National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

CERTIFICATE OF ACCREDITATION

AIR WORKS CALIBRATION LABORATORY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

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

for its facilities at

AIR WORKS INDIA (ENGINEERING) PVT. LTD., MUMBAI, MAHARASHTRA, INDIA

in the field of

CALIBRATION

Certificate Number: CC-2965

Issue Date: 14/03/2019 **Valid Until:** 13/03/2021

In view of the transition deadline for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020.

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)

Signed for and on behalf of NABL

Anil Relia
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

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SCOPE OF ACCREDITATION

Laboratory Name	AIR WORKS CALIBRATION LABORATORY, AIR WORKS INDIA (ENGINEERING) PVT. LTD., MUMBAI, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2005		
Certificate Number	CC-2965	Page No. :	1 / 9
Validity	14/03/2019 to 13/03/2021	Last Amended on	-

'In view of the transition deadline for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020.'

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
Permanent Facility					
1	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 1 kHz	10 A to 20 A	0.14% to 0.2%	Using Fluke 5502A by direct method
2	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 1 kHz	3.2 mA to 320 mA	0.13% to 0.067%	Using Fluke 5502A by direct method
3	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 1 kHz	320 µA to 3.2 mA	0.18% to 0.13%	Using Fluke 5502A by direct method
4	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 1 kHz	320 mA to 10 A	0.067% to 0.14%	Using Fluke 5502A by direct method
5	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 1 kHz	33 µA to 320 µA	0.5% to 0.18%	Using Fluke 5502A by direct method
6	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 50 Hz	10 A to 20 A	0.094% to 0.2%	Using Fluke 5502A by direct method
7	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 50 Hz	100 A to 1000 A	0.65% to 0.85%	Using Fluke 5502A + 50 turn Current Coil by direct method

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
8	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 50 Hz	3.2 mA to 320 mA	0.13% to 0.067%	Using Fluke 5502A by direct method
9	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 50 Hz	320 µA to 3.2 mA	0.18% to 0.13%	Using Fluke 5502A by direct method
10	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 50 Hz	320 mA to 10 A	0.067% to 0.094%	Using Fluke 5502A by direct method
11	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Current @ 50 Hz	33 µA to 320 µA	0.5% to 0.18%	Using Fluke 5502A by direct method
12	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 1 kHz	1 mV to 30 mV	2.76% to 0.2%	Using Fluke 5502A by direct method
13	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 1 kHz	30 mV to 300 mV	0.2% to 0.043%	Using Fluke 5502A by direct method
14	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 1 kHz	30 V to 1000 V	0.037% to 0.061%	Using Fluke 5502A by direct method

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
15	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 1 kHz	300 mV to 30 V	0.043% to 0.037%	Using Fluke 5502A by direct method
16	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 50Hz	1 mV to 30 mV	2.94% to 0.2%	Using Fluke 5502A by direct method
17	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 50Hz	30 mV to 300 mV	0.2% to 0.043%	Using Fluke 5502A by direct method
18	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 50Hz	30 V to 1000 V	0.038% to 0.061%	Using Fluke 5502A by direct method
19	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	AC Voltage @ 50Hz	300 mV to 30 V	0.043% to 0.038%	Using Fluke 5502A by direct method
20	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance	1 nF to 3 nF	1.86% to 0.98%	Using Fluke 5502A by direct method
21	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance	10 µF to 1 mF	0.42% to 1.27%%	Using Fluke 5502A by direct method

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
22	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance	3 nF to 10 µF	0.98% to 0.42%	Using Fluke 5502A by direct method
23	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Current	10 µA to 320 µA	0.26% to 0.025%	Using Fluke 5502A by direct method
24	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Current	10 A to 20 A	0.075% to 0.12%	Using Fluke 5502A by direct method
25	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Current	100 A to 1000 A	0.45% to 0.65%	Using Fluke 5502A+50 turn current coil by direct method
26	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Current	2.9 A to 10 A	0.046% to 0.075%	Using Fluke 5502A by direct method
27	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Current	320 µA to 320 mA	0.025% to 0.014%	Using Fluke 5502A by direct method
28	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Current	320 mA to 2.9 A	0.014% to 0.046%	Using Fluke 5502A by direct method

