"/>	Air <input type="checkbox"/>	Glycol <input type="checkbox"/>		
Other (Describe):						

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External Inspection Items	G	F	P	N/A	Comments
Insulation Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture. Are straps secure?				✓	Vessel was not insulated.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	✓				Paint was in good condition. No signs of external corrosion, damage or distortion.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.				✓	No leaks noted.
Skirt/ Saddle Assess condition of paint, fire protection, concrete. Look for corrosion, buckling, dents, etc. Look at vessel surface area near supports. Verify no signs of leakage at attachment to vessel and attachment welds are acceptable. Is ground wire attached?	✓				The vessel supported by saddles welded to the vessel shell and welded to the floor. No signs of corrosion, buckling or dents. All attachment welds appeared to be in good condition, no leaks. Minor spalling of the concrete pedestal noted.
Anchor Bolts Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.				✓	N/A. Welded to the floor.
Foundation Check for type, settlement, grounding, etc.				✓	The vessel was on the skid at the time of inspection at Boneyard.
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.	✓				Access stair to the floor of the vessel found to be in good condition.
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted? Inspect gussets for cracking.	✓				All nozzles appeared to be in good condition. At the time of inspection, the nozzles were opened at the ends.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	✓				The level gauge on the bridle side found to be in good condition.
External Piping: Ensure pipe is well supported. All clamps, supports, shoes, etc. in place. Look for evidence of structural overload, deflection, etc. Paint condition, external corrosion?				✓	Piping not installed in place at the time of inspection.
Valving: Ensure no leaks are visible. Valves are properly supported and chained if necessary.				✓	N/A
	YES	NO		N/A	
PSV Ensure PSV is set at pressure at or below that of vessel. Discharge piping is same size as valve outlet and is properly supported and routed. Are psv seals in place? Ensure no block valves between psv and vessel, or if there are that they are locked/sealed open.				✓	No over-pressure protection device installed at the time of inspection.
NDE methods: was UT/ MPI done on vessel	✓				Ultrasonic inspection completed at time of inspection. Note: see separate report for U/T results
Fit For Service Inspection did not identify any NCR's? The equipment does not require any repairs? The equipment is safe to operate?				✓	Overall the vessel was found to be in good condition. Vessel structure found to be fit for the service. Piping and Instrumentation work to be completed prior to placing the vessel in the service.
Other Observations: The vessel internal condition inspected from outside of the manway. The internal coating and welds found to be in good condition on the basis of limited/restricted access and inspection. Overall, the vessel was found to be in good condition. Vessel structure found to be fit for the service. Piping and Instrumentation work to be completed prior to placing the vessel in the service.					

Inspected By: Nirmal Neupane, API 510 Certification # 118570

Date: September 17th, 2025

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EQUIPMENT EXTERNAL PICTURES: Page 3

Vessel Ser # (Tag #): N/A

Picture 1:



Picture 2:



Picture 3:



Picture 4:



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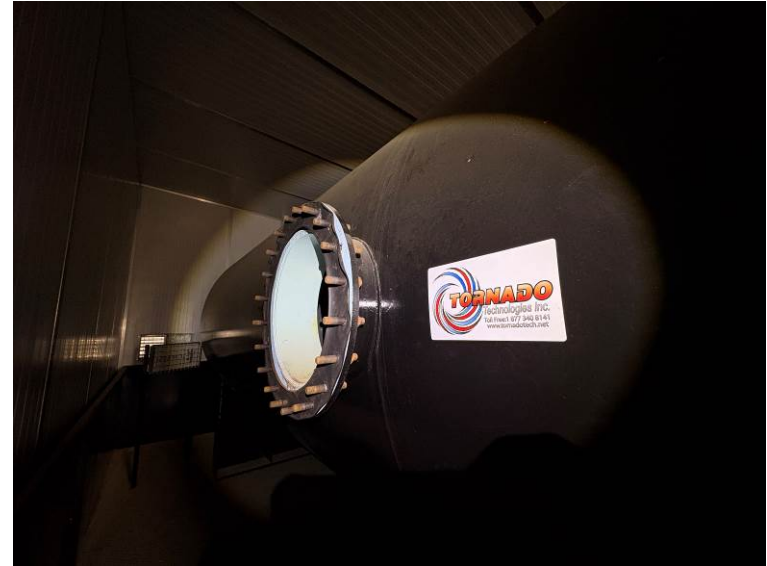
EQUIPMENT EXTERNAL PICTURES: Page 4

