This high precision method using optical scanning was developed by Prof. Dr. Yuri Popov (Moscow State Geological Prospecting Academy) and is new in both Earth science and thermal physics. It is based on scanning a sample surface with a focused, mobile and continuously operated heat source in combination with infrared temperature sensors.

- Measurement range = 0.2 to 25 W·m⁻¹·K⁻¹
- Accuracy = 3 %
- Productivity = up to 60 samples per hour (depending on sample length)
- Sample dimensions = at least 4 cm length with any given shape.
  Maximum length of scanning line appr. 500 mm
- Sample preparation = no polishing or sawing necessary.
  flat and cylindrical surfaces, e.g. drill cores
- Control = Notebook with Windows 2000/NT (™), steering software with online help functions and intuitive user interface.

The results are:

- profiles of thermal conductivity along the samples,
- inhomogeneity of thermal conductivity,
- anisotropy: components of the thermal conductivity tensor for anisotropic solids.


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