



APPLICATIONS IN FOCUS

IN 5 MINUTES MORE SECURITY IN SPACE: OTEC SUPPORTS RESEARCHERS

TESTS FOR THE PRODUCTION OF NEW METALS IN SPACE

Yes, that is true! Ceramic parts from CeramTec GmbH processed with OTEC precision finish fly around the earth in space - in a manned space station! How did this happen?

The starting point was a research project: as the production of absolutely homogeneous metals on Earth is not possible - the production is subject to physical limits such as gravity - test series were carried out on board the space station, because certain physical limits simply do not apply in space. Here, metal can be melted without contact simply by bringing in energy in limited areas.

Ceramic cages were used to safely observe and document these processes at close range for research purposes. These allow the cameras the necessary view through defined cavities close to the test field and at the same time serve as a "buffer zone" and as fire protection – in case hot material escapes from the melting zone during the melting process.

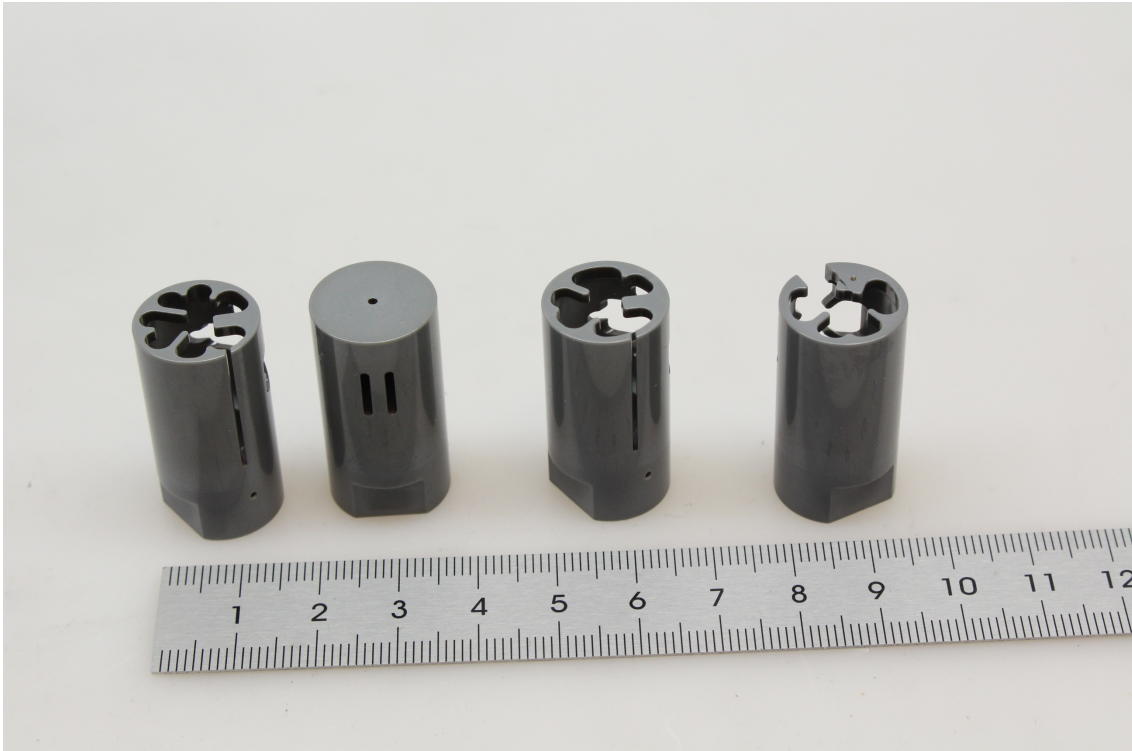
Why process ceramic cages with the OTEC technology?

Ceramic is highly heat resistant. But the surfaces of the sintered parts may still contain residues of flammable material.

With the OTEC SF series machine, the ceramic cages were reliably cleaned in only 5 min. process time. The parts were polished and with this cleaned effectively.

"Due to the filigree surface of our ceramic components, we had to find a process that could achieve both the required surface quality and not damage the fine geometry with thin wall thicknesses. OTEC proved to be a capable and competent partner here. The results achieved far exceeded all expectations and the required tolerances. Furthermore, the collaboration and cooperation was both professional and always friendly. Our choice would again be OTEC," says Bibi Sevdic and Sydney Arendt of CeramTec.

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Ready for take-off: Various ceramic cages after processing

Thanks to this "final touch" - the so-called cleaning - the crew of the space station, was able to conduct safe research.

About CeramTec GmbH

CeramTec is an internationally active supplier of technical ceramics. Well over 10,000 products, components and parts made by the ceramic experts from various ceramic materials are used in a wide variety of applications. With more than 100 years of tradition, more than 3,500 employees are active worldwide at production sites in Europe, the USA and Asia. Discover the world of high-performance ceramics and one of the most efficient materials of our time with CeramTec. Learn more: <https://www.ceramtec.com/>

About OTEC Präzisionsfinish

OTEC Präzisionsfinish GmbH offers precision technology for the production of perfect surfaces. OTEC machines for deburring, grinding, smoothing and polishing are used for rational surface finishing of tools and products. With a network of more than 60 representatives, OTEC is on site



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worldwide for international customers from many industries. Customers benefit from the comprehensive know-how of the technology leader OTEC in the development of the perfect interplay of machine and process equipment.

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