

OFFER OF THERMOGRAPHIC MEASUREMENTS

The essence of thermographic measurement

Thermography involves research methods consisting of remote and non-contact evaluation of temperature distribution on the surface of studied bodies. It involves observing and recording the distribution of infrared radiation emitted by objects having temperature above absolute zero. Thermography is used in the diagnosis of thermal conductivity disorders in the objects which are manifested by unheterogeneities of the surface temperature distribution.

Scope of offer

- Inspection of the thermal insulation of buildings and industrial chimneys;
- Detecting leaks in underfloor heating;
- Determination of heat loss of power equipment, such as diagnostics of high voltage equipment (transformers, fuses, connectors, switchgear, etc.);
- Leak detection of underground heating pipes;
- Diagnostic testing of rotating machines;
- Detection of the internal heterogeneity of thermal properties of objects using active thermography (pulse or lock-in extinction); localization of fruit and vegetable tissue damage, detecting objects beneath the soil, studying heterogeneity of the structure of building materials and metals;
- Medical diagnosis (inflammation, skin lesions, limb ischemia).

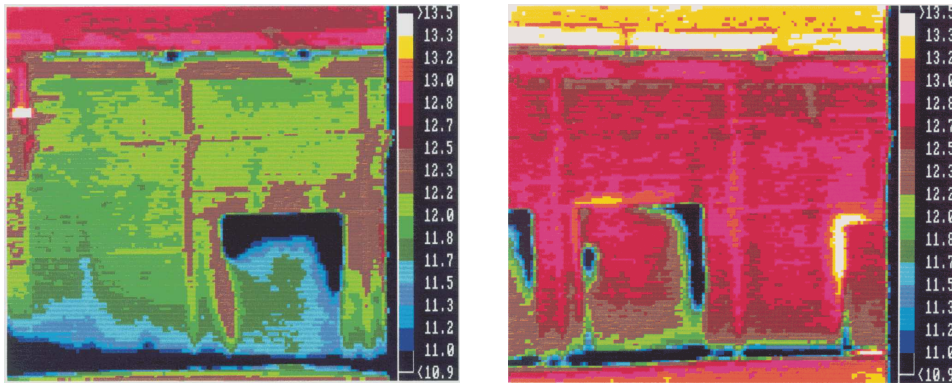
Equipment in possession of laboratory

The laboratory with thermostated air conditions (± 0.5 ° C) controlled by thermo-hygrometer LB-705 is equipped with thermographic cameras SC620 and SC7600 FLIR thermographic cameras with FLIR R&D and ALTAIR software. Active thermography equipment involves heat pulse generator by Automation Technology GmbH, Germany and a set of halogen lamps to heat stimulation.

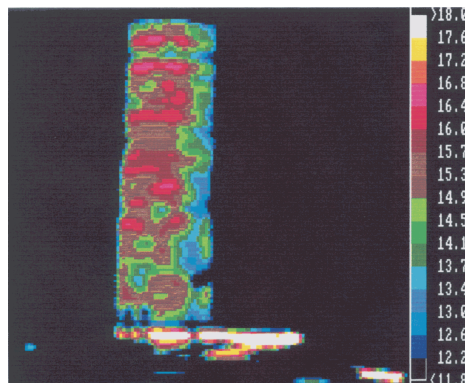
Drafting of reports

- Thermographic inspection results are presented in the form of reports consisting of:
- Determination of the purpose and scope of expertize;
- Description of tested object on the basis of technical documentation;
- Analysis of the emission characteristics of the surveyed areas;
- Detailed description of the measurement procedure (measurement equipment used, the conditions of registration, thermographic measurement methodology);
- Description of geometric orientation of the characteristic areas on thermograms by comparing them with images in visible light. All the thermograms are scaled;
- Printing and quantitative analysis of thermograms obtained;
- Indications of anomalies in distribution of radiation temperature on obtained thermograms; At the request of the client all the thermograms obtained during the inspection can be delivered to the contractor in electronic format (BMP, TIF, JPG).

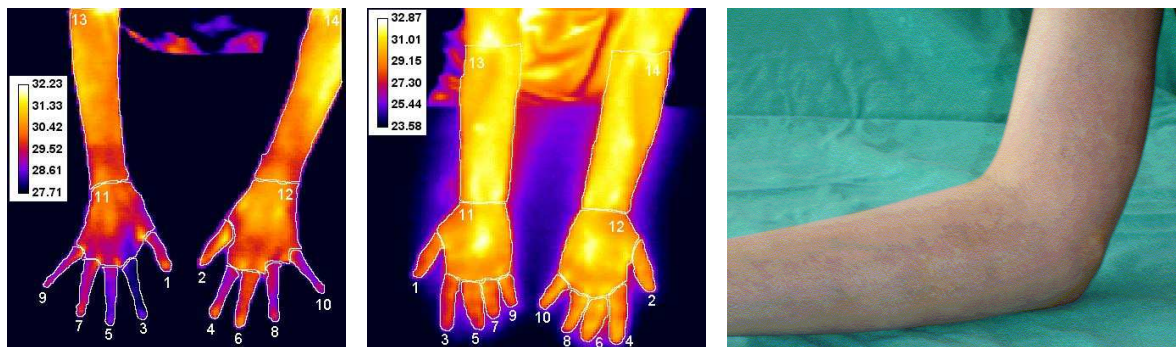
Examples of thermographic inspection



Thermal imaging of two walls in a cold store plant. An example of a flawed (thermogram on the left) and normal (thermogram on the right) wall insulation



Thermal image of the chimney before the heating repairs. Areas with a high temperature indicates the place of the burnt chimney lining



Thermograms of outer (left) and inner (right) sides of the patient's forearm and hand - right hand with the lesions, visible-light image shows the lesions on a forearm