# Ceramics Research Centre

## Materials Testing

Material testing is performed for both material evaluation and quality control.

The Ceramics Research Centre ensures the consistency of the test procedures and the reliability of the test results.
The Ceramics Research Centre is very well equipped and performs a wide range of standard tests according to ISO, PRE, ASTM and DIN. For these standard tests a catalogue is available.

Next to standard testing the Ceramics Research Centre can also perform tailor made tests. Conditions as in production environment or customer specified can be applied.
Extensive quality control programs, including sampling, visual inspection and dimensional control can be performed on hour basis or fixed price.

### Testing at Room-Temperature

- Bulk density
- True density
- Apparent porosity
- True density
- Permeability
- Pore size distribution
- Specific surface area
- Particle size distribution
- Cold crushing strength
- Modulus of rupture
- Thermal conductivity
- Youngs modulus
- Hardness
- Toughness
- Roughness
- Workability

### Testing at Elevated Temperatures

- Modulus of rupture
- Thermal expansion
- Refractoriness under load
- Creep in compression
- Permanent linear change on reheating
- Thermal conductivity
- Moisture content
- Loss on ignition
- Residual carbon
- CO-disintegration
- Thermal shock
- Thermal analysis
- Slag attack
- Viscosity
- Softening point
- Ash content
- Alkali attack

### Material sampling

Normally the customer performs the sampling of the materials.
On request the Ceramic Research Centre can perform the sampling.
The samples are machined by the Ceramics Research Centre, unless agreed otherwise. Unformed materials (castables, mortar, ramming mixes etc.) are prepared and treated as bricks for additional testing.

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