

Ceramic solutions for foundry industry



www.ikts.fraunhofer.de/en/foundry

Jörg Adler
joerg.adler@ikts.fraunhofer.de

Materials, technologies and applications

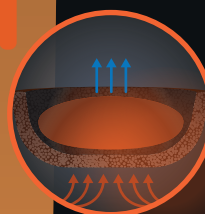
The foundry industry plays a key role in the development and manufacture of high-performance components for automotive and mechanical engineering as well as for numerous other industries. The demands placed on the production of cast components in terms of quality, price structure, variety of shapes and reliability are therefore constantly increasing.

Fraunhofer IKTS develops advanced ceramic materials that meet these requirements. In addition, the research and technology service provider has extensive expertise in the development and implementation of customer-specific testing systems for in-line and end-of-line quality control.



Ceramic protection plates
for the handling of molten aluminum

Maintenance-free

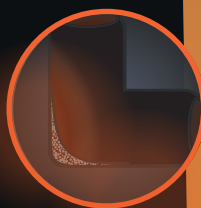


Contactless melting
with porous crucibles

Particularly high melt purity,
no crucible reaction

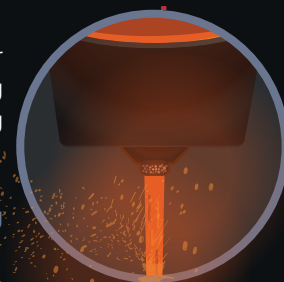
Porous ceramic inserts
for cast components with high wear resistance

6* less wear
than white cast iron



Filter for melt cleaning and calming

20% cost saving



Ceramic mold materials
for improved cooling processes

5* higher cooling rate



Gas-permeable ceramics
for aeration and deaeration of plant components

Up to 500 °C
pressure resistant

Ceramic product marking
for quality assurance and counterfeit protection of cast components

Stable to 1200 °C



Non-destructive testing
of cast components

Partially or fully automated

