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## THE STUDY OF THE TRANSITORY REGIME WHEN AN ELECTRIC RESISTIVE ELEMENT BECOMES HOT

BY

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**Abstract.** Starting from the necessity of the functioning analysis of an electrical resistor through which is circulating a current, the paper evaluates the temperature, electrical resistance and power's way of variation. To exemplify it has been chosen a resistor with big range of variation of the temperature between the in off regime and nominal functioning regime. The analysis is based on the analogy of thermal and electrical phenomena and it uses SPICE modeling.

**Keywords:** electrical heating, resistance, SPICE modeling.