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Information technologies for calculating the effect of wire thickness and insulation material on its heating temperature during operation

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***Abstract*— The paper evaluates the influence of wire thickness and insulation material on its heating temperature during operation. The temperature and time characteristics of wire exploitation under conditions of different load currents are analysed. The ranges of the wire temperature increase during operation are determined for wires with insulation made of polyethylene, polyvinyl chloride, enamel, and rubber.**

Keywords*— *wire, heating temperature, insulation material, insulation thickness, load current, temperature and time characteristics of operation.

I. INTRODUCTION

The issue of improving fire and environmental safety has become particularly relevant in the context of the Russian invasion of Ukraine. Air strikes on chemical, oil refining and energy facilities could result in the release of hazardous chemicals into the environment and cause fires of various sizes.

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