Vessel Ser # (Tag #): N/A

Picture 5:



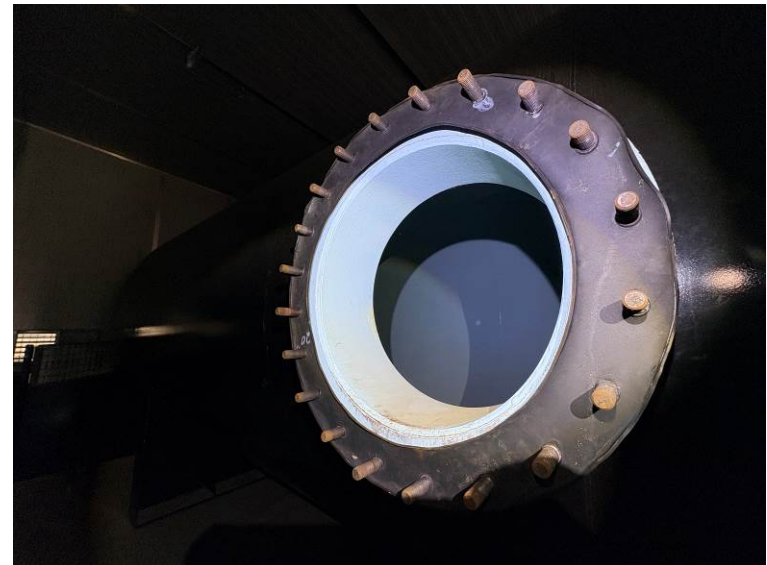
Picture 6:



Picture 7:



Picture 8:

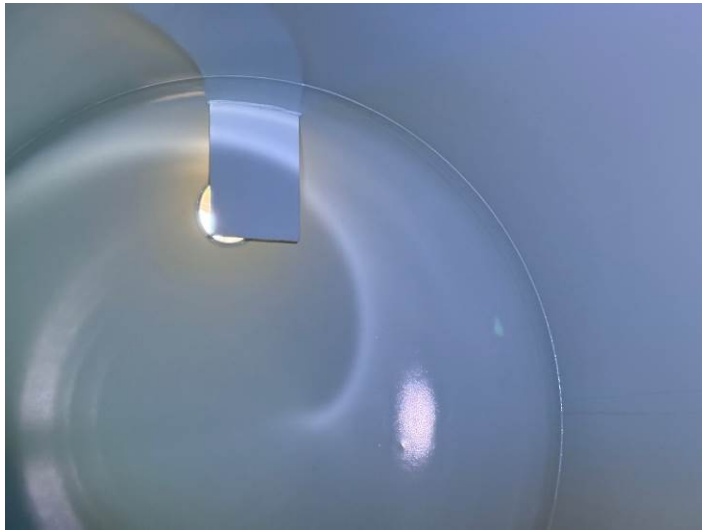


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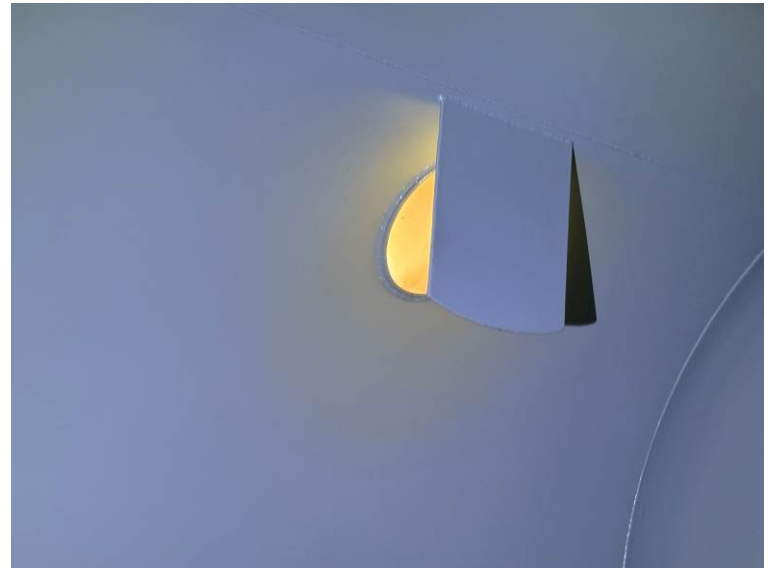
EQUIPMENT INTERNAL PICTURES: Page 5

