

## Ultrasonic test report



<b>Report number</b>	LW25-1782-01 UT
<b>Customer name</b>	FUSION-WELD ENGINEERING PTY LTD
<b>Address</b>	1865 Frankston Flinders Road Hastings VIC Australia 3915
<b>Requested by</b>	Brian Cameron
<b>Purchase order</b>	PO-0695
<b>Accredited laboratory</b>	LMATS Melbourne Laboratory
<b>Test date</b>	13/11/2025
<b>Job address</b>	1865 Frankston Flinders Road Hastings VIC Australia 3915
<b>Job description</b>	UT of Vessel Welds
<b>Identification</b>	Refer to Table 1
<b>Material grade</b>	ASTM A516/516M - Grade 70
<b>Test specification</b>	AS 4037 -1999 (R 2016) - Sec. 8 (AS 1210 - 2021 Class 2A PV) - NDT
<b>Acceptance criteria</b>	AS 4037 -1999 (R 2016) - Sec. 8 (AS 1210 - 2010 Class 1 PV) - NDT
<b>Test method</b>	AS 2207-2007 (R2017)-UT - weld
<b>Test procedure</b>	TP-UT-01 (I1,R6)
<b>Surface condition</b>	Complying with AS 2207-2007 Cl.3.3
<b>Surface preparation</b>	Wire brushed, wiped
<b>Weld profile</b>	SP1-Undressed
<b>Scan area</b>	100% weld zone and associated HAZ
<b>Probe positions</b>	Refer to the following page
<b>Test equipment</b>	'A' Scan presentation, L003222
<b>Couplant</b>	UT gel
<b>System accuracy</b>	Not applicable for flaw detection
<b>Calibration block</b>	L0458 AS 2083 Bl. 1 IIW Bl. 1 ASTM E164 V1 - 1.5mm SDH, L003617 AS 2083 Bl. 2 - 1.5mm SDH for angle beam DAC
<b>Transducers</b>	Refer to the following page
<b>Special equipment</b>	Nil
<b>Transfer correction gain</b>	Not required
<b>Damping &amp; reject settings</b>	None
<b>Scanning sensitivity</b>	80% FSH from a Ø1.5mm x 22mm SDH @ max. BPL + 6dB
<b>Evaluation sensitivity</b>	80% FSH from a Ø1.5mm x 22mm SDH @ max. BPL -6dB
<b>Sizing technique</b>	20dB drop
<b>Approved tester</b>	Terence Ferlazzo (ISO 9712 L2: UT, RT, MT, VT)
<b>Test results</b>	Refer to Table 1 for test area identification and results

REVOKED



Accreditation No. 15840

Accredited for compliance with  
ISO / IEC 17025 - Testing

**Signatory**  
Terence Ferlazzo  
(ISO 9712 L2: UT, RT, MT, VT)



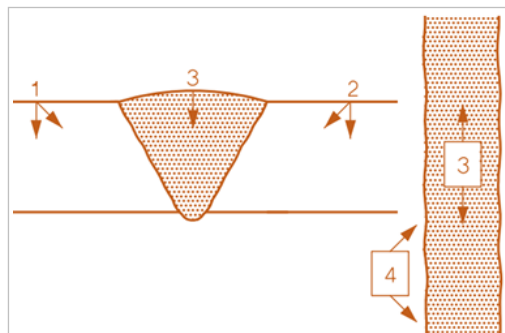
Report issued on 13/11/2025

**Probe positions**

L-scan	N-scan	T-scan
(1 & 2)	1 & 2	4

**Scanning method**

AS 2207 UM-B Level 2

**Scanning plan**

**Transducer set: 1**

Transducer	Maker S/N	Crystal type	Angle (°)	Size (mm)	Frequency (MHz)	Index (mm)	Beam misalignment (°)	Cable length & type	Ref.gain (dB)	Test range (mm)
L003686	IKF530	Single	0	Ø20	2	Not applicable	0	1m Lemo to mini-lemo	50	0-50
L006056	GA4686 MDC741	Single	60	15x15	2	20	0	1m Lemo to mini-lemo	45	0-150
L003701	IKE943	Single	45	14x14	2	15	0	1m Lemo to mini-lemo	42	0-150
L003889	IKA515	Single	70	14x14	2	17	0	1m Lemo to mini-lemo	47	0-150

