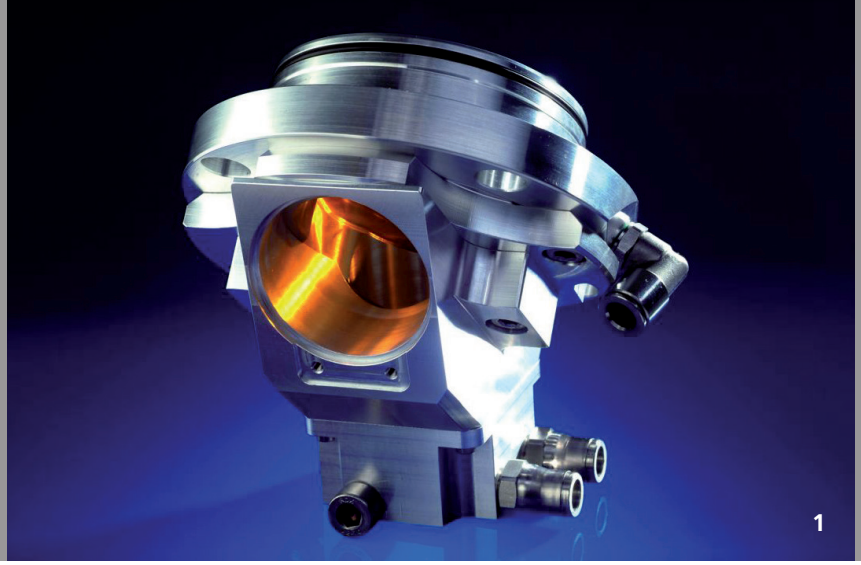

1

LASER-BASED EQUIPMENT ASSESSMENT

Task

In their laboratories, technicians and scientists in both industry and research frequently demonstrate new approaches to current issues in the field of laser-based manufacturing. Many of these approaches are technologically promising, while their implementation is associated with significant economic risk. Often such approaches never leave the status of laboratory experiments due to undetermined risks and a lack of proven market potential.

Method

When a strategic approach is designed and applied to systematically monitor and guide the technology development process, it has potential to minimize these risks and ensure success.

All relevant stakeholders need to participate in this process, each playing an essential role from demonstrating the functional principle at the laboratory bench through to validating a prototype in an industrial environment. Consisting of the supplier of the prospective solution, the user and the research partners, a team conducts a so-called laser-based equipment assessment (LEA). During the assessment, the team identifies the requirements for the equipment's use in production, the steps required to implement the necessary development steps and compares the results achieved continuously with the target definition.

Result

Under the umbrella of LASHARE, fourteen individual laser-based equipment assessments (LEAs) were conducted. In the four phases of the Assessment Circle, the team created a prototype aligned to the needs of the user, which was verified scientifically by the research partner and validated by the user in a robust industrial environment.

Applications

The »Laser-based Equipment Assessments« have been designed and tested by the LASHARE consortium and, through an open call in spring 2015, will open up possibilities for new teams to carry out funded assessments. As a coordinator, Fraunhofer ILT is one of six European centers of excellence that offer laser-based equipment assessments.

The project is funded by the EU under the grant number 609 046.

Contacts

M.Sc. Dipl.-Ing. (FH) B.Eng.(hon) Ulrich Thombansen
Telephone +49 241 8906-320
ulrich.thombansen@ilt.fraunhofer.de

Dipl.-Ing. Peter Abels
Telephone +49 241 8906-428
peter.abels@ilt.fraunhofer.de

1 Beam splitter for process monitoring.