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## Ultrasonic Inspection Report

**UT\_SN 10154B\_Flare Knockout\_aug2025**

Client: <b>Fuelled</b>	Facility: <b>n/a</b>	Date: <b>Aug 22, 2025</b>
LSD: <b>n/a</b>	Item(s) Inspected: <b>Flare Knockout Drum</b>	Job #: <b>13752</b>
Material: <b>Carbon Steel / Stainless Steel</b>	Thickness Range: <b>0 to 75mm</b>	WO #: <b>n/a</b>
Procedure: <b>UT-01 Rev. 9</b>	Ref. Code: <b>ASME VIII &amp; ASME B31.3</b>	Surf. Temp: <b>-20° to 20° C</b>
UT Equipment: <b>Asset# FD-15 Olympus Epoch XT</b>	Serial Number: <b>070057201</b>	Cal. Due: <b>Dec. 16, 2025</b>
Transducer 1: <b>Asset# T-243 Technisonic Research</b>	0° Dual 5MHz Diam. 6.35mm	Serial #: <b>25952</b>
Transducer 2: <b>Asset# T-54 Olympus D-790-SM</b>	Hot Probe 0° 5MHz Diam. 6.35mm	Serial #: <b>858220</b>
Transducer 3: <b>Asset# T-255 Olympus P/E</b>	0° 5MHz Diameter 12.7mm	Serial Number: <b>1412290</b>
Cal. Block 1: <b>Asset# CB-80 (1018) Carbon Steel</b>	6-step wedge	Serial Number: <b>62196</b>
Cal. Block 2: <b>Asset# CB-75 Stainless Steel</b>	Step Wedge 2.5 -12.5mm	Serial Number: <b>52747</b>
Couplant: <b>Magnaflux UTX</b>	Cable 1: <b>2m Dual BNC to Microdot</b>	Cable 2: <b>2m Single BNC to Microdot</b>

**Job Scope:** To perform a baseline ultrasonic thickness survey on the requested vessel located at 06-03-69-06 w6m in the Wapiti Field.

**Results:** See attached UTS drawing and data sheets for all point locations and recorded thickness measurements.

Client Representative: <b>Will Van Weelden</b>
Technician(s): <b>Dave Ellis (CGSB UT-2, MT-2, PT-2 #21762) (SNT-TC-1A MT-II, UT-II, PT-II)</b>
Assistant(s): <b>Karsyn Utz</b>
Reviewed and Approved By: <b>Lance Smith (CGSB MT-2, UT-2, PT-2, RT-1 #8052) (SNT-TC-1A MT-II, UT-II, PT-II)</b>



## **ULTRASONIC THICKNESS SURVEY**

### **“UTS”**

#### **Report Summary**

The accompanying UTS report provides representation and data of equipment requested for inspection as accessible. The UTS drawing(s) show condition monitoring locations (CMLs) with identification numbers that correlate with the ultrasonic thickness readings recorded on the following pages. All CML locations identified on the UTS drawing(s) are inspected to locate the minimum thickness and determine an average thickness. CMLs that have thickness readings less than the calculated flagged thickness are coloured **BLUE** on the UTS drawings and data pages for quick reference purposes. CMLs with unusual wall thicknesses are given descriptive comments to aid future trending.

#### **UTS Procedure**

All CML locations identified on the UTS drawing are scanned completely by continuously coupling an ultrasonic transducer to the item being tested. The average scan location on vessel heads and shells includes a 2” wide by 16” long test band. The average scan location on piping and fittings is a 2” wide band at critical areas, such as the outside radius of elbows, the neck of tees, the back of tees, or any other areas of concern.

#### **Equipment**

All equipment used for each UTS is listed on the ultrasonic report and is in accordance with Lance Inspections Inc. procedure UT-01 (Rev. 9). All ultrasonic machine calibrations, field calibrations, and performance of ultrasonic thickness surveys are completed in accordance with Lance Inspections Inc. procedure UT-01 (Rev. 9)

#### **Flag Values**

##### **Client Review**

Lance Inspections does not deem CMLs acceptable or rejectable. The flag values in the attached report are provided for ease of client review only.

##### **Vessels**

Flag thicknesses are determined by subtracting the corrosion allowances from the nominal thickness as stated on a vessel data plate or a client-provided MDR or U1A form for the vessel.

Regarding vessel and nozzle points that have a known Nominal Thickness but no stated corrosion allowance, Lance Inspections has adopted a “TRF” Thickness Reduction Flag value. This value is 1.5mm (0.059”) less than the known nominal thickness. Vessel and Nozzle points without known nominals, will be given a 1.5mm (0.059”) corrosion allowance from the initial minimum thickness reading.