**Table 1: Test items identification (provided by the client) and results (All dimensions in mm unless stated otherwise)**

Identification	Drawing No.	Weld No.	Description	Test area	Thickness	Discontinuities	Result	Photo No.
Vessel number: 420XS20160	420M(2D)25027	L2	U2 Fresh Cleaning Caustic Heater	1000mm of weld as pictured, datum at centre circ weld	16mm	NRRD	C	1, 2
Vessel number: CV176	21-12-044	Weld joining items 4 and 5 as per drawing	Chlorine Road Tanker	Whole circumference of weld and associated HAZ. See test restrictions	16mm	470-LF-30 (depth 7mm), 500-LF-340 (depth 13mm), 1040- LF-50 (depth 9mm), 1180-LF-280 (depth 9- 13mm)	DNC	3, 4

### Test restrictions

Curved scanning surfaces. Access restriction to full scan length on Vessel CV176 due to dome. Outlets in scanning area prevented scanning from one side

### Comments

Datum for weld joining items 4 and 5 at 0 degree mark. Lack of inter-run fusion detected

### Normative general notes

1. Test and inspection items may be discarded after 6 weeks, unless alternative arrangements are made with LMATS.
2. Samples, identification of samples and all job specific details were supplied by the client. The test results relate only to the items tested or sampled.
3. Any stated nominal pipe sizes and nominal thickness of the material were provided by the client.
4. Where applicable, the Measurement Uncertainty (MU) applies to the test results as per LMATS procedure. MU can be obtained by contacting one of LMATS ISO 17025 accredited laboratories.
5. Acceptance criteria is applied from the test specification. If the test specification does not include acceptance criteria, then the test or inspection results should be referred to a competent authority for further action.
6. Refer to the attached revision notes if this report has been revised. This report shall not be reproduced except in full without approval of the issuing laboratory to ensure that parts of a report are not taken out of context. The client or their representatives shall not edit this report.
7. LMATS or its professional indemnity insurance provider do not indemnify the contents within this report or the conformity of a tested product unless the invoice for the reported work is paid in full within the agreed credit terms. Reports will be revoked if the invoice for the completed work is not paid in full.

### Abbreviations used in this report

A - No discontinuities detected  
 CP - Crater Pipe  
 F - Failed  
 IC - Copper Inclusion  
 IO - Oxide Inclusion (wagon tracks)  
 KL - Longitudinal crack  
 LP - Incomplete root Penetration  
 NRRD - No Recordable Reflections Detected  
 p.d. - Processing / film Defects  
 PU - Uniform Porosity  
 SGI - Incompletely filled Groove  
 SMH - Hammer Mark  
 SSP - Spatter  
 SXP - Excessive Penetration

BT - Burn (melt) Through  
 DNC - Does Not Comply  
 GP - Gas Pore  
 IL - Linear Inclusion (Slag line)  
 IT - Tungsten Inclusion  
 KT - Transverse crack  
 LR - lack of Root fusion (missed edge)  
 NUSID - No unacceptable Surface Indications Detected  
 PG - Localized Porosity  
 RP - Report findings  
 SGS - Shrinkage Groove  
 SMT - Tool Mark (chipping mark)  
 SUC(e) - Undercut External  
 WH - Worm Hole

C - Comply  
 EC - Elongated Cavity (hollow bead)  
 HiLo - Linear misalignment  
 IN - Inclusion  
 KC - Crater crack  
 LI - lack of Inter-run fusion  
 LS - lack of Side fusion  
 P - Passed  
 PL - Linear Porosity  
 SED - Excessive Dressing (underflushing)  
 SMG - Grinding Mark  
 SRC - Root Concavity (Suck back)  
 SUC(i) - Undercut Internal



Image 1 of 4 - General view of the test area



Image 2 of 4 - General view of the test area



Image 3 of 4 - General view of the test area



Image 4 of 4 - General view of the test area