

MSME

सूक्ष्म, लघु एवं मध्यम उद्यम
MICRO, SMALL & MEDIUM ENTERPRISES

MSME- TECHNOLOGY CENTER, MUMBAI

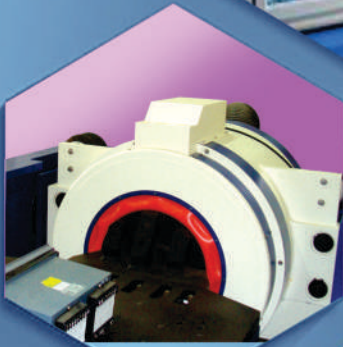
IDEMI

प्रौद्योगिकी विकास केंद्र, मुंबई
MSME- TECHNOLOGY CENTER, MUMBAI



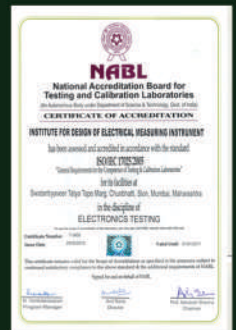
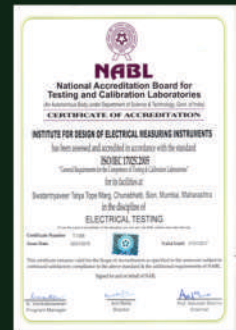
(A Government of India Society)
MINISTRY OF MSME

INSTITUTE FOR DESIGN OF ELECTRICAL MEASURING INSTRUMENTS



EMI-EMC TESTING
SAFETY TESTING
TYPE TESTING
ELECTRICAL TESTING
ELECTRONICS TESTING
PERFORMANCE TESTING
ENVIRONMENTAL TESTING
MECHANICAL TESTING

TESTING SERVICES



Eastern Express Highway, Opp. Everard Nagar Bus Stop, Chunabhatti, Sion, Mumbai - 40022
Tel: 022-24050301/2/3/4 Fax: 022-24050016, E-mail: idemi@vsnl.net idemi@rediffmail.com

INSTITUTE FOR DESIGN OF ELECTRICAL MEASURING INSTRUMENTS

MSME, TECHNOLOGY CENTRE, MUMBAI

INTRODUCTION

IDEMI was established in September 1969 with joint efforts of UNIDO / UNDP, Vienna and Ministry of Small Scale Industry, Govt. of India.

IDEMI is a Govt. of India Society under the Ministry of Micro, Small & Medium Enterprises for Services-to-industry. We are serving the Industries for testing of Electrical, Electronics, Telecommunication, Information Technology, Bio-Medical and Process Control Instruments

IDEMI is a pioneer in Testing and Calibration having dedicated qualified Engineers with rich experience, state-of-art technology instruments and data bank.

IDEMI laboratories are accredited by department of Science and Technology, Govt. of India earlier by NCTCF from 1989 and now by National Accreditation Board for Testing & Calibration Laboratories (NABL) as per ISO/IEC 17025:2005.

IDEMI is providing services in the following areas:

- 1) Training for Skill Development & Capacity Building of Man Power in various subjects
- 2) Calibration of Electrical, Electronic, Pressure, Temperature, Flow, Mass, Volume & Dimension Measuring Instruments.
- 3) Electrical & Environmental Testing of Domestic Appliances & Electrical/Electronic products.
- 4) EMI / EMC Testing on Electronic gadgets & various testing for **CE Marking**
- 5) Field Services in Calibration & Testing
- 6) Design & Development of Prototype Instruments.
- 7) Tool Design & Documentation.
- 8) Manufacturing of Tools, Jigs & Fixtures, Critical Components, Precision jobs.
- 9) Batch Production services
- 10) Consultancy services for Laboratory accreditation as per ISO/IEC 17025
- 11) Consultancy services for QMS certification as per ISO 9001.

MSME

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IDEMI is also conducting following Sponsored Training Programmes:

1. "Entrepreneurship cum Skill Development Programme" (ESDP) sponsored by Ministry of Micro Small & Medium Enterprises, Govt. of India.
2. **Skill Development** Training Programmes for youth of **North East states** under Capacity Building & Technical Assistance Scheme sponsored by Ministry of Development of North Eastern Region (DoNER), Govt. of India.
3. **Skill Development** Training Programmes for youth of Madhya Pradesh Sponsored by Madhya Pradesh Council of Employment & Training (MAPCET), Govt. of Madhya Pradesh.
4. **High Quality Skill Training** Programmes for Tribal Development support for Governments of various States.

