THEY ALLOW CUSTOMERS TO FEEL SECURE ABOUT OUR PRODUCTS

Our company is a producer of small electrical motors and fans. We always strive to develop and provide high quality products. LOTRIČ Metrology conducts periodical checks of equipment for leakage tests of fans housings for our new project of manufacture of fans for gas furnaces. The clients thus feel secure in our product. LOTRIČ Metrology helps us to obtain the required certificates with reliable results, supported by expert advice and counseling on how to improve our products further. I can best describe LOTRIČ Metrology group with the words professional, adaptable and open for new common projects. The location of their laboratory is another advantage as we can hand over and pick up samples 24 hours a day.

Peter Frim, quality manager at YDRIA MOTORS d. o. o.

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.

EXPERTS OPINION

LOTRIČ Metrology Ltd.
Selca 163
SI–4227 Selca
Slovenia, EU
T: +386 4 517 07 00
E: info@lotric.si
W: www.lotric.si/en

www.lotric-certificiranje.si/en

WE MEASURE. YOU GROW.
PRODUCT QUALITY INFORMATION YOU CAN RELY ON.

WORKING TOGETHER WITH THE ACCREDITED LABORATORY LOTRIČ METROLOGY MEANS COMPLETE AND RELIABLE SERVICE: YOUR CUSTOMERS WILL TRUST IN THE QUALITY OF YOUR PRODUCTS.

- Independent tests based on international standards or non-standard tests for your specific products.
- Verify how suitable the technology in use is for achieving the desired quality.
- Determine the causes of error in case of complaints.
- Help of experienced professionals in solving technological challenges.

OVERVIEW OF METHODS ON METAL MATERIALS

DIMENSIONS, ANGLE AND ROUGHNESS
- Measurements of surface roughness ISO 4288
- Measurements on coordinate measuring machines (CMM) ISO 1101
- Microscopic measurements
- Confirming dimensional and geometric characteristics and tolerances according to drawing ISO 14253-1, -2

MECHANICAL PROPERTIES
- Tensile strength ISO 6892-1
- Compression strength ISO 606-1, ASTM E9
- Bending strength ISO 145, ASTM E294, -1c
- Hardness (Rockwell) ISO 6506
- Hardness (Brinell) ISO 6506
- Hardness (Vickers) ISO 6507*
- Hardness (Knoop) ISO 6505
- Bending test (sheet metal and wires) EC 4391
- Deep drawing test (Brinell) ISO 20482
- Impact strength (Charpy) ISO 14556

FORCE, TORQUE AND PRESSURE
- Standard and nonstandard measurement of forces
- Torque measurement
- Tightness of pressure and vacuum systems
- Mechanical aging

METALLOGRAPHY
- Macro and micro-examinations
- Analysis of the crystal structure
- Analysis of crystal grain size ISO 643
- Analysis of the size and distribution of the graphite in cast iron ISO 140
- Analysis of porosity ISO 10049
- Depth of the heat-treated layers (temperament, nitriding) ISO 2437, ISO 3774
- Examination of welds
- Coating thickness measurements ISO 1463*

HEAT TREATMENTS
- Hardening of components
- Optimization of annealing technologies
- Hardening temperature studies
- Determination of optimal annealing temperature

ANALYSIS OF DEFECTS AND DAMAGES
- Breakdown analysis and analysis of defects in material
- Assessment of the suitability of the material and of technologies

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MATERIAL ANALYSIS
- Material identification and content of chemical elements
- LECO analysis of sulphur and carbon content in steel

FASTENERS
- Strength class of standard fastening elements ISO 898-1
- Torque forces of fasteners, shafts
- Pull out test

QUALITY OF ORGANIC COATINGS
- Coating thickness ISO 2178, ISO 2360
- Degree of corrosion ISO 6289-3
- Filiform corrosion resistance EN 3665
- Degree of blistering ISO 6289-4
- Discoloration and corrosion around a scribe ISO 6289-8
- Degree of cracking ISO 6289-4
- Corrosion test (Brinell) ISO 14556
- Gloss determination DIN 67530
- Colour determination
- Coating hardness
- Chemical analyses of paints and varnishes
- Paints, baths and rinsing waters
- Analysis of galvanic, degreasing, activation, passivation and phosphate baths and rinsing waters
- Content of metallic elements and salts
- Temperature, pH, electrical conductivity, oxygen content, hardness, dry matter content
- Content of microorganisms
- Chemical analyses of paints and varnishes
- Ral/S
- Content of elements Cr6+, Cd, Hg, Pb IEC 62321, EN 15205

TECHNICAL CLEANLINESS
- Technical cleanliness of products VOA 19, ISO 16232

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).
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- Compression strength ISO 6062, ASTM E9
- Bending strength ISO 7508, ASTM E296-1c
- Hardness (Rockwell) ISO 6508
- Hardness (Indenter) ISO 6506
- Hardness (Brinell) ISO 6506
- Hardness (Vickers) ISO 6507*
- Hardness (Rockwell) ISO 6508
- Hardness (Knoop) ISO 6509
- Hardness (Berkovich) ISO 6509
- Impact strength (Charpy) ISO 17356
- Impact strength (Cleavage) ISO 17358

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- Magnetic hardness measurements
- Magnetic examination of surface protection failure
- Chemical determination of surface protection
- Hardness determination
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ENVIRONMENTAL TESTING
- Temperature and relative humidity
- Cyclic climatic tests
- Neutral salt spray – NSS ISO 9227*
- Acetic acid salt spray – AASS ISO 9227
- Copper accelerated acetic salt spray – CASS ISO 9227*
- Industrial climate (ISO) DIN 50018*
- Constant condensation DIN 50018*
- Damp heat, cyclic IEC 60068-2-30
- Oil mist DIN 50016
- Dry heat EN 60068-2-2*

QUALITY OF GALVANIC AND OTHER INORGANIC COATINGS
- Metallographic determination of surface protection
- Painting thickness ISO 1663*
- Hardness determination
- Metallurgical examination of surface protection
- Chemical determination of impurities on the surface
- Mass and thickness of phosphate coating
- Degree of corrosion ISO 10289
- Corrosion testing of zinc coatings DIN 50961*
- Corrosion testing of copper and nickel coatings ISO 1664*

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- Painting thickness ISO 2178, ISO 2360
- Degree of corrosion
- Filiform corrosion resistance EN 3665
- Degree of blistering
- Degree of cracking
- Degree of rusting
- Scratching resistance (Elcometer)
- Gloss determination
- Colour determination
- Coating hardness
- Chemical analyses of paints and varnishes
- Resistance to liquids ISO 2812
- Stone-chip resistance DIN 50995-1

PAINTS, BATHS AND RINING WATERS
- Analysis of galvanic, degreasing, activation, passivation and phosphate baths and rinsing waters
- Content of metallic elements and salts
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