

High-pressure steam generation

Expanding the possibilities in foam part production

Meeting future challenges

Since August 2021, Fraunhofer ICT has used a high-pressure steam supply to improve the production of foam parts made from plastics. With our new steam boiler, steam pressures of up to 15 bar can be generated. This enables materials to be sintered with higher processing temperatures within the classic molding process. The steam chest molding machine available at the institute was manufactured by Erlenbach GmbH. It can currently be operated with 7.5 bar steam pressure in the industrial cycle, and the aim is to further reduce technological limitations to allow even higher steam pressures.

The new steam supply is already being used successfully to foam materials such as EPS (expanded polystyrene), EPP (expandable polypropylene) and ETPEs (expanded thermoplastic elastomers).

With the new steam supply and the radio frequency molding process established last year, Fraunhofer ICT is well equipped for the development of future material systems, in terms of feasibility spectrum as well as material and process know-how.

Our offer

- High-pressure process steam supply up to 15 bar
- Steam chest molding machine up to 7.5 bar steam pressure
- Extended processing window for the use of thermoplastic particle foams, such as:
 - conventional materials (EPP, EPS, ETPU)
 - bio-particle foams (EPLA)
 - engineering thermoplastics (EPET, EPC, etc.)



High-pressure steam supply (manufactured by BBS) at Fraunhofer ICT.

Contact

Christoph Mack
Phone +49 721 4640-721
christoph.mack@
ict.fraunhofer.de

Fraunhofer Institute for
Chemical Technology ICT
Joseph-von-Fraunhofer-
Straße 7
76327 Pfinztal (Germany)

www.ict.fraunhofer.de