##### **Piping**

Flag thicknesses for piping are determined by subtracting 12.5% (mill tolerance) from the nominal thickness. The 12.5% is input as the corrosion allowance on the UTS report. Piping and fitting points without known nominals will have a 1.5mm corrosion allowance from the initial minimum thickness reading.

Sincerely,

Lance Smith,  
Lance Inspections Inc.

Customer: FUELLEDDescription: FLARE KNOCKOUT DRUMFacility: N/ALocation: N/AReg A#: N/ASerial #: 10154BDrawing#: 1CRN #: N/AManufacturer: PRISM INTEGRATEDUnit #: C84179Year Built: 2014Shell MAWP: 103 kPaShell MAWT: N/AShell Material: N/SNominal: 9.5mmCA: N/S

Tube "A" MAWP: \_\_\_\_\_

Tube "A" MAWT: \_\_\_\_\_

Head Material: N/SNominal: 9.5mmCA: N/S

Tube "B" MAWP: \_\_\_\_\_

Tube "B" MAWT: \_\_\_\_\_

Tube Material: \_\_\_\_\_

Nominal: \_\_\_\_\_

CA: \_\_\_\_\_

Size: 5ft x 20ftManway: 24inMDMT: N/S

Boot Shell Mat: \_\_\_\_\_

Nominal: \_\_\_\_\_

CA: \_\_\_\_\_

Insulated: NOC Stamp: NORT: NOPWHT: NO

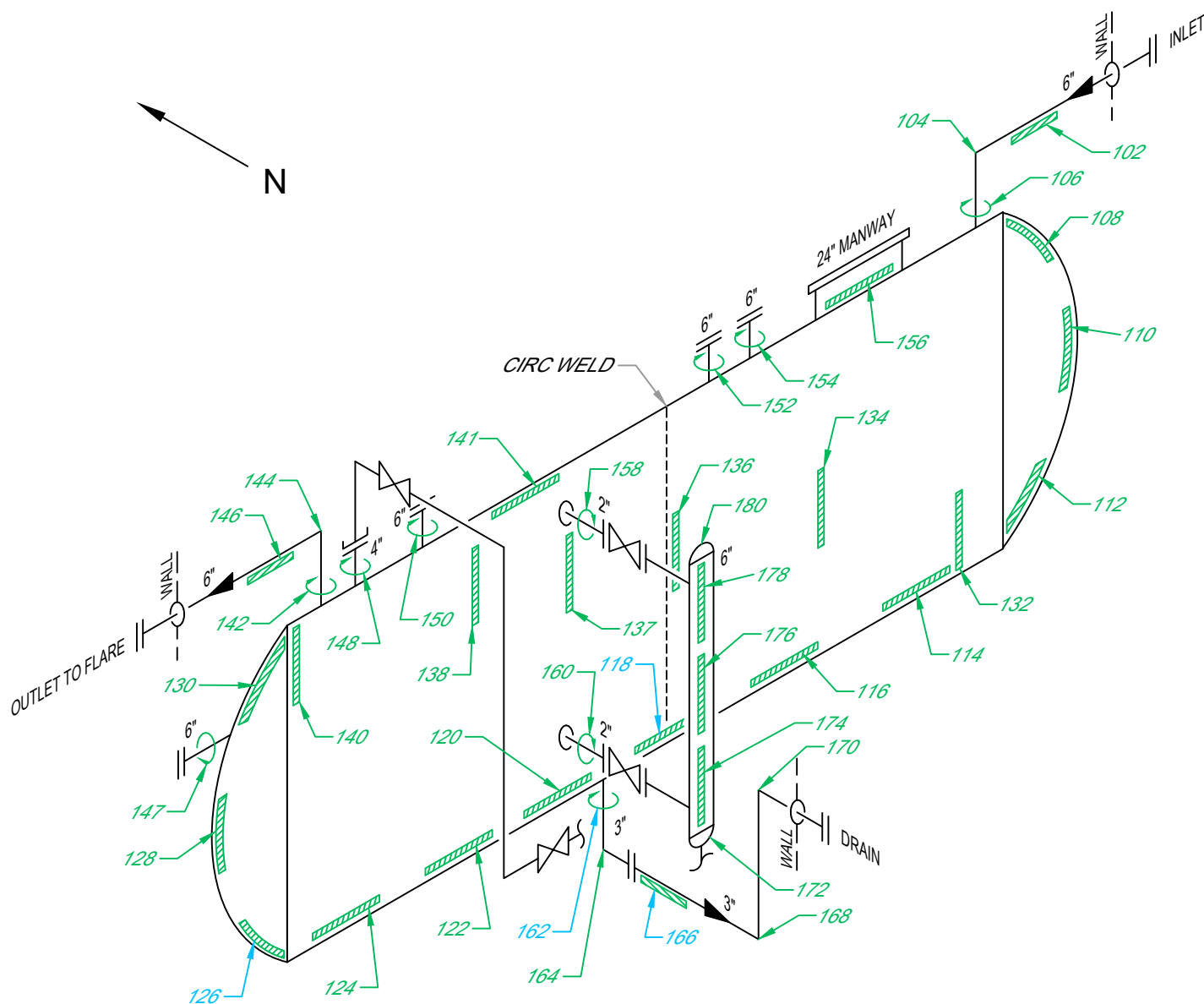
Boot Head Mat: \_\_\_\_\_

Nominal: \_\_\_\_\_

CA: \_\_\_\_\_

NOTE: VESSEL IS INTERNALLY COATED. ALL NOZZLE FLANGES HAVE A 150 lb RATING.

AUG 2025\_LOCATED ON CNRL SITE 06-03-69-06 W6M AT TIME OF INSPECTION.



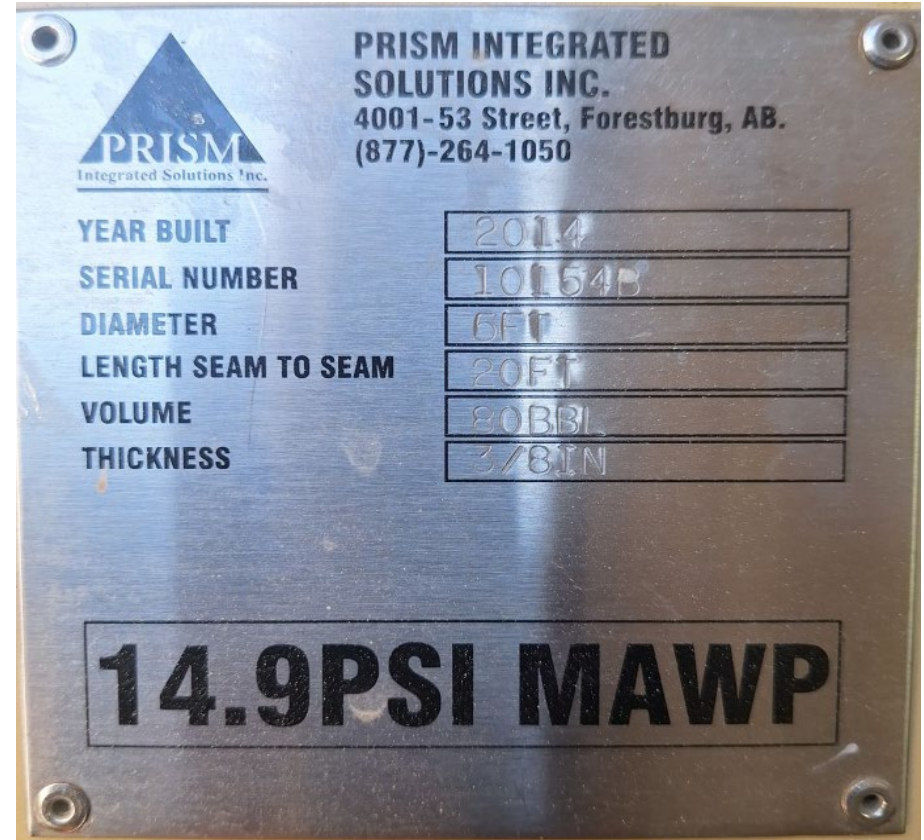


Client: **Fuelled**  
Unit #: **C84179**  
Equip Description: **Flare Knockout Drum**  
Serial #: **10154B**  
Drawing #: **1**

