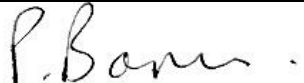


Laboratory Accreditation Programmes

Schedule to CERTIFICATE OF ACCREDITATION

Laboratory	Materials and Testing Laboratories Ltd	
Address	10 Patrick Street , Onehunga, Auckland, 1061	
Telephone	09 579-0262	
URL	www.mtlabs.co.nz	
Authorised Representative	Mr Thibaud Lastennet General Manager	
Client No.	3	
Programme	Mechanical Testing Laboratory	
Accreditation Number	7	
Initial Accreditation Date	23 April 1975	
Conformance Standard	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories	
Testing Services Summary	4.42 Assemblies and Structures 4.54 Cylinders and Other Pressure Vessels 4.69 Plastic and Plastic Products 4.75 Welder Qualification Tests 4.76 Metals and Metal Products 4.81 Non Destructive Tests by Radiography 4.82 Non Destructive Tests by Ultrasonics 4.83 Non Destructive Tests by Visual Inspection 4.84 Non Destructive Tests by Dye Penetrant Methods 4.85 Non Destructive Tests by Magnetic Particle methods 4.86 Non Destructive Tests by Eddy Current 4.87 Non Destructive Tests by Specialised Techniques	
Signatories	Mr Driekus Barnard 4.75, 4.76 (c)(f)(g)(h), 4.81, 4.83 Mr Steve Burnard 4.82, 4.83, 4.84, 4.85, 4.87 (d) Mr Alan McKenna 4.82, 4.83, 4.84, 4.85, 4.86 Mr Jim Saunders 4.42, 4.54, 4.69, 4.75, 4.76, 4.85 Mr Umang Singh 4.69 (BS ISO 13953 Tests Only) Mr Thiago Souto 4.82, 4.83, 4.84, 4.85, 4.86, 4.87	

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4.42 Assemblies and Structures

(i) Ladders

The following tests in accordance with AS/NZS 1892

The measureable tests on ladders

(j) Other assemblies

Tests in accordance with the following methods

ASTM C635	Deflection testing of metal suspension systems for acoustic tile and lay-in ceiling panels
BS 12159-2	Tests on load restraint assemblies for road vehicles

The following test in accordance with In-house method

TM15	Three and four point deflection tests on materials or assemblies
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4.54 Cylinders and Other Pressure Vessels

The following tests in accordance with In-house method

Checking volume capacity of LPG cylinders by means of mass checking (0 kg to 30 kg)

4.69 Plastic and Plastic Products

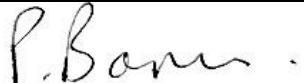
Tensile tests

BS ISO 13953	Polyethylene (PR) pipes and fittings
ISO 13954:1997	Peel decohesion test for polyethylene (PE) electrofusion assemblies

4.75 Welder Qualification Tests

Tests in accordance with the standards such as:

AS 1554
 AS 1665
 ASME IX
 AS/NZS 2980
 BS EN 287
 BS EN ISO 15614-1

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BS EN ISO 15614-2
 BS EN ISO 9606-1
 BS EN ISO 9606-2

4.76 Metals and Metal Products

Tests in accordance with the standards such as:

- (a) Tension tests in accordance with the following standards in the load range 0.12 kN to 500 kN

AS 1391
 AS 2205.2
 ASTM E8
 BS EN 10002.1
 BS EN ISO 6892-1

Testing methods as defined by the following standards and, with AS/NZS 4671, as modified by Verification Method B1/VM1 Clause 14

ISO 15630-1:2010	Clause 5.3 Reinforcing bars, wire rod and wire
ISO 15630-2:2010	Clause 5.3 Welded Fabric
	Clause 7 Weld Shear Test

- (c) Bend tests in accordance with the following standards

AS 2205.3
 BS EN 1639

- (e) Hardness tests in accordance with the following standards

Vickers hardness tests

AS 1817
 BS EN ISO 6507

Rockwell hardness tests

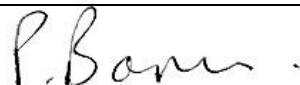
AS 2205.6
 BS EN 10109
 BS EN ISO 6508-1

