TOGETHER WE REALISE OUR GOALS

The LOTRIČ Metrology group offers reliable service of technical cleanliness of our products – in the development phase for samples and for yearly requalification, where results of purity are compulsory. The proximity of the laboratory, their responsiveness and the issue of certificates which are clear and comprehensible also to our clients in the automotive industry are the key advantages of cooperating with LOTRIČ Metrology laboratory – they help us achieve our goals.

Miro Šmid, director of quality at DOMEL d. o. o.

EXTRAORDINARY COMPETENCE FOR FASTER DEVELOPMENT

LOTRIČ Metrology group performs chemical and mechanical testing of various materials as well as environmental testing and chemical etching of small components. With their competences which they have developed and built on over the years they help us to develop our products faster. Their employees are known for their expertise, quick response time and precision so we are always glad to do business with them.

Dieter Brunner, CEO ISKRAEMECO d. d.
ELECTRIC SAFETY ACCORDING TO LVD DIRECTIVE
- Insulation resistance test
- High voltage and impulse test
- Short circuit testing
- Earth fault simulation
- Leakage current measurement
- Fast transient measurement

ELECTROMAGNETIC COMPATIBILITY
- Immunity: surge, burst, conductive disturbances, electromagnetic discharge
- Emission: conductive emission
- Network quality: dip simulation, swell simulation, total harmonic distortions (THD), flickers, interruptions in electric network

RoHS TESTING FOR RESTRICTED SUBSTANCES
- Content of elements (Cr6+, Cd, Hg, Pb, PBB, PBDE) IEC 62321, EN 15205

MECHANICAL PROPERTIES
- Mechanical durability (life-time) of electrical devices and switches
- Vibration resistance
- Mechanical strength of cases EN 60947
- 8 kN test IEC 62262
- Torsion of terminals, connectors and mounting screws
- Strength and pull out force of electronic components
- Recording transient occurrence with high-speed cameras

BURNING BEHAVIOUR, TEMPERATURE
- Silver wire test EN 60695-2-17*
- Flame resistance UL 94
- Ignitability UL 94
- Burn rate UL 94
- Temperature measurement with infrared camera

INGRESS PROTECTION (IP) TESTING
- Protection against dripping water, sprayed water and splashed water IP X1-4
- Effect of immersion IP X7-8

ENVIRONMENTAL TESTING AND ACCELERATED AGING
- Temperature and relative humidity (optional with electrical connection)
- Cyclic climatic test
- Neutral salt spray – NSS ISO 9227*
- Acetic acid salt spray – AASS ISO 9227
- Copper accelerated acetic salt spray – CAASS ISO 9227*
- Industrial climate (ISL) DIN 50018*
- Constant condensation ISO 6759-2*
- Damp heat cyclic IEC 60068-2-30*
- UV light IEC 60068-2-5
- Salt EN 60068-2-11
- Dry heat EN 60068-2-2

CLEAN ROOMS
- Classification of air cleanliness ISO 14644, US FED 209E
- Air speed and flow ISO 14644
- Air flow visualization ISO 14644
- Permeability test and filter classification EN ISO 14644, EN 1822
- Air temperature ISO 14644
- Relative humidity ISO 14644
- Pressure difference ISO 14644
- Recovery test ISO 14644, EN 1822

ELECTROSTATICS
- Protection of electronic devices from electrostatic phenomena ISO 61340-5-2

RESISTIVITY
- Surface resistivity
- Volume resistivity

DEVELOPMENT APPROACH AND CONSULTING
- Technology advice from experts

We perform the tests according to numerous other standard and non-standard procedures, which are tailored to your requirements and/or the requirements of your customers.

*Accredited testing methods. Read more about the accredited procedures in the accreditation documents no. LP-004 and no. LP-099 (http://www.slo-akreditacija.si).
SAFE DEVICES AND COMPONENTS, READY FOR THE MARKET.

WE KNOW THAT THE DEVELOPMENT OF YOUR PRODUCT IS IMPORTANT TO YOU. COOPERATING WITH LOTRIČ METROLOGY GIVES YOU ALL THE SUPPORT YOU NEED TO BE A SUCCESSFUL DEVELOPER.

- Help with meeting legal requirements and demands of the market for your innovation.
- Renting of laboratory and expert help with technical challenges.
- We approach your product as a whole - from soldering to casings.
- One stop for all your testing.

**ELECTRIC SAFETY ACCORDING TO LVD DIRECTIVE**
- Insulation resistance test
- High voltage and impulse test
- Shock resistance testing
- Electrical fault simulation
- Leakage current measurement
- Fast transient measurement

**ELECTROMAGNETIC COMPATIBILITY**
- Immunity: surge, burst, conductive and radiated emissions, electromagnetic discharge
- Emission: radiated emissions
- Network quality: dip simulation, swell simulation, total harmonic distortion (THD), flickers, interruptions in electric network

**RoHS TESTING FOR RESTRICTED SUBSTANCES**
- Content of elements (Cr6+, Cd, Hg, Pb, PBB, PBDE) IEC 62321, EN 15205

**MECHANICAL PROPERTIES**
- Mechanical durability (life-time) of electrical devices and switches
- Vibration resistance
- Mechanical strength of cases
  - EN 60947
  - IEC 62262
- Testing of terminals, connectors and mounting screws
- Strength and pull out force of electronic components
- Recording transient occurrence with high-speed cameras

**BURNING BEHAVIOUR, TEMPERATURE**
- Silver-wire test
  - EN 60695-2-11*
- Flame resistance
  - UL 94
- Burst rate
  - TL 1910*, ISO 3795, FM/NS 302, DIN 75200
- Temperature measurement with infrared camera

**INGRESS PROTECTION (IP) TESTING**
- Protection against dripping water, sprayed water and splashed water
  - IP 61-6
- Effect of immersion
  - IP 67-8

**ENVIRONMENTAL TESTING AND ACCELERATED AGEING**
- Temperature and relative humidity (optional with electrical connection)
  - Cyclic climatic tests
  - Neutral salt spray – NSS
    - ISO 9227*
  - Acidic salt spray – NAS5
    - ISO 9227
  - Copper accelerated acidic salt spray – CAAS
    - ISO 9227*
  - Industrial climate (SCI)
    - DIN 50018*
  - Constant condensation
    - ISO 6752-2*
  - Damp heat, cyclic
    - IEC 60068-2-30*
  - UV light
    - IEC 60068-2-5
  - Cold
    - EN 60068-2-1
  - Dry heat
    - EN 60068-2-2

**CLEAN ROOMS**
- Classification of air cleanliness
  - ISO 14644, US FED 209E
  - Air speed and flow
    - ISO 14644
  - Air flow visualization
    - ISO 14644
  - Penetration test and filter classification
    - EN ISO 14644, EN 1822
  - Air temperature
    - ISO 14644
  - Relative humidity
    - ISO 14644
  - Pressure difference
    - ISO 14644
  - Recovery test
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