**Vessel Overview**



**Data Plate**





## UTS Data Sheet

Client: **Fuelled**

Unit #: **C84179**

Equip Description: **Flare Knockout Drum**

Serial #: **10154B**

Drawing #: **1**

	Nominal Thickness (mm)	Corrosion Allowance (mm)	Flag Thickness (mm)
<b>102</b> Description: <b>Bottom Band on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 5.8 Average: 6.7 Comments: <i>Aug 2025_Corrosion noted at 6:00 position.</i>	7.1		5.6
<b>104</b> Description: <b>6" 90° Nozzle</b> Date: Aug. 22, 25 Minimum: 6.2 Average: 6.7 Comments:	7.1		5.6
<b>106</b> Description: <b>Circ on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 6.6 Average: 7.0 Comments:	7.1		5.6
<b>108</b> Description: <b>Upper Inlet Head</b> Date: Aug. 22, 25 Minimum: 8.7 Average: 9.3 Comments: <i>Aug 2025_Min scan at support weld.</i>	9.5		8.0
<b>110</b> Description: <b>Mid Inlet Head</b> Date: Aug. 22, 25 Minimum: 8.9 Average: 9.2 Comments:	9.5		8.0
<b>112</b> Description: <b>Lower Inlet Head</b> Date: Aug. 22, 25 Minimum: 8.7 Average: 9.2 Comments: <i>Aug 2025_Min scan at knuckle.</i>	9.5		8.0
<b>114</b> Description: <b>Bottom Shell</b> Date: Aug. 22, 25 Minimum: 8.7 Average: 9.3 Comments: <i>Aug 2025_Shallow corrosion noted.</i>	9.5		8.0
<b>116</b> Description: <b>Bottom Shell</b> Date: Aug. 22, 25 Minimum: 9.5 Average: 9.8 Comments:	9.5		8.0



## UTS Data Sheet

Client: **Fuelled**

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Equip Description: **Flare Knockout Drum**

Serial #: **10154B**

Drawing #: **1**

	Nominal Thickness (mm)	Corrosion Allowance (mm)	Flag Thickness (mm)
<b>118</b> Description: <b>Bottom Shell</b> Date: Aug. 22, 25 Minimum: 8.0 Average: 9.0 Comments: <i>Aug 2025_Min scan at weld. Shallow corrosion noted.</i>	9.5		8.0
<b>120</b> Description: <b>Bottom Shell</b> Date: Aug. 22, 25 Minimum: 8.1 Average: 8.9 Comments: <i>Aug 2025_Shallow corrosion noted.</i>	9.5		8.0
<b>122</b> Description: <b>Bottom Shell</b> Date: Aug. 22, 25 Minimum: 8.3 Average: 9.5 Comments: <i>Aug 2025_Shallow corrosion noted.</i>	9.5		8.0
<b>124</b> Description: <b>Bottom Shell</b> Date: Aug. 22, 25 Minimum: 8.9 Average: 9.4 Comments: <i>Aug 2025_Shallow corrosion noted.</i>	9.5		8.0
<b>126</b> Description: <b>Lower Outlet Head</b> Date: Aug. 22, 25 Minimum: 7.7 Average: 8.5 Comments: <i>Aug 2025_Corrosion noted.</i>	9.5		8.0
<b>128</b> Description: <b>Mid Outlet Head</b> Date: Aug. 22, 25 Minimum: 8.7 Average: 8.9 Comments:	9.5		8.0
<b>130</b> Description: <b>Upper Outlet Head</b> Date: Aug. 22, 25 Minimum: 8.7 Average: 9.1 Comments:	9.5		8.0
<b>132</b> Description: <b>Lower Shell</b> Date: Aug. 22, 25 Minimum: 9.0 Average: 9.4 Comments:	9.5		8.0





## UTS Data Sheet

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Equip Description: **Flare Knockout Drum**

Serial #: **10154B**

Drawing #: **1**

	Nominal Thickness (mm)	Corrosion Allowance (mm)	Flag Thickness (mm)
<b>134</b> Description: <b>Lower Shell</b> Date: Aug. 22, 25 Minimum: 9.6 Average: 9.7 Comments:	9.5		8.0
<b>136</b> Description: <b>Mid Shell</b> Date: Aug. 22, 25 Minimum: 9.5 Average: 9.6 Comments:	9.5		8.0
<b>137</b> Description: <b>Upper Shell</b> Date: Aug. 22, 25 Minimum: 9.7 Average: 9.3 Comments:	9.5		8.0
<b>138</b> Description: <b>Upper Shell</b> Date: Aug. 22, 25 Minimum: 9.7 Average: 9.8 Comments:	9.5		8.0
<b>140</b> Description: <b>Upper Shell</b> Date: Aug. 22, 25 Minimum: 9.2 Average: 9.4 Comments:	9.5		8.0
<b>141</b> Description: <b>Top Shell</b> Date: Aug. 22, 25 Minimum: 9.5 Average: 9.6 Comments:	9.5		8.0
<b>142</b> Description: <b>Circ on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 6.3 Average: 6.7 Comments:	7.1		5.6
<b>144</b> Description: <b>6" 90° Nozzle</b> Date: Aug. 22, 25 Minimum: 6.9 Average: 7.3 Comments:	7.1		5.6



