



PRODUCT TESTING ACCORDING TO AUTOMOTIVE STANDARDS



WE MEASURE. YOU GROW.

BECAUSE YOU ARE THE BEST PARTNER FOR YOUR CUSTOMERS.

WORKING TOGETHER WITH THE ACCREDITED LABORATORY LOTRIČ METROLOGY MEANS FULL SUPPORT IN MEETING YOUR CUSTOMERS' REQUIREMENTS. COMPLETELY INDEPENDENT, INTERNATIONAL AND SIMPLE.

- All tests for automotive components in one place.
- A clear and detailed certificate with a simple result: COMPLIES/DOES NOT COMPLY.
- Knowledge of the requirements of leading car manufacturers: BMW, Citroën, Mercedes-Benz, General Motors, Renault, Scania, Volkswagen, Volvo.
- A testing laboratory for the automotive industry with more than 20 years of experience.



AUTOMOTIVE TESTING

PLASTIC COMPONENTS

Mechanical properties	Chemical properties	Burning behaviour	Emission	Surfaces
Tensile strength	IR identification	Burn rate	Odour test	Colour and gloss determination
Flexural strength	DSC	Flame resistance	Fogging test	Surface energy with test inks
Impact strength (Izod, Charpy, Dynstat)	TGA	Glow wire test	VOC number	Abrasion resistance
Modulus of elasticity	MVR - MFR		FOG number	Chemical resistances (water, oil, brake fluid, graphite, organic solvents, acids, cleaning agents, oil derivate)
Hardness (Shore A and D)	Viscosity			
Vicat softening point	Density			
Ball indentation test	Water absorption			
Ball drop test	Annealing residue			
Mechanical aging				
Compression test				
Shrinkage				
Examples of automotive standards				
D42 1235, PV 3905	DBL 5410 DBL 5404	UL94, TL1011, EN 60695-2-11, ISO 3795, MVSS 302, DIN 75200, TL 1010	VDA 270, PV 3900, DIN 75201, SAE J 1756, DIN 75201B, VW 50181, PV 3015, VDA 278	D47 1279, STD 1026

Standard specimens or sample plates can be provided by LOTRIČ Metrology.

METALLIC COMPONENTS

Material specification	Galvanic and other inorganic coatings	Organic coatings
Standard metal identification	Degree of corrosion	Degree of corrosion
Elemental analysis	Metallographic determination	Degree of blistering
Mechanical properties	of surface protection	Degree of delamination
Tensile strength	Inorganic coating thickness	Cross cut test
Bending test		Degree of cracking
Casting porosity		Colour and gloss determination
Metallurgical requirements		Coating thickness
		Coating hardness
		Resistance to impact
		Resistance to scratches
Examples of automotive standards		
VW 50097, B 51 1110	STD 4165, DBL 8451	GS 90011, GME 00201, DBL 7381

Standard test specimens or sample plates can be provided by LOTRIČ Metrology.

CLEANLINESS

TECHNICAL CLEANLINESS	CLEAN ROOMS
Particle extraction	Classification of air cleanliness
Particle mass	Air speed and flow
Particle classification	Air flow visualization
Metal and non-metal particles	Permeability test and filter classification
	Air temperature
Examples of automotive standards	Relative humidity
VDA 19, ISO 16232	Pressure difference
	Recovery test

ENVIRONMENTAL TESTING AND ACCELERATED AGEING

Cyclic climatic tests
Neutral salt spray (NSS)
Copper accelerated acetic salt spray (CASS)
UV light
Industrial climate (SO ₂)
Temperature and relative humidity
Thermal shock

ELECTRONIC COMPONENTS

Electrical safety
Ingress protection (IP test)
IK test
Elements according to RoHS

MOTOR OILS, INDUSTRIAL LUBRICANTS

IR Identification
Viscosity
Saponification
Corrosiveness, ferrography
Content of impurities
Wear properties

FASTENERS AND WELDS

Pull out test
Metallography of welds

DIMENSIONS, ANGLES AND ROUGHNESS

Confirming dimensional and geometric characteristics and tolerances according to technical drawing
Measurements on coordinate measuring machine (CMM)
Microscopic measurements
Measurements of surface roughness

FAULT DETECTION, TECHNOLOGICAL IMPROVEMENTS

Help from a team of experts in solving the demanding challenges of production
Faster fault detection in initial production phases
Advice on choosing the appropriate material
Non-standard force and torque measurements
Determining the cause of insufficient anti-corrosive protection

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.

Read more about the accredited procedures in the accreditation documents no. LP-004 and no. LP-099 (<http://www.slo-akreditacija.si>).

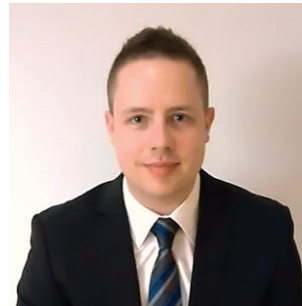
EXPERTS OPINION



THEY SOLVE OUR PROBLEMS FOR US

We work together with the LOTRIČ Metrology group in environmental testing and technical cleanliness of products, which are designed for leading car manufacturers such as Audi, BMW and Citroën. Because we want to optimize our production processes so our products can be of the best possible quality, we implement changes in our production processes where necessary, based on the reliable analysis provided by the LOTRIČ Metrology laboratory. We work with them because they understand our needs and our customers' requirements, so we do not need to invest time in additional explanations and coordination. We receive the certificates in a flash and are always informed in real time of the testing procedure; the results are always supported with a clear explanation.

Simona Petrič, CEO at ELVEZ Ltd.



WE CAN FOCUS ON OUR WORK

We established a reliable partnership with the LOTRIČ Metrology group in order to help us meet the demanding requirements of automotive standards that our innovative solutions in electronics and lighting systems must comply with. In the laboratory in Kranj they perform tests and issue the certificates we need for our polymer and metal products. We see the biggest advantage in their flexibility – our company just forwards the requests of our customers, which are already well known to the experts at LOTRIČ Metrology. They carry out the service tailored to our needs without unnecessary complications. Reliable results and responsive personnel who are always open to any eventual adjustments are proof of their excellence.

Aleš Kobe, LAB manager at Hella Saturnus Slovenija Ltd.