- (f) Impact tests in accordance with the following standards

Charpy impact tests at temperatures between -80 °C and Ambient

AS 1544.2
 AS 2205.7

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BS EN ISO 148-1

(g) Weld tests (tensile, bend, nick breaks and macro-examination) in accordance with the following standards

- AS 1554
- AS 2205.4
- AS 2205.5
- ASME VIII
- ASME IX
- ASTM A370
- ASTM E190
- BS EN 1320
- BS EN 3451 Aluminium
- BS EN 4206 Copper
- BS EN ISO 15614
- BS EN ISO 17639

(h) Other tests in accordance with the following standards

BS EN 10218.1 Steel wire and wire products
 General test methods

In-house method

TM 15 Three point and four point deflection tests of materials
 or assemblies

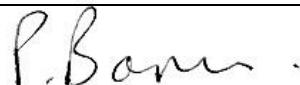
4.81 Non Destructive Tests by Radiography

- (a) Radiographic examination of metals
- (i) Single wall or rolled products Al, Cu, Fe, SS
 - thickness measurements
 - corrosion pitting
- (ii) Welded Joints Al, Cu, Fe, SS
- (iii) Castings Al, Cu, Fe, SS
- (iv) Forgings Al, Cu, Fe, SS

4.82 Non Destructive Tests by Ultrasonics

- (a) Ultrasonic examination of metals
- (i) Single wall or rolled product Al, Cu, Fe, SS
- (ii) Welded joints Al, Cu, Fe, SS
- (iii) Castings Al, Cu, Fe, SS
- (iv) Forgings Al, Cu, Fe, SS

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4.83 Non Destructive Tests by Visual Inspection

- | | | |
|-------|-----------------------------|----------------|
| (a) | Visual inspection of metals | |
| (i) | Flat or rolled product | Al, Cu, Fe, SS |
| (ii) | Welded joints | Al, Fe, SS |
| (iii) | Castings | Al, Cu, Fe, SS |
| (iv) | Forgings | Al, Cu, Fe, SS |

4.84 Non Destructive Tests by Dye Penetrant Methods

Penetrant Testing in accordance with standards such as:

- | | | |
|------|----------------------------|----------------------------|
| (i) | Visible dye | |
| | - Water washable | Al, Cu, Fe, Ni, Mg, Zn, SS |
| | - Solvent removable method | Al, Cu, Fe, Ni, Mg, Zn, SS |
| (ii) | Fluorescent dye | |
| | - Water washable | Al, Cu, Fe, Ni, Mg, Zn, SS |
| | - Solvent removable method | Al, Cu, Fe, Ni, Mg, Zn, SS |
| | - Post emulsifiable method | Al, Cu, Fe, Ni, Mg, Zn, SS |

4.85 Non Destructive Tests by Magnetic Particle methods

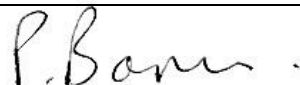
Magnetic Particle Testing in accordance with standards such as:

- | | | |
|-------|----------------------|------------------|
| (i) | Magnetic flow method | |
| | Welded joints | |
| | Forgings | |
| | Castings | |
| | Machined parts | |
| (ii) | Current flow method | Amps AC/DC 3000A |
| | Welded joints | |
| | Forgings | |
| | Castings | |
| | Machined parts | |
| (iii) | Coil method | Amps AC/DC 2000A |
| | Welded joints | |
| | Forgings | |
| | Castings | |
| | Machined parts | |

4.86 Non Destructive Tests by Eddy Current

- | | | |
|-----|--|------------------------|
| (a) | Surface flaw detection | Al, Cu, Fe, Ni, Mg, Zn |
| (b) | Metallic Coating thickness measurement | Al, Cu, Fe, Ni, Mg, Zn |
| (c) | Sorting of materials and components | Al, Cu, Fe, Ni, Mg, Zn |
| (e) | Weld testing | Al, Cu, Fe, Ni, Mg, Zn |

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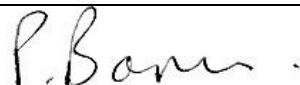
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4.87 Non Destructive Tests by Specialised Techniques

- (a) Ultrasonic Time of Flight Diffraction (TOFD)
- (d) Phased Array

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