Training for Skill Development & Capacity Building of Man Power

IDEMI Training Division has been devoted to Technical Manpower Development particularly from "Industrial Sector" & "Information Technology Sector". Skill Development Training is a continuous education & is required by every Practicing Professional and Student for improving his/her competency to meet the greater demands & challenges of Industry.

IDEMI's "Skill-Development Training Programmes" has built-in potential to generate Employment or a possibility to start working independently as a **Self Entrepreneur**.

IDEMI is also conducting the **Capacity Building Training Programme** for Principals, Faculty members & Senior officers with main focus on Behaviour Science through several Soft Skills like Inter Personnel Skills, HR Management, Communication & Presentation skills, Leadership, Decision Making, Team Building, Stress & Conflict Management etc.

Activity at a Glance

- Design and Development ■ Tool Design & Tool Room
- Calibration & Testing ■ Training for Skill Development

IDEMI is a
Govt. of India Society
and Basically
Service-to-Industry
Organization



More than 4 decades
of Experience



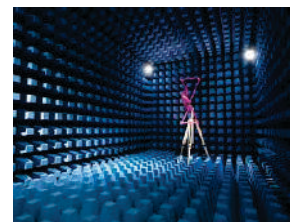
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(Ministry of Micro, Small & Medium Enterprises)

EMI-EMC TESTING

(NABL Accreditation certificate no. T-1358)

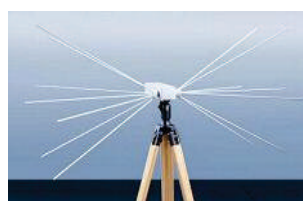
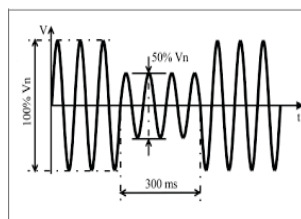
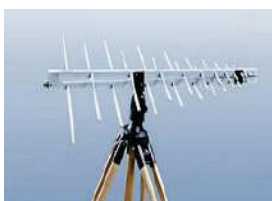
Electromagnetic Immunity Test

Test	Standard
Electrostatic Discharge Test CD: 30 kV, AD: 30 kV	IEC/EN 61000-4-2, IS 14700 (Part 4/Sec 2)
Radiated Susceptibility Test 1-30 V/m, 80 MHz - 6 GHz	IEC/EN 61000-4-3 IEC/EN 61000-4-20
Electrical Fast Transient/Burst Test 0 – 4 kV	IEC/EN 61000-4-4, IS 14700 (Part 4/Sec 4)
Surge Immunity Test 0 – 7 kV	IEC/EN 61000-4-5, IS 14700 (Part 4/Sec 5)
Conducted RF Susceptibility Test 1 – 10 V, 150 kHz – 80 MHz	IEC/EN 61000-4-6
Power Frequency Magnetic Field Test 3 A/m - 30 A/m	IEC/EN 61000-4-8, IS 14700 (Part 4/sec 8)
Pulse Frequency Magnetic Field Test 100 A/m – 1000 A/m	IEC/EN 61000-4-9, IS 14700 (Part 4/Sec 9)
AC Voltage Dips, Short Interruption & Voltage Variation Test 0-100 %	IEC/EN 61000-4-11, IS 14700 (Part 4/Sec 11)
DC Voltage Dips, Short Interruption & Voltage Variation Test 0-100 %	IEC/EN 61000-4-29
Impulse Voltage Test 0.5 – 12 kV	IEC/EN 60255-5



Electromagnetic Emission Test

Test	Standard
Conducted Emission Test 150 kHz – 30 MHz	CISPR 11/EN55011, CISPR 22/EN55022, IS 6873, CISPR 15
Radiated Emission Test 30 MHz – 6 GHz	CISPR 11/EN55011, CISPR 22/EN55022, IS 6873, CISPR 15
Disturbance Power Measurement test 30 MHz-300 MHz	CISPR 14-1/ EN55014-1
Harmonic Emission Test up to 40 th Harmonic	IEC/EN 61000-3-2, IS 14700 (Part 3/Sec 2)



EMI/EMC Pre-Compliance & Site Testing undertaken on above mentioned products for 'CE' Marking

