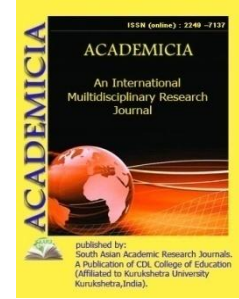


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**APPLICATION OF AUTOMATIC CONTROL AND ELECTRICITY
 MEASUREMENT SYSTEM IN TRACTION POWER SUPPLY SYSTEM**

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ABSTRACT

In that work the methods of organization an automatic control and metering system for electricity (ACMSE) in the traction power supply system of electrified railway transport are presented. We consider the installation of electricity metering devices on an electric rolling stock, similar in their metrological characteristics (accuracy class, minimum interval of reading, etc.). The definition of the level of consumption, specific consumption and unbalance of electricity for the traction of trains is given. Also, consumption of active and reactive electricity, power losses in the traction network, and the magnitude and duration of the regeneration regimes in AC sections are determined. The estimation of the level of power loss in the traction network under various schemes of connection of traction substations (circuits for connecting two-way and one-way power supply of the contact network) is considered.

KEYWORDS: *Control, accounting, Traction network, Reactive energy, Alternating current, Block diagram, Functional diagram, Synchronization, Measuring unit.*

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