

Nonferrous Metallurgy (Al, Cu, Mg, Si, Sn, Zn)

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

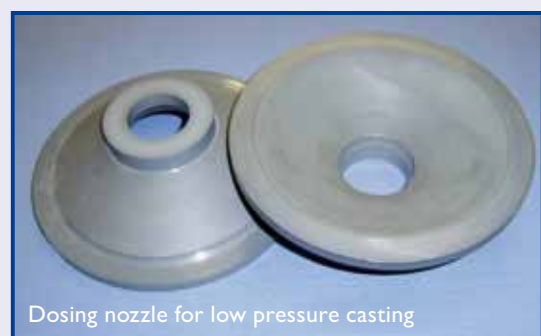
Our ceramic materials offer advantageous properties especially for Nonferrous Foundry applications:

- corrosion and wear resistance
- none or poor wettability of non-ferrous melts
- temperature stability exceeding 1000 °C
- excellent thermal shock resistance
- high bending strength in combination with high fracture toughness
- high thermal conductivity
- electrically insulating or conducting properties
- low density

Especially in aluminum, zinc and tin foundry technology our Silicon Nitride materials are already established. Further applications are under investigation in silicon, bronze and copper melts. We understand ourselves as your competent development partner for new applications in non-ferrous metallurgy and foundry area.

Aluminium- and Nonferrous Melting Technology:

- thermocouple protection tubes for temperature measurement and control in melting furnaces and casting equipment
- immersion heater sheaths (electrically heated or gas fired)
- riser stalks for low pressure casting
- degassing agitator (shaft and impeller)
- corrosion-resistant tube systems or pipelines for
- contamination-free melt transportation



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- dosing valves, casting chambers and pistons for pressure or squeeze casting
- sliding plates
- thermal shock treated parts for induction melting pumps
- corrosion-resistant crucibles

FCT Ingenieurkeramik is able to manufacture customized components with high complexity and narrow tolerances as prototype or in series production. Diameters up to 450 mm and lengths up to 1300 mm are state of the art.

FCT produces ceramic parts based on customer's design particularly out of non-oxide ceramics or composites.

The following material qualities are available: dense, gas pressure-sintered or hot-pressed silicon nitride materials as well as our sintered, fiber-reinforced and reaction-bonded silicon carbide grades (SSiC, C/C-SiC, NSiC).

For specific requirements 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.

Additionally we offer services in sintering, hot-pressing and HIPing as well as in ceramic process engineering.



Degassing unit for liquid aluminium transport system



Degassing agitator



High pressure „shot unit“

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