Application Note

Monitoring of Insulation of Glass Melting Furnaces

The Task
In the glass production process, various raw materials are molten and homogenized in a melting furnace at temperatures up to 1600°C. An effective insulation of the melting furnace is indispensable for this. However, the refractory materials used for lining the furnaces suffer heavy wear and stresses caused by the continuous filling and emptying of molten glass.

In order to prevent instability and breakthroughs due to damaged insulation, the front wall and ceiling temperatures in glass melting furnaces require constant monitoring and checking. This enables users to detect weak points in the melting furnaces early on and to optimize the melting furnace uptime, and at the same time improves operational reliability.

Our Solution
IMPAC Portable Pyrometer Series 8 pro – High quality pyrometers for mobile monitoring and inspection with built-in measured data storage

- Very robust aluminum die-cast housing for use in rough environments
- Focusable precision optics for optimum adjustment even with very small spot sizes
- Large data storage capacity for subsequent analysis of measured data
- Integrated maximum value storage to determine the peak value in a series of measurements
- Fully digital signal processing, resulting in wider temperature ranges as well as higher accuracy

The USB interface permits the use of the optional analyzing software PortaWin. With this software the measured temperature data can be displayed and processed on a PC in real time or used for subsequent analysis.

Your Benefits
- Highly accurate and very fast temperature measurements
- Flexible monitoring of critical areas to avoid instability of ceiling and dangerous breakthroughs e. g. to the walls
- Avoidance of costly loss production by optimal temperature monitoring of critical furnace areas
- Large data storage capacity for complete documentation of all inspection visits
- Optimization of melting furnace uptime and improvement of operational reliability

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