TESTING

- EMI / EMC TESTING
- ELECTRICAL / ELECTRONICS TYPE TESTING
- SAFETY TESTING
- ENVIRONMENTAL TESTING

Pioneers in
Calibration & Testing



EMI- EMC Testing as per Particular Product standards

Product	Standards
Electromagnetic Compatibility (EMC) - Part 6-1: Generic Standards - Immunity for Residential, Commercial and Light-Industrial Environments	IEC/EN 61000-6-1, IS 14700 (Part 6/Sec 1)
Electromagnetic Compatibility (EMC) - Part 6-2: Generic Standards - Immunity for Industrial Environments	IEC/EN 61000-6-2, IS 14700 (Part 6/Sec 2)
Electromagnetic Compatibility (EMC) - Part 6-3: Generic Standards - Emission Standard for Residential, Commercial and light-industrial environments	IEC/EN 61000-6-3, IS 14700 (Part 6/Sec 3)
Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission Standard for Industrial Environments	IEC/EN 61000-6-4, IS 14700 (Part 6/Sec 4)
Electrical equipment for measurement, Control and Laboratory use – EMC Requirements – Part 1: General Requirements Electrical Equipment for Measurement, Control and Laboratory use	IEC/EN 61326-1
Medical Electrical Equipment - Part 1-2: General Requirements for Basic Safety and Essential Performance - Collateral Standard: Electromagnetic Disturbances - Requirements and Tests	IEC/EN 60601-1-2
Measuring Relays and Protection Equipment - Part 26: Electromagnetic Compatibility Requirements	IEC/EN 60255-26
Uninterruptible Power Systems (UPS) - Part 2: Electromagnetic Compatibility (EMC) Requirements	IEC/EN 62040-2
Equipment for General Lighting Purposes - EMC Immunity Requirements	IEC/EN 61547
Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement	CISPR 24/EN55024, IS 15039
Electromagnetic Compatibility. Product Family Standard for Audio, Video, Audio-Visual and Entertainment lighting Control Apparatus for Professional use.(Immunity)	EN 55103-1
Electromagnetic compatibility. Product Family Standard for Audio, Video, Audio-Visual and Entertainment Lighting Control Apparatus for Professional use.(Emissions)	EN 55103-2
Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Telecommunication Network Equipment; Electro Magnetic Compatibility (EMC) Requirements	EN 300386
Limits and Methods of Measurement of Radio Disturbance Characteristics of Electrical Lighting and Similar Equipment	CISPR 15/ EN 55015
Electromagnetic compatibility - Requirements for Household Appliances, Electric Tools and Similar Apparatus - Part 1: Emission	CISPR 14-1/EN 55014-1
Electromagnetic Compatibility – Requirements for Household Appliances, Electric Tools and Similar Apparatus Part 2: Immunity – Product Family Standard	CISPR 14-2/EN 55014-2
Electromagnetic Compatibility of Multimedia Equipment. Emission Requirements	EN 55032



TOOL DESIGN & TOOL ROOM PRACTICE
ELECTRICAL / ELECTRONICS
INDUSTRIAL AUTOMATION / EMBEDDED SYSTEM
ROBOTICS & MECHATRONICS
ANIMATION, GRAPHICS, WEB & VFX
INFORMATION TECHNOLOGY

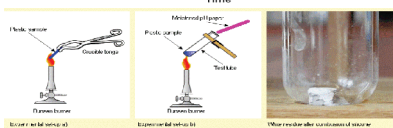
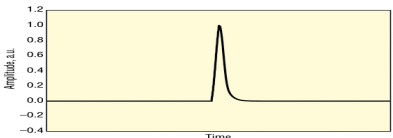
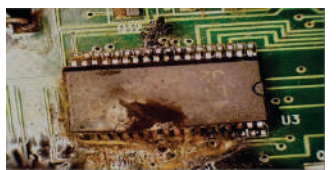
TRAINING

Training for
Skill Development

SAFETY TESTING

(NABL Accreditation certificate no. T-1358, T-3458)

Product Standards	
Product	Standard
Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory use - Part 1: General Requirements	IEC/EN 61010-1
Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory use - Part 1: General Requirements	IEC/EN 60335-1, IS 302
Measuring Relays and Protection Equipment - Part 27: Product Safety Requirements	IEC/EN 60255-27
Information Technology Equipment - Safety - Part 1: General Requirements	IEC/EN 60950-1, IS 13252
Safety Requirements for Audio, Video and similar Electronic Apparatus	IEC/EN 60065, IS 616
Safety of Machinery - Electrical Equipment of Machines - Part 1: General Requirements	IEC/EN 60204-1



