

Design and construction of a chamber for a laser module for sensor structuring in inert gas atmospheres

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Work content

IMPT has a unique modular coating and structuring system for the cleanroom-independent production of application-specific sensors on large components. The system's laser module structures thin films on complex 3D components using an ultrashort pulse laser with a high degree of design freedom and high resolution. Laser processing also enables laser trimming and localized laser annealing.

In addition to the basic module of the system, which operates under vacuum, the use of the laser module in inert gas atmospheres requires a special chamber with active suction to remove the particles produced during laser ablation, which is being designed and constructed within the scope of this work.

Type of work

Student Project
6 months

Requirements

- Independent, structured, self-reliant work
- Technical knowledge in mechanical engineering

Starting date

01.02.2025