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CALIBRATION THERMOELECTRIC HEAT FLUX SENSOR IN THE DIAGNOSTIC SYSTEM OF THERMAL STATE OF ELECTRIC MACHINES

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Authors

V.P. Babak*, S.I. Kovtun**

Institute of Engineering Thermophysics NAS of Ukraine, str. Zheliabova, 2a, Kyiv, 03057, Ukraine,

e-mail: vdoe@ukr.net; sveta_kovtun@ukr.net

* ORCID ID : <http://orcid.org/0000-0002-9066-4307>

** ORCID ID : <http://orcid.org/0000-0002-6596-3460>

Abstract

Prospects and specific features of the application of thermoelectric heat flow sensors in the systems of diagnostics of the thermal state of electric machines are considered. A method for calibrating sensors is improved by implementing a step-by-step procedure, in resulting the verification procedure without demounting the sensor and can be carried out at the site of operation. The correction factor for the refinement of the conversion factor under operating conditions was determined. The correction is a characteristic of the heat flow sensor and depends on the design, technological and thermophysical parameters of a particular sensor

instance that was placed to the heat exchange conditions characteristic for the study object. References 8, figure 1.

Key words: thermoelectric heat flux sensor, conversion factor, monitoring of thermal parameters.

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