Vessel Ser # (Tag #): N/A

Picture 9:
Inlet Side



Picture 10:
Outlet Side



Picture 11:
Bottom
Head &
Shell
(Product
Residue)



Picture 12:
Bottom
Shell &
Nozzles



Fuelled Family of Companies

File Name: Flare Knockout Drum
Description: FKOD
Probe: 7.5 MHz FH2E
Instrument : DMS Go
Units: INCH

Thickness Data

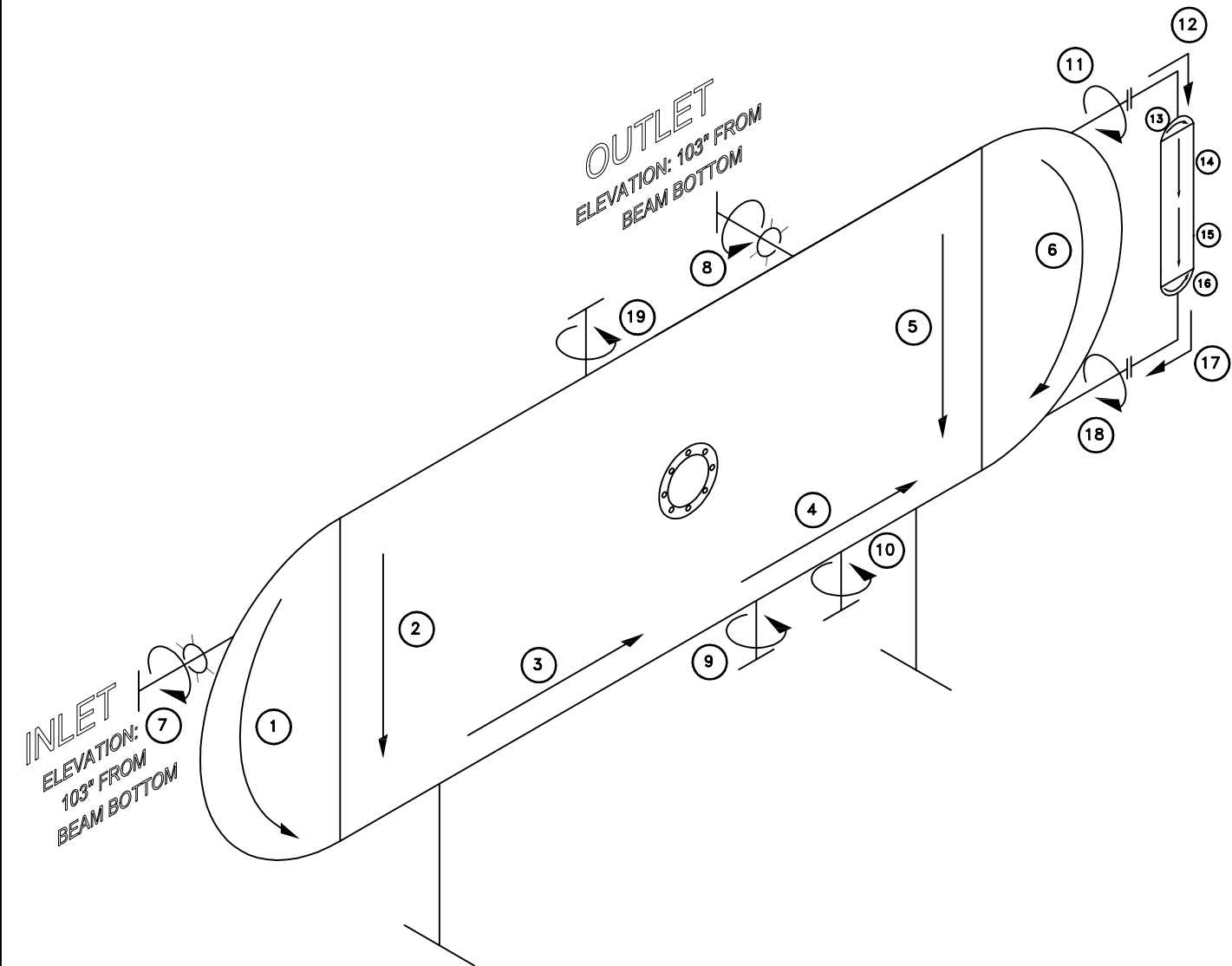
Band #'s	Size	Sch	Nom.	Sept. 17th, 2025		T _{min}	% Below Nom.	Change from last survey
Flare Knockout Drum								
Band #1	HEAD		0.375	0.369		0.369	1.6	N/A
Band #2	SHELL		0.375	0.380		0.380	N/A	N/A
Band #3	BOTTOM SHELL		0.375	0.387		0.387	N/A	N/A
Band #4	BOTTOM SHELL		0.375	0.382		0.382	N/A	N/A
Band #5	SHELL		0.375	0.383		0.383	N/A	N/A
Band #6	HEAD		0.375	0.369		0.369	1.6	N/A
Band #7	10" INLET NOZZLE CIRC.	40	0.365	0.354		0.354	3.0	N/A
Band #8	10" OUTLET NOZZLE CIRC.	40	0.365	0.356		0.356	2.5	N/A
Band #9	3" BOTTOM NOZZLE CIRC.	STD	0.216	0.213		0.213	1.4	N/A
Band #10	3" BOTTOM NOZZLE CIRC.	STD	0.216	0.216		0.216	N/A	N/A
Band #11	2" NOZZLE (BRIDLE) CIRC.	XS	0.218	0.208		0.208	4.6	N/A
Band #12	2"-90°	XS	0.218	0.221		0.221	N/A	N/A
Band #13	6" BRIDLE TOP HEAD	40	0.280	0.279		0.279	0.4	N/A
Band #14	6" BRIDLE SHELL	40	0.280	0.265		0.265	5.4	N/A
