



National Accreditation Board for  
Testing and Calibration Laboratories

**CERTIFICATE OF ACCREDITATION**

**AI ENGINEERING SERVICES LIMITED**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017**

**"General Requirements for the Competence of Testing &  
Calibration Laboratories"**

for its facilities at

HANGAR N.3, 6TH FLOOR, OLD AIRPORT, MUMBAI, MAHARASHTRA, INDIA

in the field of

**CALIBRATION**

Certificate Number: CC-2670

Issue Date: 28/02/2023

Valid Until: 27/02/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Name of Legal Identity : AI Engineering Services Limited

Signed for and on behalf of NABL



N. Venkateswaran  
Chief Executive Officer



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## SCOPE OF ACCREDITATION

<b>Laboratory Name :</b>	AI ENGINEERING SERVICES LIMITED, HANGAR N.3, 6TH FLOOR, OLD AIRPORT, MUMBAI, MAHARASHTRA, INDIA		
<b>Accreditation Standard</b>	ISO/IEC 17025:2017		
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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Multifunction calibrator by Direct method	3 A to 20 A	0.148 % to 0.174 %
2	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Multifunction calibrator by Direct method	3 mA to 3 A	0.123 % to 0.15 %
3	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Volts @ 400 Hz	Multifunction calibrator by Direct method	200 mV to 200 V	0.022 % to 0.133 %
4	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Multifunction calibrator by direct method	29 micro amp to 3 mA	0.56 % to 0.123 %
5	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Volts @ 400 Hz	Multifunction calibrator by Direct method	200 V to 1000 V	0.133 % to 0.036 %



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6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Volts @ 400 Hz	Multifunction Calibrator @ 400 Hz	5 mV to 200 mV	0.17 % to 0.022 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Volts @ 50 Hz	Multifunction calibrator by Direct method	200 mV to 200 V	0.022 % to 0.13 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Volts @ 50 Hz	Multifunction calibrator by Direct method	200 V to 1000 V	0.13 % to 0.037 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTS @ 50 Hz	Multifunction Calibrator by Direct method	5 mV to 200 mV	0.17 % to 0.022 %
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Alternating Current @ 400 Hz	Multifunction Calibrator by Direct method	29 micro amp to 3 mA	0.554 % to 0.123 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Alternating Current @ 400 Hz	Multifunction calibrator by Direct method	3 A to 20 A	0.193 % to 0.21 %



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12	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Alternating Current @ 400 Hz	Multifunction calibrator by Direct method	3 mA to 3 A	0.123 % to 0.193 %
13	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	Multifunction calibrator by Direct method	1 micro amp to 20 mA	2.37 % to 0.013 %
14	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	Multifunction Calibrator by direct method	2 A to 20 A	0.075 % to 0.14 %
15	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	Multifunction Calibrator by Direct Method	20 mA to 2 A	0.013 % to 0.075 %
16	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Multifunction Calibrator by direct Method	0.1 mV to 1 mV	1.301 % to 0.189 %
17	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	1 mV to 1000 V	0.19 % to 0.006 %



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18	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Multifunction Calibrator by Direct Method	10 Ohm to 400 K Ohm	0.007 % to 0.004 %
19	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Multifunction Calibrator by Direct Method	400 K Ohm to 100 M Ohm	0.0043 % to 0.098 %
20	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J Type	Using multifunction calibrator by Simulation Method	-199 °C to 1200 °C	0.68°C
21	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K Type	Using multifunction calibrator by Simulation Method	-199 °C to 1370 °C	0.789 °C
22	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Gauge (LC 0.0127 mm/0.0005 inch) for Travel movement only	Using Dial Calibration Tester by Comparison Method.	0 to 1.0 mm Travel movement.	7.33µm



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23	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge (L.C.0.0127 mm/ 0.0005 inch)	Using Depth Checker/Length bar and slip gauge set by Comparison Method.	0 to 304.8 mm	7.84 µm
24	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer ( L.C. 0.00254 mm/0.0001")	Using Depth Checker/Length Bar and Slip Gauge Set by Comparison Method	0 to 304.8 mm(12 inch)	8.94 µm
25	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge ( Lever type) ( L.C. 0.001 mm )	Using Dial Calibration Tester by Comparison Method.	0 mm to 1 mm	2.27 µm
26	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge ( Plunger type) ( L.C. 0.001 mm )	Using Dial Calibration Tester by Comparison Method.	0 to 25.4 mm	2.27 µm
27	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Electronic Probe (LC 0.001 mm/0.00004 inch)	Using Dial Calibration Tester by Comparison Method.	0 to 1 mm	23.1 µm



