



## CERTIFICATE OF ACCREDITATION

*In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-*

### **ONE EIGHTY MATERIALS ENGINEERING SOLUTIONS (PTY) LTD**

**Co. Reg. No.: 2007/007050/07**

**MOWBRAY**

Facility Accreditation Number: **T0593**

is a South African National Accreditation System accredited facility  
provided that all conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation,  
Annexure "A", bearing the above accreditation number for

### **MECHANICAL AND CHEMICAL TESTING**

The facility is accredited in accordance with the recognised International Standard

**ISO/IEC 17025:2017**

The accreditation demonstrates technical competency for a defined scope and the operation of a  
quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to  
use the relevant accreditation symbol to issue facility reports and/or certificates

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**Mr F Osman**

**Acting Chief Executive Officer**

**Effective Date: 11 September 2024**  
**Certificate Expires: 10 September 2028**



ANNEXURE A  
**SCHEDULE OF ACCREDITATION**

Facility Number: **T0593**

**Permanent Address of Laboratory:**

ONE EIGHTY MATERIALS ENGINEERING  
 SOLUTIONS (PTY) LTD  
 Building 13  
 The Waverly Business Park  
 Wyecroft, Mowbray  
 7700

**Technical Signatory:**

Mr M Munyai

**Postal Address:**

Postnet Suite 78  
 Private Bag X11, Mowbray  
 7705

**Nominated Representative:**

Ms N van Blerk

**Tel:** (021) 447 5258/4643

**Issue No.:** 17

**Fax:** (086) 617 1047

**Date of Issue:** 11 September 2024

**E-mail:** admin@one-eighty-degrees.com

**Expiry Date:** 10 September 2028

Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
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**Metallic Materials**

**Tensile Testing**

At room temperature  
 Tensile testing up to 600 kN  
 Determination of tensile strength, yield strength (upper and lower), yield point elongation, 0.2% proof stress, 0.5% proof stress, Modulus of elasticity, elongation and area reduction

OE-TSP-03 TM01 Tensile testing metallic materials based on ASTM E8, BS EN ISO 6892-1, BS EN ISO 10002-1 and ASTM A370

**Impact Testing**

Determination of absorbed energy up to 300J, -50°C to room temperature lateral expansion, percentage of shear fracture

OE-TSP-03 TM03 Impact testing metallic materials based on ASTM E23, ISO 148-1

**Microstructural Analysis**

Determination of microstructure  
 Ferrite count and ferrite percentage

OE-TSP-03 TM08 Microstructural analysis based on ASTM E3  
 OE-TSP-03 TM13 Ferrite count and ferrite percentage based on ASTM E562 and ASTM E1245

**Micro Examination**

Determination of microstructure in the field

OE-TSP-03 SOP13 based on ASTM E1351

**Macro Examination**

Determination of weld defects  
 Determination of fillet weld size

OE-TSP-03 TM24 based on ASTM E340, ISO 5817

**Hardness Testing**

Determination of Vickers Hardness      OE-TSP-03 TM05 Vickers hardness testing based on ASTM E 384, conversions to other hardness according to ASTM E140, ASTM E92

**Portable Hardness Test**

On-site Equotip Leeb portable hardness limited to a minimum sample weight of 5 kg and sample thickness of 3 mm      OE-TSP-03 TM19 Portable hardness test based on ASTM A956 and ASTM E110

**Corrosion Test**

Measurement of susceptibility to intergranular corrosion attack      OE-TSP-03 TM15 based on ISO 3651-2  
 OE-TSP-03 TM27 based on ASTM G28 Method A

Mass loss per time      OE-TSP-03 TM18 based on ASTM A262C and  
 OE-TSP-03 TM22 based on ASTM G48

Pitting under 20x magnification      OE-TSP-03 TM16 based on ASTM A923C

**Bend Testing**

Determination of fusion strength between weld metal and base metal      OE-TSP-03 TM11 Bend tests based on ASME IX, AWS D1, ASTM A370, ABS Rules and BS EN ISO 5173

**Chemical Analysis**

Ferrous & Non-Ferrous Metals      Laboratory spectrometric chemical analysis for determination of C, Mn, P, S, Cu, Ni, Cr, Mo, Nb, V, Ti, Al, As, B, Bi, Ca, Ce, Co, Si, Sn, Ca, Zr, Sb, Pb, Fe, Ta, La, Ti, W by OES      OE-TSP-03 TM06 Spectrometric analysis based on ASTM E415 and ASTM A751

Positive material identification using X-MET 8000      X-MET 8000 and OE-TSP-03 TM26 Complying to ASTM A751 and ASTM E1085

Original Date of Accreditation: 12 September 2013

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM



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**Accreditation Manager**