

## Features of temperature measurement On the surface of the heat-glass UBiGRUND®

Speaking about measuring the temperature of the surface with Thermal Paint insulation UBiGRUND®, it is necessary to take into account the fundamental difference between this material from traditional insulation, and take into account a number of factors.

For example, when measuring the surface of liquid insulation with contact devices (thermocouple, contact thermometer), measurement error sometimes reaches 30%.

Contactless devices (pyrometer or thermal imager) give a greater 80 - 85% error.

This is due to the fact that the listed devices often have a wave range  $\lambda$  = more than 7 microns.

High heat transfer properties of liquid insulation UBiGRUND® and low degree of black coating leads to a high error when measuring the temperature, for example, a pyrometer - the gradation of which is made using model black emitters and operating in the spectral range of 7-18  $\mu\text{m}$ . Therefore, the inaccuracy of the measurement can reach dozens of degrees on the Celsius scale.



The most accurate measurement of the surface temperature of the objects covered with thermal insulation UBiGRUND® is achieved by the **Elkometr-319** contact device, which has a minimal error of measuring such coatings.

The external sensor of this device type K (TE) has a range of measuring surface temperature from -40 to + 200 ° C. This device is fully certified, and allowed to use in the territory of the Russian Federation.