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28	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer ( L.C. 0.001 mm )	Using slip gauge set by Comparison method.	0 to 25.4 mm (1 inch)	0.43 µm
29	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (0.00254mm/0.0001")	Using Length Bar and Slip Gauge Set by Comparison method	0 to 762 mm ( 30 inch)	11.72 µm
30	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge ( L.C. 0.0254mm/0.001 inch	Using Caliper Checker/Length Bar and Slip Gauge Set by Comparison Method.	0 to 609.6 mm(24 inch)	16.0 µm
31	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (L.C. 0.0254 mm / 0.001 inch)	Using Length Bar and Slip Gauge Set by Comparison Method	0 to 1219.2 mm	20.68 µm
32	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micrometer / Stick Micrometer(2 Points) ( LC 0.0254 mm(0.001 inch) )	Using Length Bar & Slip gauge set by Comparison Method.	0 to 1981.2 mm(78 inch)	24.03µm



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33	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micro meter Head ( L.C. 0.001mm and coarser)	Using Slip Gauge Set with Comparator Stand 1000 mm by comparison method	0 to 25.0 mm	3.67µm
34	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Three Point Micrometer (0.00508mm/0.0002 inch)	Using Ring Gauge set by comparison method	0 to 101.6 mm	4.19 µm
35	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Three point Micrometer( L.C 0.00254 mm/0.0001 inch)	Using Ring Gauge Set by Comparison Method.	0 to 12.7 mm(0.5 inch)	2.63 µm
36	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Caliper ( L.C. 0.0127 mm(0.0005 inch))	Using Length Bar & Slip gauge set by Comparison Method.	0 to 1219.2 mm(40inch)	11.98µm
37	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Caliper ( L.C. 0.0127 mm(0.0005 inch))	Using Caliper Checker/Length Bar Set and Slip Gauge Set by Comparison Method.	0 to 609.6 mm(24 inch)	9.5µm





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38	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Caliper ( L.C. 0.0254 mm(0.001 inch))	Using Length Bar & Slip gauge set by Comparison Method.	0 to 1981.2 mm(78 inch)	19.3 µm
39	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure - Hydraulic (Dial, Digital Pressure Gauges)	Using Digital Pressure Gauge and comparator by comparison method	0 to 689.47 bar	1.04bar
40	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure - Hydraulic (Dial, Digital Pressure Gauges/Indicators	Using Digital Pressure Gauge and comparator by comparison method	0 to 344.74 bar	0.87bar
41	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure - Pneumatic (Dial, Digital Pressure Gauges/ indicators )	Using Digital pressure Gauge and pneumatic pressure comparator by Comparison method	0 to 34.473 bar	0.03bar
42	MECHANICAL-TORQUE GENERATING DEVICES	Torque. Type I - Class A,B,C,D,E and Type II - Class A,B,C,D,E,F,G	Using Torque Analyser by comparison method as per BS 6789:2017	814 Nm to 1355.8 Nm	0.79%
43	MECHANICAL-TORQUE GENERATING DEVICES	Torque. Type I - Class A,B,C,D,E and Type II - Class A,B,C,D,E,F,G	Using Torque Analyzer by comparison method as per Standard BS EN ISO 6789:2017	0 to 135.6 Nm	1.30%



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44	MECHANICAL-TORQUE GENERATING DEVICES	Torque. Type I - Class A,B,C,D,E and Type II - Class A,B,C,D,E,F,G	Using Torque Analyser by comparison method as per BS 6789:2017	1355 Nm to 2711.6 Nm	1.22%
45	MECHANICAL-TORQUE GENERATING DEVICES	Torque. Type I - Class A,B,C,D,E and Type II - Class A,B,C,D,E,F,G	Using Torque Analyzer by comparison method as per Standard BS EN ISO 6789:2017	81 Nm to 814 Nm	1.26%

\* CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.