ELECTRICAL, SAFETY & MECHANICAL TEST

Insulation Resistance Test
Dielectric Strength Test
Temperature Rise Test
Drop Test / Toggle Test
Mechanical Impact Hammer Test
Leakage Current Test
Creepage Distances and Clearances
Ground Bond Test
Mechanical Stability Test
Resistance to Tracking Test
Resistance to Fire (Glow wire test)
Resistance to Heat (Ball pressure test)
Electrical Power Measurement
Impulse Test
Electrical Endurance Test
Performance & Functional test
Protection against access to live parts

CALIBRATION

CALIBRATION OF ELECTRICAL
ELECTRONIC, PRESSURE
TEMPERATURE, FLOW, MASS
VOLUME & DIMENSION

Pioneers in Calibration & Testing



ENVIRONMENTAL TESTING

(NABL Accreditation certificate no. T-1358)

TESTS	
Tests	Standard
Cold Test -60 °C to Ambient	IEC/EN 60068-2-1, IS 9000 (Part 2/sec I to IV)
Dry Heat Test Ambient to 200 °C	IEC/EN 60068-2-2, IS 9000 (Part 3/sec I to V)
Change of Temperature test -60 °C to 180 °C, Rate of change: 1 °C	IEC/EN 60068-2-14, IS 9000 (Part XIV)
Damp Heat (Steady state) Test 20 % to 98 %, @ 30 °C to 85 °C	IEC/EN 60068-2-78, IS 9000 (Part 4)
Damp Heat (Cyclic) Test 20 % to 98 %, @ 30 °C to 85 °C	IEC/EN 60068-2-30, IS 9000 (Part 5/Sec 1 & 2)
Vibration Test 5 to 2800 Hz, 0 to 51 mm, up to 70 'g'	IEC/EN 60068-2-6, IS 9000 (Part 8)
Shock Test Upto 50 'g'	IEC/EN 60068-2-27, IS 9000 (Part 7/Sec 1)
Degree of protection (Ingress protection) Test IP 10 - 68	IEC/EN 60529, IS/IEC 60529



TYPE TESTING

(NABL Accreditation certificate no. T-1358)

Products	
Products	Standard
AC Static Watthour Meters Class 1 & 2	IS 13779, IEC/EN 62052-11, IEC/EN 62053-21
AC Static Transformer Operated Watthour and VAR-Hour Meters Class 0.2S, 0.5S and 1.0S	IS 14697, IEC/EN 62052-11, IEC/EN 62053-21
Direct Acting Indicating Analog Electrical Measuring Instruments and their Accessories	IS 1248 (Part 1 to 8)
Direct Measuring Instruments for Measurement and Control	IS 13875 (Part 1 & 2)
AC Supplied Electronic ballast	IS 13021, IEC 61347-2-3
·Ballast for fluorescent Lamps	IS 1534
·Self ballasted Lamp	IS 15111, IEC/EN 60968
·Luminaries	IS 10322, IEC/EN 60598-1
·Static relays for Power Protection System	IS 3231, IEC/EN 60255
Self Ballasted LED Lamp, LED Module, d.c. or a.c. Supplied Electronic Controlgear for LED Modules, Fixed General Purpose Luminaries	IS 16101, IS 16102, IS 16103, IS 15885 (Part 2/ Sec 13), IS 10322 (Part 5/ Sec 1)
All Electrically I Operated Domestic Appliances & their Accessories	

TOOL DESIGN & TOOL ROOM

CAD/CAM/CAE/CNC
 DESIGN & MFG. OF PRESS TOOLS, MOULDS
 DIE CASTING DIES, JIGS FIXTURES CMM(QC)
 ELECTRO MECHANICAL ASSEMBLY &
 CONSULTANCY

