

Mechanical and Apparatus Engineering

FCT Ingenieurkeramik represents more than 30 years experience in ceramic engineering and the production of high-performance materials and composites.

Our ceramic materials offer advantageous properties especially for mechanical engineering:

- corrosion and wear resistance
- high bending strength with excellent fracture toughness
- high stiffness
- low density
- low CTE
- good thermal shock resistance
- temperature stability exceeding 1000 °C
- non-metallic material
- electrically insulating or conducting properties
- heat conductivity similar or higher than steel

In mechanical engineering our Silicon Nitride ceramics are already established in various fields of application.

Wear parts

- agitator arms and lining elements for attrition mills
- guiding elements and beams for machine tools
- wear resistant non coupling parts for induction heating systems
- dosing and ball valves in aggressive and corrosive fluid handling systems
- seal rings for gas and fluid application
- plunger and pistons for wear resistant pumping and dosing systems
- crushing rollers and brackets
- wear resistant screw-conveyors, compaction and pelletiser rollers

Optics

- lens carrier systems for wafer steppers
- housing and carrier structures for cameras and telescopes
- highly stiff structures for mirrors and optical components

Aerospace

- ultra lightweight, highly rigid structures for satellites and telescopes
- supporting systems and platforms for optical devices



Agitators for attrition mills



Housing structure for avionic camera



Ceramic chain for induction heating

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Photovoltaics

- wear resistant components for high purity Silicon processing units
- ceramic breaker jaws and compaction rollers
- drive components for coating facilities

Elektronics

- high strength insulators
- protective plates for CVD coater
- plates for wafer probe cards
- carrier structures for wafer treatment
- chucks for wafer machining

Measuring and Inspection Technique

- structural components for high frequency shakers
- wear resistant gauges

Thermal Engineering

- heating and cooking plates
- kiln furniture, burner nozzles
- thermocouple protection tubes
- heating elements

Glass Industry

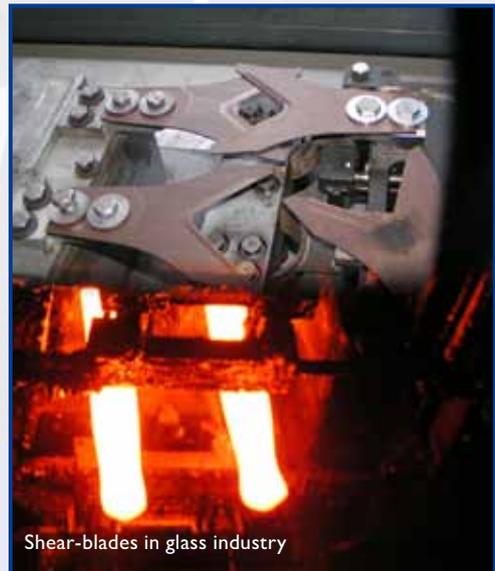
- shear blades for bottle production
- grips and transport plates in contact with hot glass
- agitators for glass melts

FCT produces ceramic parts based on customer's design particularly out of non-oxide ceramics or composites. For specific application of our customers we also develop custom made materials.

We understand ourselves likewise as a competent consultant for material selection and component design as well as for connection techniques by shrinking, clamping, gluing or soldering.



Heating plate for thermal conductivity measurement



Shear-blades in glass industry



Seperator wheel

Ask your questions about ceramics - we find solutions for you!