Band #15	6" BRIDLE SHELL	40	0.280	0.263		0.263	6.1	N/A
Band #16	6" BRIDLE BOTTOM HEAD	40	0.280	0.279		0.279	0.4	N/A
Band #17	2"-90°	XS	0.218	0.214		0.214	1.8	N/A
Band #18	2" NOZZLE (BRIDLE) CIRC.	XS	0.218	0.212		0.212	2.8	N/A
Band #19	3" TOP NOZZLE CIRC.	STD	0.216	0.219		0.219	N/A	N/A

Notes

T_{avg} Average Thickness reading for given data
T_{min} Minimum thickness reading for given data
 Green background indicates up to 12.5% below Nominal
 Yellow background indicates between 12.5% & 35% below Nominal
% Below Nom. Red background indicates over 35% below Nominal
 N/A - Indicates reading above nominal value

Assumptions:

1. The vessel head and shell nominal thickness was assumed to be 0.375"



EQUIPMENT DATA:	
MAKE:	TORNADO TECHNOLOGIES INC.
SER. NO.:	-
CRN NO.:	-
B.C. NO.:	-
ALTA. NO.:	-
MFG. DATE:	-
MAWP:	-
"t" SHELL:	-
"t" HEAD:	-
SIZE:	100" OD x 240" S/S (APPROX.)
CORR. ALLOW.:	-
XRAY/STRESS REL.:	-

ALTEC INSPECTION LTD.	FLARE KNOCKOUT DRUM	
	CNRL MEEK'S BONEYARD	
BY: T.NINAN	DATE: SEPTEMBER 17th, 2025	COMPANY: FUELLED FAMILY OF COMPANIES
DRAWN: 13020 BEATON PARK ROAD, BOX 283, CHARLIE LAKE, B.C. V0C 1H0 (250)785 6295	DRAWING NUMBER: FLARE KNOCKOUT DRUM	