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
29	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Voltage	1 mV to 10 mV	0.68% to 0.089%	Using Fluke 5502A by direct method
30	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Voltage	10 mV to 320 mV	0.089% to 0.008%	Using Fluke 5502A by direct method
31	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Voltage	3.2 V to 1000 V	0.006% to 0.01%	Using Fluke 5502A by direct method
32	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	DC Voltage	320 mV to 3.2 V	0.008% to 0.006%	Using Fluke 5502A by direct method
33	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Insulation Resistance (n steps of 1-2-5-10)	100 kOhm to 1000 MOhm	1.2% to 1.39%	Using Standard High Resistance box
34	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Resistance	1 MOhm to 50 MOhm	0.019% to 0.58%	Using Fluke 5502A by direct method
35	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Resistance	1 Ohm to 100 Ohm	0.71% to 0.015%	Using Fluke 5502A by direct method

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
36	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Resistance	100 kOhm to 1 MOhm	0.015% to 0.019%	Using Fluke 5502A by direct method
37	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Resistance	100 Ohm to 100 kOhm	0.015%	Using Fluke 5502A by direct method
38	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple(K-type)	-45 °C to 500 °C	0.3°C	Using Fluke 5502A by direct method
39	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple(K-type)	500 °C to 930 °C	0.32°C	Using Fluke 5502A by direct method
40	ELECTRO-TECHNICAL- TIME & FREQUENCY (Measure)	Time Interval: Timer and Stop Watch	1 min to 1 hrs	0.63s to 5.08s	Using Digital Stop Watch by comparison Method
41	ELECTRO-TECHNICAL- TIME & FREQUENCY (Source)	Frequency	120 Hz to 100 kHz	0.008% to 0.009%	Using Fluke 5502A by direct method
42	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer(L.C. 0.001 mm)	0 to 25 mm	1.5µm	Using Slip gauge set as per IS 2967:1983

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
43	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge(L.C. 0.01 mm)	0 to 300 mm	11.50µm	Using Caliper Checker and surface plate as per IS 2921:2016
44	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Caliper(L.C. 0.01 mm)	0 to 300 mm	12.0µm	Using Caliper Checker as per IS 3651(part 1 and part 2)
45	MECHANICAL-PRESSURE INDICATING DEVICES	Analog and Digital Vacuum gauges, Transducers, Transmitters	-0.95 bar to 0 bar	0.015bar	Using Digital Pressure Calibrator as per DKD R-6-1 by comparison Method
46	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Analog and Digital Pressure Gauge, Pressure Transducer, Pressure Transmitter	0 bar to 1000 bar	0.75bar	Using Digital Pressure Calibrator as per DKD R-6-1
47	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure: Analog and Digital Pressure gauges, Pressure Transducers, Pressure Transmitters	0 bar to 40 bar	0.038bar	Using Digital Pressure Calibrator as per DKD R-6-1 by comparison method
48	MECHANICAL-TORQUE GENERATING DEVICES	Torque Wrenches, Driver	10 Nm to 1000 Nm	1% to 0.50%	Using Manual Torque Wrench Calibration system as per ISO 6789

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
49	MECHANICAL-TORQUE GENERATING DEVICES	Torque Wrenches, Driver	2 Nm to 10 Nm	1.50%	Using Manual Torque Wrench Calibration system as per ISO 6789
50	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance(L.C. 0.001 kg)(Class III & IV)	0 to 15 kg	1.3g	By using OIML Standard F1 class weight as per OIML R-76-1
51	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance(L.C. 0.01 kg)(Class III & IV)	0 to 100 kg	14g	By using OIML Standard F1 class weights as per OIML R-76-1

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S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
Site Facility					
1	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance(L.C. 0.001 kg)(Class III & IV)	0 to 15 kg	1.3g	By using OIML Standard F1 class weight as per OIML R-76-1
2	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance(L.C. 0.01 kg)(Class III & IV)	0 to 100 kg	14g	By using OIML Standard F1 class weights as per OIML R-76-1