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<br>General Manager |
| **Client No.** | 3 |
| **Programme** | Mechanical Testing Laboratory |
| **Accreditation Number** | 7 |
| **Initial Accreditation Date** | 23 April 1975 |
| **Conformance Standard** | ISO/IEC 17025:2017<br>General requirements for the competence of testing and calibration laboratories |
| **Testing Services Summary** | 4.42 Assemblies and Structures<br>4.54 Cylinders and Other Pressure Vessels<br>4.69 Plastic and Plastic Products<br>4.75 Welder Qualification Tests<br>4.76 Metals and Metal Products<br>4.81 Non Destructive Tests by Radiography<br>4.82 Non Destructive Tests by Ultrasonics<br>4.83 Non Destructive Tests by Visual Inspection<br>4.84 Non Destructive Tests by Dye Penetrant Methods<br>4.85 Non Destructive Tests by Magnetic Particle methods<br>4.86 Non Destructive Tests by Eddy Current<br>4.87 Non Destructive Tests by Specialised Techniques |
| **Signatories** | Mr Driekus Barnard — 4.75, 4.76 (c)(f)(g)(h), 4.81, 4.83<br>Mr Steve Burnard — 4.82, 4.83, 4.84, 4.85, 4.87 (d)<br>Mr Alan McKenna — 4.82, 4.83, 4.84, 4.85, 4.86<br>Mr Jim Saunders — 4.42, 4.54, 4.69, 4.75, 4.76, 4.85<br>Mr Umang Singh — 4.69 (BS ISO 13953 Tests Only)<br>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 |

## 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 ºC 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<br>- thickness measurements<br>- corrosion pitting | Al, Cu, Fe, SS |
| (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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## 4.87 Non Destructive Tests by Specialised Techniques

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



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