

Project title:

MOLDING PROCESS DEVELOPMENT FOR PRECISION OPTICAL ELEMENTS

The project focuses on two main objectives:

- development, prototype production, and testing of a compact unit for the molding of precise elements,
- development of a technological procedure for the molding of precise aspheric and free-form elements.

Participation of TOPTEC in the production of a prototype of a compact unit for the molding of precise elements consists primarily of providing consulting in the areas of construction and operation. The team offers considerable experience in the operation of a similar device and also in the design, manufacturing, control, and operation of precise scientific instruments. The actual construction and production of the unit for the molding of precise elements fall within the competence of asphericon s.r.o.

The development of the technological procedure for the molding of precise aspheric and free-form elements is the task of the experts of the Centre. During the design process, experiments are run using various types of materials for glass elements and forms. Moreover, anti-adhesion layers are examined, as are manners of form machining and numeric simulations.



Fig. 1: molding form made of Inconel 600, right

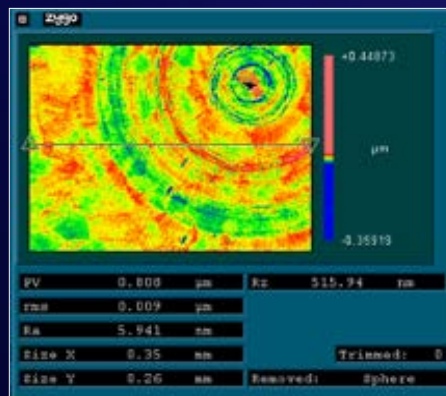


Fig. 2: molding form made of Inconel 600—measurement on WLI

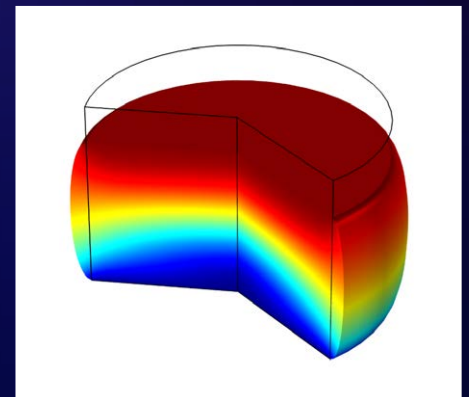


Fig. 3: simulation of an element molding