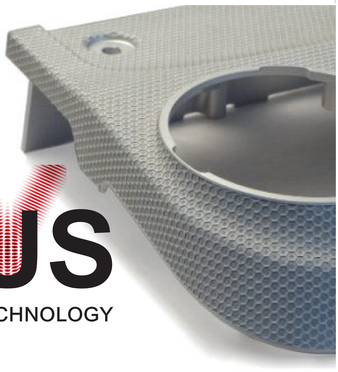

PROMETHEUS

RAPID ULTRA-SHORT PULSE LASER SURFACE TEXTURING TECHNOLOGY

THE NEXT GENERATION IN HIGH POWER ULTRA-SHORT PULSE LASER SURFACE PROCESSING

HIGH POWER ULTRA-SHORT PULSE LASERS TO ENABLE THE PRECISE PERIODIC TEXTURING AT UNPRECEDENTED PROCESSING SPEEDS.

TECHNOLOGY USED ON A RANGE OF DIVERSE MATERIALS:

METALS / POLYMERS / CERAMICS AND CERMETS.

EXPECTED RESULTS OF END USER CASE STUDIES:

ORTHOPAEDIC IMPLANTS

- Surface texturing of medical implants and composites to improve functional outcomes.
- Increased polymer/metal surface energies to improve adhesion and bond strength at material and peri-implant interfaces.

DISHWASHER

- Improve the energy efficiency of dishwasher drying by 4%
- Residual water on the surface of the samples after the drying process has been reduced by 76-78%.

TUMBLEDRYER

- Improve the energy efficiency of tumble dryer heat exchangers by 5%
- The offset of 2538 tonnes of CO2 per yea

AUTOMOTIVE CYLINDER PISTON LINER

- Deliver piston cylinder inserts exhibit 30% less blow by and with 40% less friction enabling engines with > 1.1% reduction in fuel consumption
- Reduce friction
- Reduce engine oil consumption
- 257 million litres of fuel saving per year
- The offset of 664 million tonnes of CO2 per year

AUTOMOTIVE HIGH STRENGTH ALUMINIUM PRESSING

- Improve friction and wear of stamping tool for cold forming and reduce the use of lubricant in the process
- Avoid aluminium adhesion on tool
- Reduce friction to increase sheet formability

AESTHETIC CHROME COMPONENTS FOR AUTOMOTION

- Obtain super-hydrophobic textured surfaces on chrime polymer components
- Improve the easy-clean capability
- New changes to the design og the parts

Scan for more information

www.prometheus-laser.eu

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Partners:

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