Gear up for the Revolution

ACCREDITATIONS / RECOGNITIONS / MEMBERSHIPS

<p>IDEMI MUMBAI is a Govt. of India Institute under the Ministry of MSME</p>	
<p>IDEMI MUMBAI Laboratories is Accredited by NABL, New Delhi</p>	
<p>IDEMI MUMBAI is recognised by BIS, under Laboratory Recognition Scheme for Type Testing of Energy Meter.</p>	
<p>IDEMI MUMBAI is Member of Bureau of Indian Standards (BIS)</p>	
<p>IDEMI MUMBAI is Member of British Standard Institute, (BSI) United Kingdom</p>	
<p>IDEMI MUMBAI is Member of Society of EMC Engineers</p>	
<p>IDEMI MUMBAI is Member of Institute for Electrical & Electronic Mfg. Association (IEEMA) India.</p>	
<p>IDEMI MUMBAI is Member of Metrology Society of India.</p>	
<p>IDEMI MUMBAI is Member of Fluid Power</p>	
<p>IDEMI MUMBAI is Member of Indo - German Chamber of Commerce (IGCC)</p>	
<p>IDEMI MUMBAI Undertakes the Testing as per International Electro Technical Commission Standard (IEC)</p>	
<p>IDEMI MUMBAI Undertakes the Testing for CE Marking</p>	
<p>IDEMI MUMBAI is a Member of Indo - American Society</p>	
<p>IDEMI MUMBAI is a Member of Tool & Gauge Manufacturing Association (TAGMA)</p>	



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MSME-TECHNOLOGY DEVELOPMENT CENTRE, MUMBAI



A Govt. of India Society
Mumbai

INSTITUTE FOR DESIGN OF ELECTRICAL MEASURING INSTRUMENTS

Activities at a Glance

- Design and Development
- Tool Design & Tool Room
- Calibration & Testing
- Training for Skill Development

More than 4 decades of Experience

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Magnetic Maharashtra



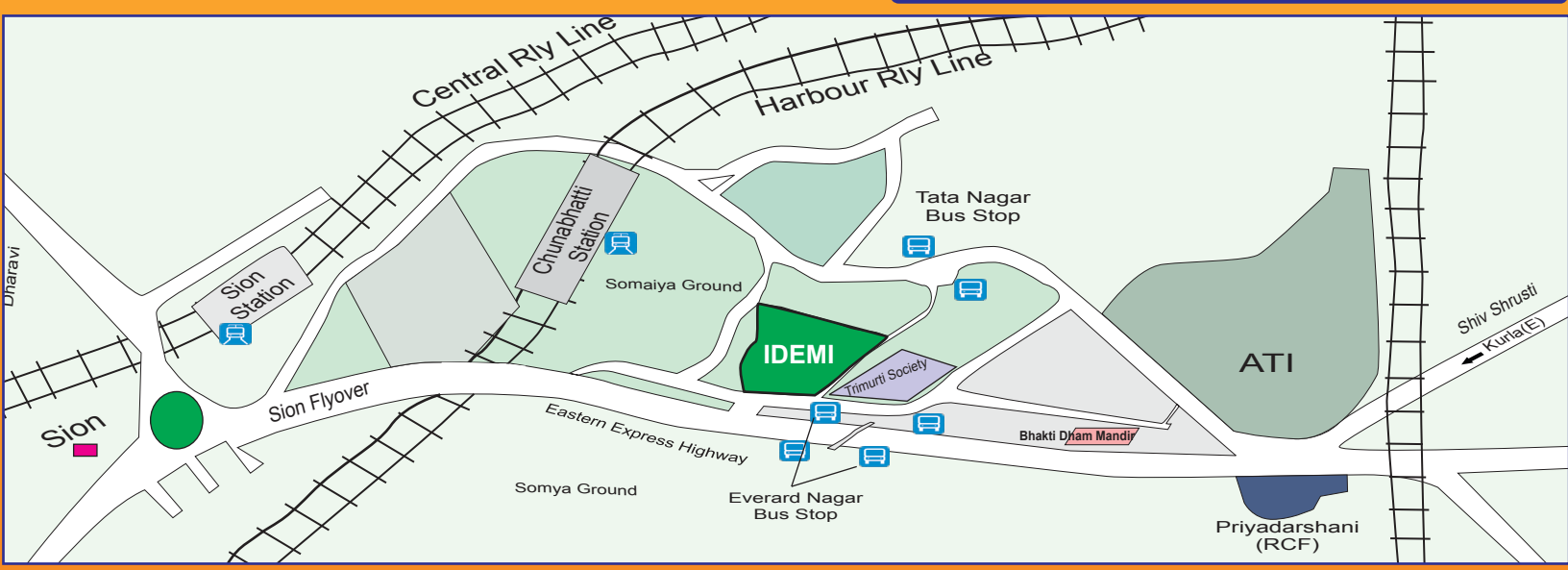
Quality is our motto



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