The solution for **Mould Texturing** by **Micro Laser Engraving**

TECHNOLOGIES

- **Dynamic Seal Design Software**
- **Mould Tool Design Software**
- **Moud Surface Texturing**
- **Manufacturing best practices**
- **Inline quality and process control**

OBJECTIVES OF THE PROJECT

To develop a :

- **friction modelling software**
- **Surface Texture method**
- **tool to design mould tool**
- **specific manufacturing process**

To validate result by demonstration pilot lines:

- **on mould tool manufacture**
- **on rotary seals for engine manufacture**
- **on piston seals manufacture**

MouldTex

3D mould surface texturing

CONTEXT OF THE PROJECT

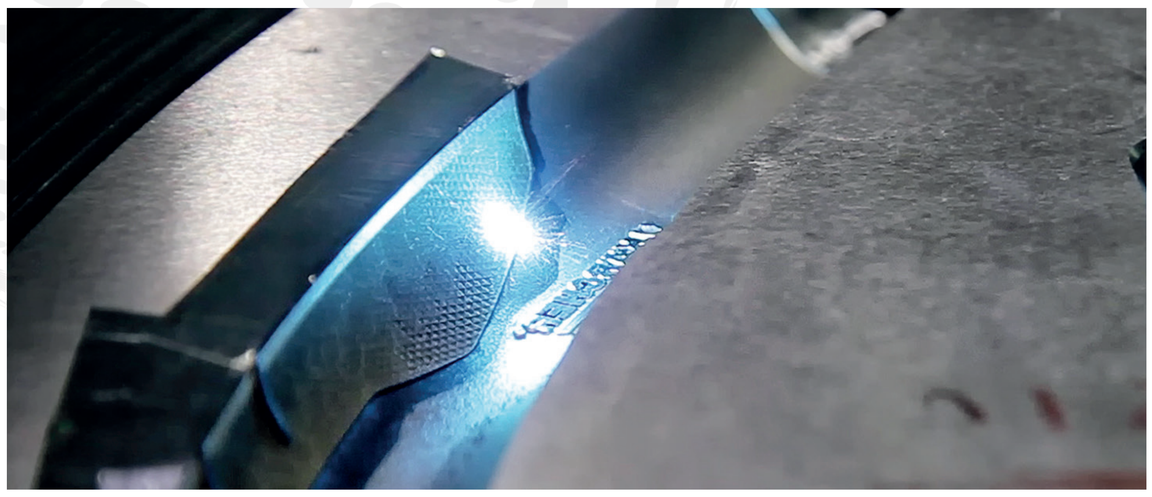
Friction is intrinsically related to seal performance. Surface texturing is a proven technique for reducing friction. Within recent years this technique has been applied and demonstrated for polymeric and elastomeric materials at laboratory level.

MouldTex will develop and demonstrate a novel methodology for the design and high volume manufacture of surface textured polymeric components.

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.

New solutions for your **needs**



PROJECT PARTNERS

Coordinator ITAINNOVA Instituto Tecnológico de Aragón

IDS

FORTH Foundation for Research and Technology - Hellas

ML Engraving laser or nothing

SKM Aeronautics Ltd.

Plastipolis Pôle de compétitivité plasturgie

Funditec

optimal ptik

ORP Stampi — Innovation in the mould construction

www.mouldtex.com

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **N° 768705**