Fuelled Family of Companies

File Name: Flare Knockout Drum
Description: FKOD
Probe: 7.5 MHz FH2E
Instrument : DMS Go
Units: INCH
Date: September 17th, 2025

Thickness Data

Band #'s	Size	Sch	Nom.	Point # 1	Point # 2	Point # 3	Point # 4	Point # 5	Point # 6	Point # 7	Point # 8	Point # 9	Point # 10	T _{avg}	T _{min}	% Below Nom.
Flare Knockout Drum																
Band #1	HEAD		0.375	0.379	0.375	0.376	0.374	0.369	0.371	0.377	0.376	0.371	0.362	0.375	0.369	1.6
Band #2	SHELL		0.375	0.388	0.389	0.388	0.384	0.380	0.390	0.386	0.390	0.384	0.390	0.387	0.380	N/A
Band #3	BOTTOM SHELL		0.375	0.387	0.390	0.392	0.391	0.391	0.392	0.390	0.391	0.393	0.394	0.391	0.387	N/A
Band #4	BOTTOM SHELL		0.375	0.385	0.383	0.382	0.383	0.387	0.387	0.387	0.384	0.383	0.385	0.385	0.382	N/A
Band #5	SHELL		0.375	0.385	0.387	0.383	0.387	0.386	0.384	0.383	0.384	0.382	0.383	0.385	0.383	N/A
Band #6	HEAD		0.375	0.390	0.392	0.385	0.377	0.377	0.376	0.370	0.369	0.372	0.385	0.380	0.369	1.6
Band #7	10" INLET NOZZLE CIRC.	40	0.365	0.363	0.354	0.369	0.368	0.370	0.371	-	-	-	-	0.366	0.354	3.0
Band #8	10" OUTLET NOZZLE CIRC.	40	0.365	0.370	0.361	0.359	0.361	0.356	0.361	-	-	-	-	0.361	0.356	2.5
Band #9	3" BOTTOM NOZZLE CIRC.	STD	0.216	0.227	0.213	0.244	0.233	-	-	-	-	-	-	0.229	0.213	1.4
Band #10	3" BOTTOM NOZZLE CIRC.	STD	0.216	0.237	0.229	0.216	0.239	-	-	-	-	-	-	0.230	0.216	N/A
Band #11	2" NOZZLE (BRIDLE) CIRC.	XS	0.218	0.227	0.208	0.227	0.230	-	-	-	-	-	-	0.223	0.208	4.6
Band #12	2"-90°	XS	0.218	0.227	0.225	0.226	0.222	0.221	-	-	-	-	-	0.224	0.221	N/A
Band #13	6" BRIDLE TOP HEAD	40	0.280	0.360	0.282	0.300	0.294	0.279	0.361	-	-	-	-	0.313	0.279	0.4
Band #14	6" BRIDLE SHELL	40	0.280	0.265	0.265	0.267	0.286	0.268	0.268	0.269	0.270	0.272	0.272	0.270	0.265	5.4
Band #15	6" BRIDLE SHELL	40	0.280	0.268	0.272	0.267	0.263	0.267	0.266	0.271	0.270	0.274	0.269	0.268	0.263	6.1
Band #16	6" BRIDLE BOTTOM HEAD	40	0.280	0.360	0.282	0.297	0.296	0.279	0.350	-	-	-	-	0.311	0.279	0.4
Band #17	2"-90°	XS	0.218	0.214	0.219	0.215	0.229	0.229	-	-	-	-	-	0.221	0.214	1.8
Band #18	2" NOZZLE (BRIDLE) CIRC.	XS	0.218	0.218	0.238	0.213	0.212	-	-	-	-	-	-	0.220	0.212	2.8
Band #19	3" TOP NOZZLE CIRC.	STD	0.216	0.219	0.224	0.220	0.223	-	-	-	-	-	-	0.222	0.219	N/A

Notes

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