Issue date: 06 April 2025
Valid Until: -

NO: SAMM 442

LABORATORY LOCATION/ CENTRAL OFFICE:	Metallurgical Consultancy and Services Sdn Bhd No. 20, Jalan U5/17, Section U5 40150 Shah Alam, Selangor , 40150, SELANGOR MALAYSIA
ACCREDITED SINCE :	06 APRIL 2025
FIELD(S) OF TESTING:	MECHANICAL MECHANICAL (METALLURGY)

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

CENTRAL LOCATION:	Metallurgical Consultancy and Services Sdn Bhd No. 20, Jalan U5/17, Section U5 40150 Shah Alam, Selangor , 40150, Selangor
FIELD(S) OF TESTING :	MECHANICAL, MECHANICAL

SCOPE OF TESTING : MECHANICAL

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
(continued)	None	ASTM E 190:2014
	a. Vickers (HvN)	ASTM E384-2017
	Nitrofuran residues:	In-house Method, Ref. No. MOH D03-
	None	DIN ISO 34-1:2016 AS 1683.12: 2001 (2018)
	Abrasion Resistance	ASTM D5963-04 (2019) (Method A) ISO 4649: 2017 (Method A) DIN ISO 4649:2014 (Method A)
	DC to 1 kHz	(of reading) 0.0035 Q
	at Frequency: 2.5 MHz to 1.3 GHz	(of reading)
	1 kHz	0.000048 nF

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	100 Q DC to 1 kHz	0.023 Q
	None	0.5 bar
	None	None
	Liquid Limit	None
	None	None
	None	None
	None	None
(including Copper Based,	In Situ PMI	In house developed procedure
	None	In House Procedure for BS
All Type Of Ferrous And Non-	None	None
	None	JIS G1253:2012
Austenitic Stainless Steel	Corrosion test- Detecting susceptibility to inter-granular attack in austenitic stainless steel	ASTM A262-15 Practice A ASTM A262-15 Practice B ASTM A262-15 Practice C ASTM A262-15 Practice E ASTM A262-15 Practice F
Based And Titanium Based	Instrumentation Technique)	None
Based Materials	None	None
Chromium Bearing Alloys	susceptibility to inter-granular	ASTM G28-2015 Method A
Duplex Stainless Steel	Corrosion Test-Ferric Chloride	None
Fe-based Materials	None	In house developed procedure
Ferrous Metallic Materials	None	None
	None	None
Galvanized And Corrosion Resisting Coated Metallic Products	Salt spray (Fog) test	ASTM B117-2019 ASTM G 85:2019
Lron Based- Ferrous Metallic Materials	Positive Material Identification (Spectrometric Analysis-Instrumentation Technique)	ASTM E415-2017 BS EN 14730-1 : 2017 (Clause 5.4.3 AS 1085.20 : 2012 (Appendix J) ASTM E1086-14
Martensitic And Duplex Stainless Steel	Ferrite Count (i) Point counting	Equipment Used: Rotating polisher/grinder (Struers &
Materials.	None	Equipment Used
Metallic Bolts, Screw And Studs	Tensile test	ISO 898 Part 1:2013 ASTM A370-2020
Metallic Clad Or Weld Overlay	Shear test of clad material or	ASTM A263:2019
Metallic Material	None	In house developed procedure
	1. Bend Test	ISO 7438:2016
Metallic Materials	Tensile test at ambient temperature	ASTM A370-2020 ASTM E8-2016
	None	JIS Z2248:2006
	None	None
	Metallography	None
	None	In house developed procedure
	Bend Test	ISO 7438: 2016
	Tensile Test Force Range: 0 to 1000 kN	ISO 6892-1: 2019 Excluding site sampling
	Elemental Analysis	ASTM E1251: 17a

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Metallic Materials (pipeline And Pressure Vessel Steel)	Hydrogen Induced Cracking (HIC) - Crack length ratio (CLR)	NACE TM 0284:2016 Equipment used: Air tight test vessel for gas
Metallic Materials Including	Heat Treatment:	In house developed procedure
Metallic Materials Including Ferritic, Austenitic,	None	ASTM E562-2019
Metallic Nut- Coarse Threads	Proof load test of nut	ISO 898-2:2012 ASTM A370-2020
Nickel Based, Aluminum	(Spectrometric Analysis-	None
	None	Standards (QP/WI/11-d1)
Pipes	qualification of Welding Procedure (WPS), Welder (WQT) and Production Control Test Plate (mock-up test).	API 1104:2018 ASME IX:2017 AWS D1.1:2020 AWS D1.2:2014
Rail	None	EN 14587-1 : 2018
	Ultrasonic Test	BSE-NDT-T01
Reinforcement Bar	None	BS 4449:2005+A3:2016
Stainless Steel And Related Alloys	Corrosion test- Pitting corrosion resistance of stainless steel and related alloys by use of ferric	ASTM G48-2015 Method A
Welded Structure/ Plates/	Test required for the	None
Welded Structures/plate/pipe	None	(QPWI/12a & b)
Welding Filler Metal	None	None
Wrought, Nickel Rich,	Corrosion test- Detecting	None

SCOPE OF TESTING : MECHANICAL (METALLURGY)

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	at Frequency: 2.5 MHz to 1.3 GHz	(of reading)
	1 kHz	0.000048 nF
	100 Q DC to 1 kHz	0.023 Q
	None	0.5 bar
	None	None
	Liquid Limit	None
	None	None

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
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	None	In House Procedure for BS
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Based And Titanium Based	Instrumentation Technique)	None
Based Materials	None	None
Chromium Bearing Alloys	susceptibility to inter-granular	ASTM G28-2015 Method A
Duplex Stainless Steel	Corrosion Test-Ferric Chloride	None
Fe-based Materials	None	In house developed procedure
Ferrous Metallic Materials	None	None
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Welded Structures/plate/pipe	None	(QPWI/12a & b)
Welding Filler Metal	None	None
Wrought, Nickel Rich,	Corrosion test- Detecting	None

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SCOPE OF TESTING : MECHANICAL (METALLURGY)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques