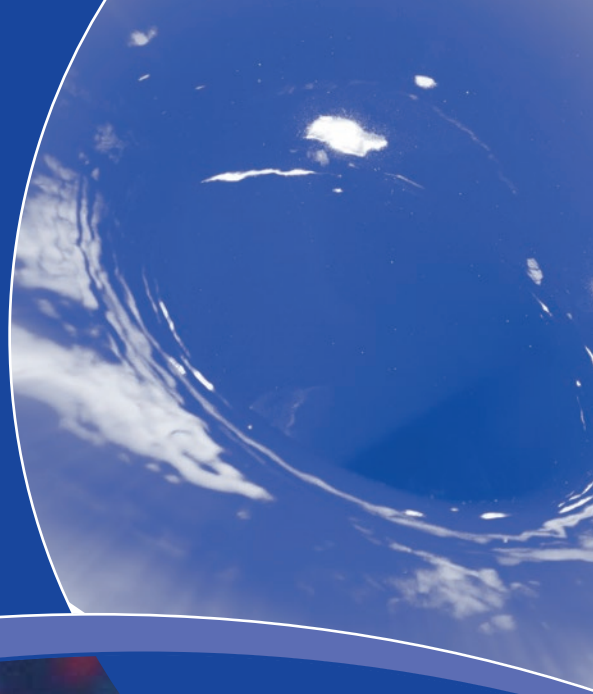
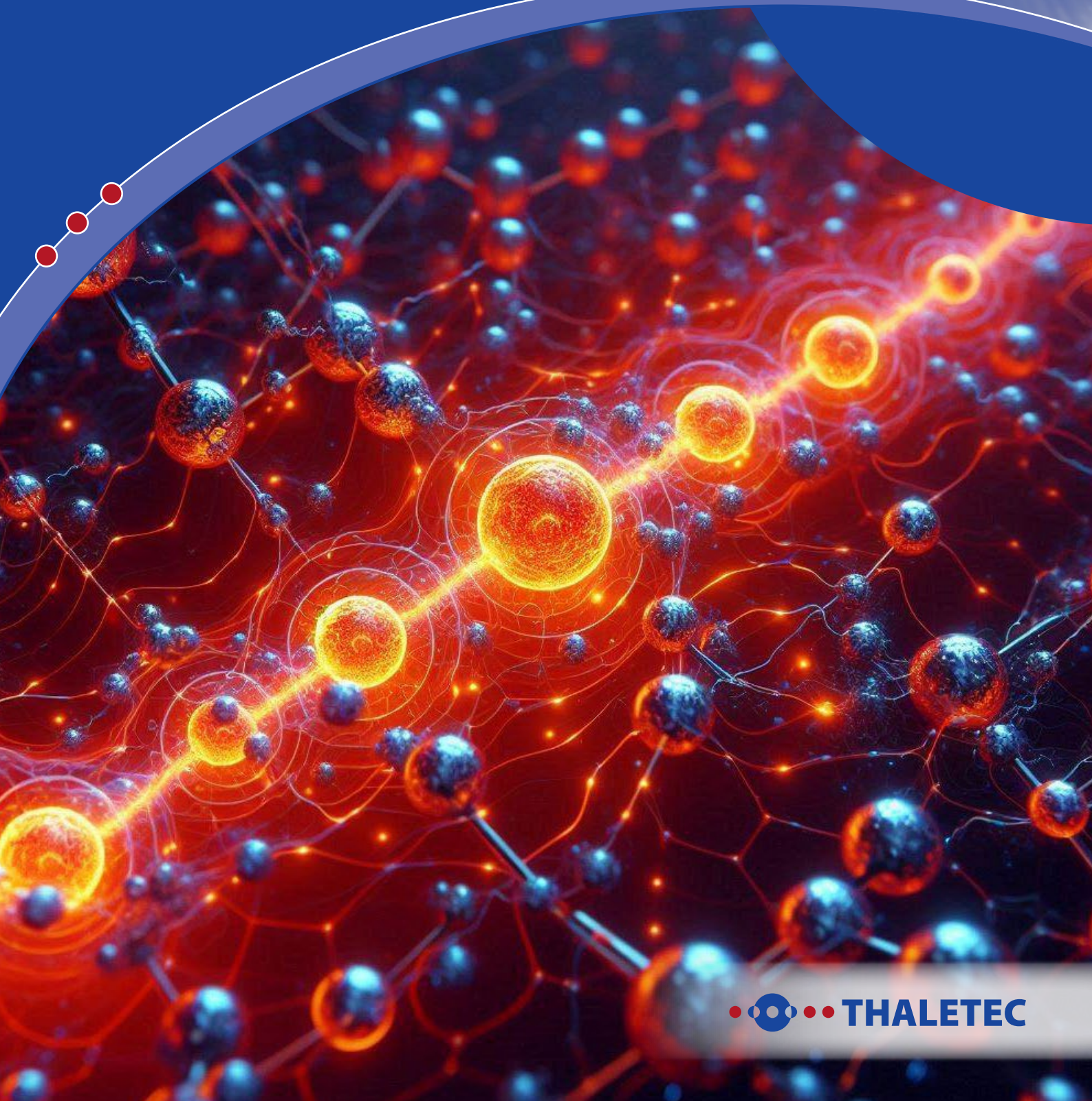
THALETEC Thermosist

Highly thermally conductive technical glass-lining





THALETEC

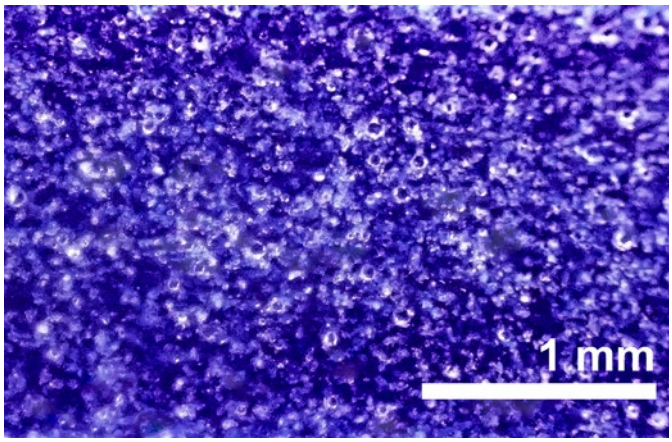
Description

THALETEC Thermosist is a new type of technical glass-lining. It has a 40 % higher thermal conductivity than conventional glass-linings. The significantly increased thermal conductivity is achieved by doping the glass matrix with highly thermally conductive ceramic crystals. Crystalline structures are generally better heat conductors than amorphous glasses, which also include technical glass.

The other properties of technical glass-lining with THALETEC Thermosist correspond to those of conventional chemical glass-linings.

Features

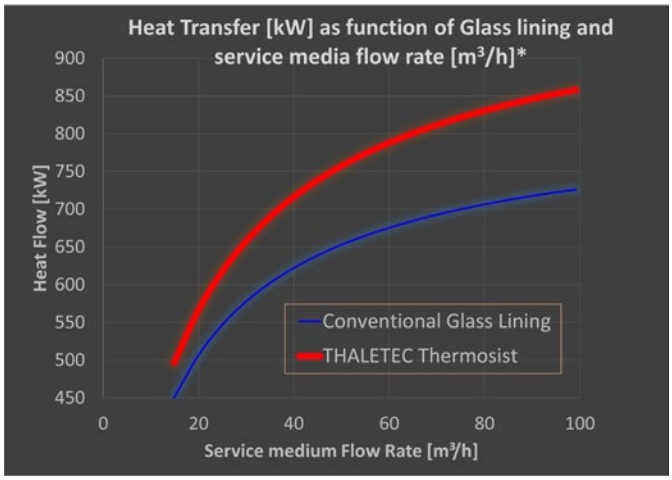
- Technical glass-lining, doped with highly thermally conductive ceramic crystals
- Thermal conductivity 40 % higher than that of conventional chemical glass-linings (confirmed by external test laboratory)
- same application properties as conventional chemical glass-linings
- Surface roughness in the range of < 0.5 µm
- Colour: Medium blue, matt glossy



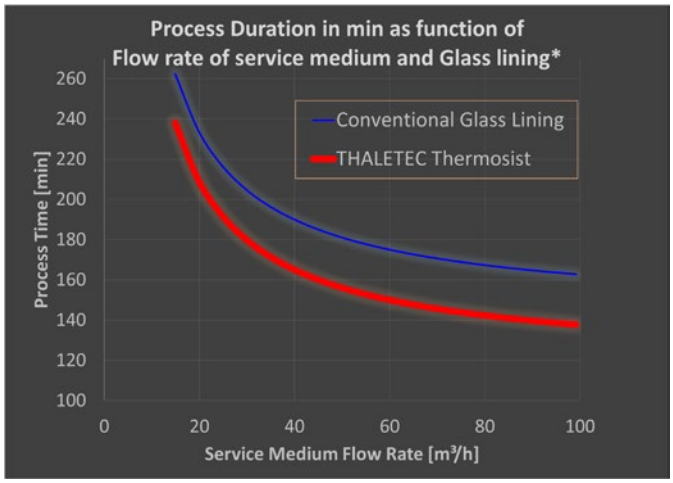
Cross-section of THALETEC Thermosist. The thermally conductive crystals embedded in the glass matrix are clearly visible

Advantages

- Effective increase in the U-value (heat transfer coefficient) on tempered glass-lined surfaces by up to 26 %
- No reduction of the usable glass-lining layer thickness required (DIN EN ISO 28721-1)
- High thermal shock resistance
- Significantly increased heat flow and shorter process times
- Increasing productivity in glass-lined reactors during thermal process steps



Dependence of the process time on the glass type and the flow rate of the service medium in the jacket. At high flow rates, the process time can be reduced by up to 15 %*



Dependence of the process time on the glass type and the flow rate of the service medium in the jacket. At high flow rates, the process time can be reduced by up to 15 %*

***Calculation of example BE16000**

Product: H_2O (Cooling from 80°C to 30°C) | Service medium: H_2O (20°C; jacket) | $N_{Turbine}$ = 60 rpm (CXU Ø1120 mm) | mean flow velocity in jacket v_{jacket} = 1.5 m/s (74.4 m³/h)

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