## UTS Data Sheet

Client: **Fuelled**

Unit #: **C84179**

Equip Description: **Flare Knockout Drum**

Serial #: **10154B**

Drawing #: **1**

	Nominal Thickness (mm)	Corrosion Allowance (mm)	Flag Thickness (mm)
<b>146</b> Description: <b>Bottom Band on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 5.9 Average: 6.5 Comments: <i>Aug 2025_Corrosion noted.</i>	7.1		5.6
<b>147</b> Description: <b>Circ on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 6.4 Average: 6.8 Comments:	7.1		5.6
<b>148</b> Description: <b>Circ on 4" Nozzle</b> Date: Aug. 22, 25 Minimum: 5.0 Average: 5.4 Comments:	6.0		4.5
<b>150</b> Description: <b>Circ on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 6.6 Average: 7.0 Comments:	7.1		5.6
<b>152</b> Description: <b>Circ on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 6.6 Average: 7.0 Comments:	7.1		5.6
<b>154</b> Description: <b>Circ on 6" Nozzle</b> Date: Aug. 22, 25 Minimum: 6.8 Average: 7.1 Comments:	7.1		5.6
<b>156</b> Description: <b>Circ on 24" Manway</b> Date: Aug. 22, 25 Minimum: 9.1 Average: 9.4 Comments:	9.5		8.0
<b>158</b> Description: <b>Circ on 2" Nozzle</b> Date: Aug. 22, 25 Minimum: 4.6 Average: 5.0 Comments: <i>Aug 2025_Corrosion noted at 6:00 position.</i>	5.5		4.0





## UTS Data Sheet

Client: **Fuelled**

Unit #: **C84179**

Equip Description: **Flare Knockout Drum**

Serial #: **10154B**

Drawing #: **1**

	Nominal Thickness (mm)	Corrosion Allowance (mm)	Flag Thickness (mm)
<b>160</b> Description: <b>Circ on 2" Nozzle</b> Date: Aug. 22, 25 Minimum: 4.7 Average: 5.2 Comments: <i>Aug 2025_Shallow corrosion noted at 12:00 position.</i>	5.5		4.0
<b>162</b> Description: <b>Circ on 3" Nozzle</b> Date: Aug. 22, 25 Minimum: 3.8 Average: 4.5 Comments: <i>Aug 2025_Corrosion noted.</i>	5.5		4.0
<b>164</b> Description: <b>3" 90° Nozzle</b> Date: Aug. 22, 25 Minimum: 4.4 Average: 4.9 Comments: <i>Aug 2025_Corrosion noted.</i>	5.5		4.0
<b>166</b> Description: <b>Bottom Band on 3" Pipe</b> Date: Aug. 22, 25 Minimum: 4.5 Average: 5.0 Comments: <i>Aug 2025_Shallow corrosion noted.</i>	5.5	0.7	4.8
<b>168</b> Description: <b>3" 90° Elbow</b> Date: Aug. 22, 25 Minimum: 4.9 Average: 5.2 Comments:	5.5	0.7	4.8
<b>170</b> Description: <b>3" 90° Elbow</b> Date: Aug. 22, 25 Minimum: 5.3 Average: 5.6 Comments:	5.5	0.7	4.8
<b>172</b> Description: <b>6" End Cap</b> Date: Aug. 22, 25 Minimum: 8.3 Average: 9.5 Comments:	7.1	0.9	6.2
<b>174</b> Description: <b>Vertical Band on 6" Column</b> Date: Aug. 22, 25 Minimum: 10.1 Average: 10.4 Comments:	7.1	0.9	6.2



## UTS Data Sheet

Client: **Fuelled**

Unit #: **C84179**

Equip Description: **Flare Knockout Drum**

Serial #: **10154B**

Drawing #: **1**

	Nominal Thickness (mm)	Corrosion Allowance (mm)	Flag Thickness (mm)
<b>176</b>			
Description: <b>Vertical Band on 6" Column</b>	7.1	0.9	6.2
Date: Aug. 22, 25			
Minimum: 10.6			
Average: 10.8			
Comments:			
<b>178</b>			
Description: <b>Vertical Band on 6" Column</b>	7.1	0.9	6.2
Date: Aug. 22, 25			
Minimum: 10.4			
Average: 10.7			
Comments:			
<b>180</b>			
Description: <b>6" End Cap</b>	7.1	0.9	6.2
Date: Aug. 22, 25			
Minimum: 8.3			
Average: 9.3			
Comments:			