



Industrie Service

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## Infrared Thermography in Plants

A Product Information Sheet by the Plant Engineering Business Area

### Procedure

Infrared thermography (IRT) is a contact-free technique offering measurement and imaging of surface temperatures. It may be used both as a qualitative and quantitative measurement application. While the qualitative application serves exclusively to indicate anomalies in a temperature field, the quantitative approach allows temperature anomalies to be compared with the "normal state" based on the difference in temperature or the actual temperature of an object to be determined.

For the exact determination of an object's temperature, knowledge of its radiation properties is essential. These properties are best determined by conducting reference measurements on the object. The advantage of the contact-free measurement technique is reflected in the variety of measurement tasks in which it can be used.

Advanced interpretation of measurement results calls for specialist know-how which we can provide thanks to our long-standing experience in the field of IR thermography.

### Terms of reference

- Measuring heat loss from plants and buildings
- Determining temperature fields to calculate heat loss
- Identifying leaks in pipes and components
- Wear measurements for industrial furnaces (glass, ceramics, metallurgy)

- Identification of surface temperatures in industrial processing
- Wear measurements of machine parts
- Inspection of electrical equipment

### Our services

- Analysis of the terms of reference, preparation of measurement
- On-site measurement, storing of thermograms
- Preliminary on-site evaluation of results
- Alignment of the measurement scope based on initial results
- Evaluation of the produced thermograms (temperatures)
- In-depth assessment and interpretation of measurement results
- Preparation of a measurement report

### Your benefits

- ▶ Increased operational safety
- ▶ Enhanced plant availability
- ▶ Optimised energy consumption
- ▶ Reduced operating costs
- ▶ Support in the design and planning of new plants
- ▶ Support in quality assurance (e.g. construction)

### TÜV SÜD.

Choose certainty. Add value.

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