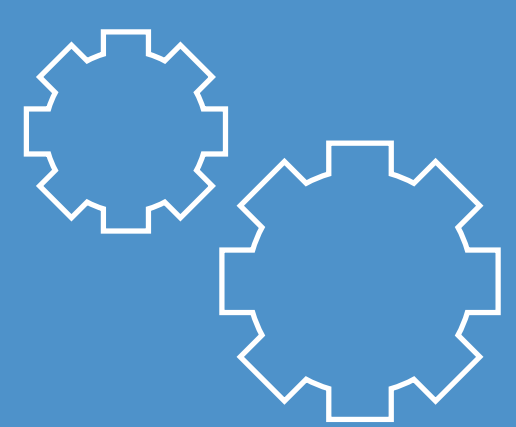


The solution for Mould Texturing by Micro Laser Engraving



TECHNOLOGIES

- Friction & Wear Simulation
- Reduced Order Modelling
- Laser Micro-texturing
- Optical Technologies for Surface Inspection
- SolGel-based Release Agents

OBJECTIVES OF THE PROJECT

To develop a :

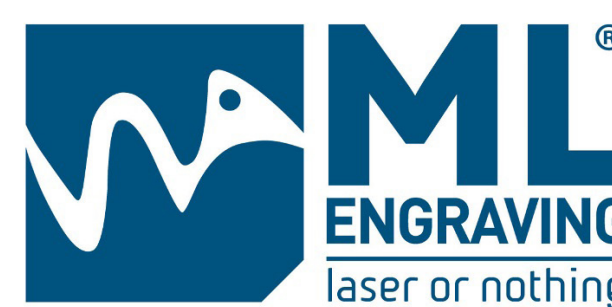
- friction modelling and optimisation software
- mould surface texturing method
- release agents for easy demoulding
- mould design tool

To validate the results in demo pilot lines
for the manufacturing of :

- mould tools
- rotational seals for engines
- piston seals

PROJECT PARTNERS

Coordinator



CONTEXT OF THE PROJECT

Friction is intrinsically related to seal performance. Surface texturing is a proven technique for reducing friction. Within recent years this technique has been applied and demonstrated for polymeric and elastomeric materials at laboratory level.

MouldTex will develop and demonstrate a novel methodology for the design and high volume manufacture of surface textured polymeric components with reduced friction and wear and longer life.

The novel methodology combines:

- advanced modelling software for the identification of surface texture patterns that lead to significant friction reduction for target rubber and plastic seals and applications
- software for the design of mould tools that enable the reliable transfer of texture patterns onto the seal surface
- novel automated laser system for the application of hierarchical laser induced micro- texture patterns to the mould tool surface
- best practice for moulding and de-moulding using surface textured moulds
- inline optical inspection for surface texture pattern quality control.



www.mouldtex.com

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