

The present invention relates to the heat-power engineering. The proposed method for determining heat loss accountable to external cooling of a turbogenerator consists in measuring the temperature of the outside surface of the heat insulation layer as well as an ambient temperature and using the measurement data for determining the heat loss. For the purpose to increase the measurement accuracy, the temperature of the inside surface of the heat insulation layer is measured, and the actual specific heat flux ( $q$ ) through the heat insulation layer is determined from the following equation:

$$q = (q_1 + q_2)/k \text{ W/m}^2,$$

where  $q_1$  - heat flux per an area unit of the outside surface of the heat insulation layer;  $q_2$  - heat flux per an area unit of the inside surface of the heat insulation layer;  $k$  - correction factor,  $k = 1.5 \dots 2.5$ .