

Quantz fire-proof

the high temperature resistant concrete

PURE INNOVATION

Quantz fire-proof high temperature resistant concrete

QUANTZ is the Next Generation of cement bonded materials with steel and ceramic like performance. It's a substantial advancement of the class of Ultra High Performance Concretes. For the usage in high-temperature applications we adapted the Quantz technology by using special aggregates and optimizing the formulation with new developed mathematic algorithms to improve density and strength.

THE PERFORMANCE of Quantz is much more than only a high compressive strength. In fact, performance stands for perfect workability, high quality, customized high compressive and flexural strength, impermeability and an overall ecological and economical effectivity. The material can be used for temperatures up to 1700°C. Even after this temperature treatment, the concrete will have high structural properties.

ADVANTAGE

- Monolithic Quantz (concrete) housing
- Economic and ecologic benefits
- No steel structures or housings
- No expensive ceramic isolation
- Temperatures up to 1700°C possible
- Heating up in seconds is possible
- Modular ovens can be realized
- Customized Plug&Heat systems



fig.: Installation of prototype oven

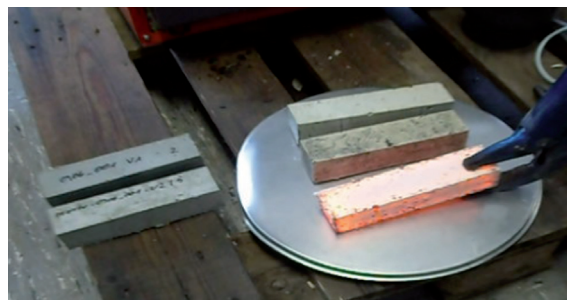


fig.: Quantz heat-proof after 1300°C treatment

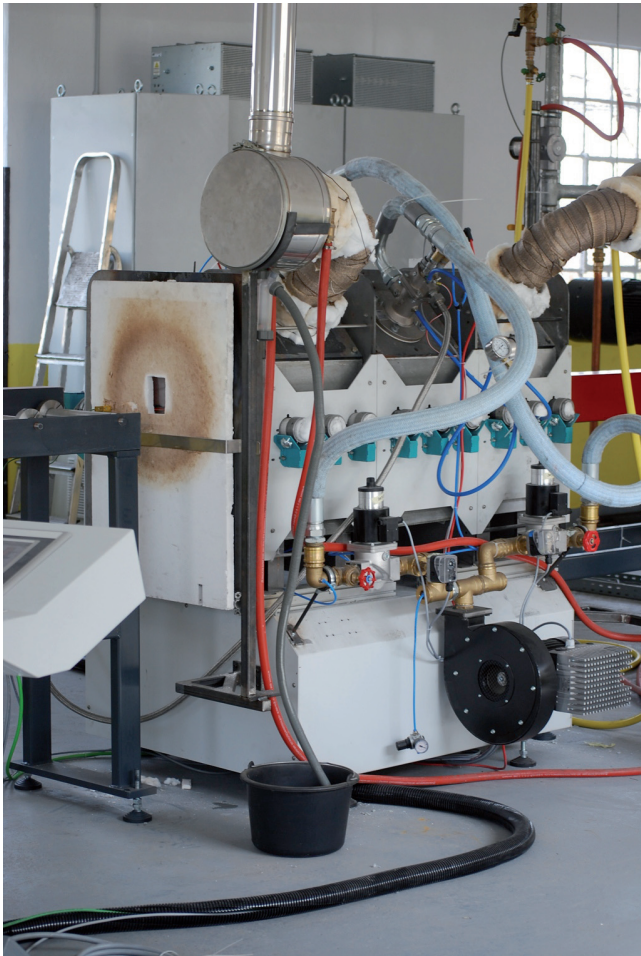


fig.: Plug&Heat Prototype oven with heat-proof material.



fig.: Strong isolation: Inside 1045°C, Outside 25°C

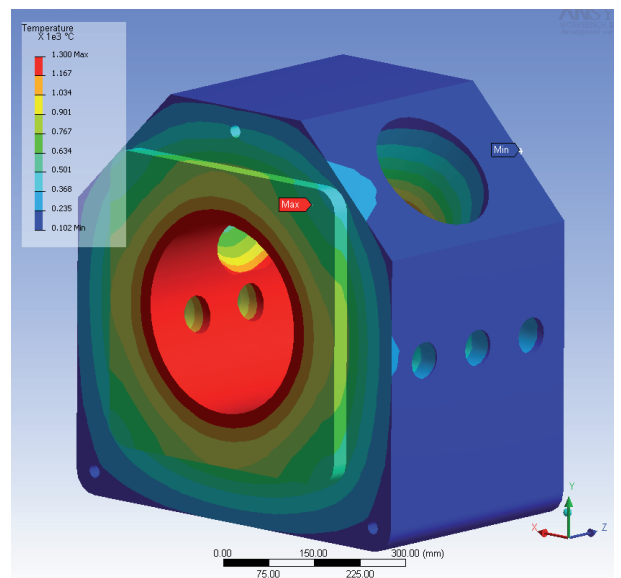


fig.: Oven design with a monolithic concrete housing

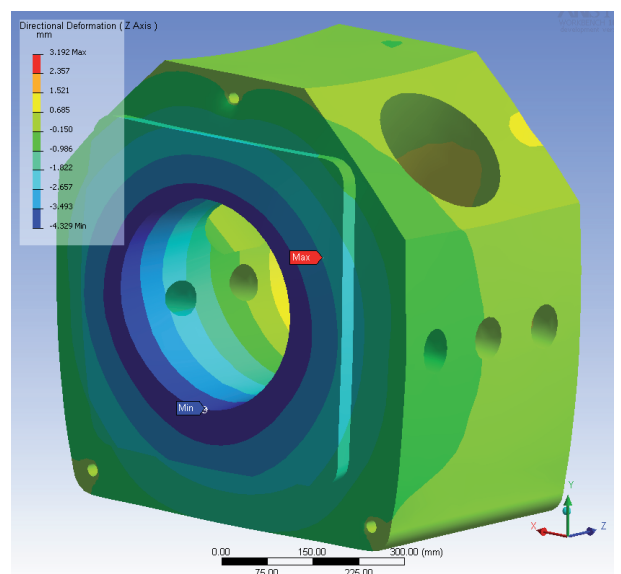


fig.: Low deformations caused by temperature.

PLUG & HEAT monolithic concrete housing

The Quantz heat-proof technology allows to develop and produce individual monolithic concrete housings for small or large oven systems. The Plug&Play respective Plug&Heat idea allows to develop oven concepts, where clients or users can change and configure the oven regarding their requirements.

Special -high temperature gas-burners can be used as well as electronical heating units. The temperature shock from 22°C to 1300°C in several seconds don't effect the housing.

The shape of the concrete housing can be adapted freely regarding the technical parameters of the devices (burner, transportation units, sensors, sockets,)

Even if the geometry of the housing has to change because a larger combustion space is needed, the devices can be used again, only the Quantz housing must be replaced.