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Kulagin D.O., Cand. the technology. Sciences, associate Professor, Zaporizhzhya national technical University

INCREASE OF EFFICIENCY USING OF ENERGY RESOURCES ON THE RAILWAY TRANSPORT

Introduction.

Mode of operation of the locomotive determines the degree of use of power and traction control, reliability and efficiency in specific operating conditions, what is the actual problem. The desire to improve the use of power and traction control is accompanied by the improvement of modes of driving trains, rational use of fuel and energy resources for traction of trains.

When developing rational modes of driving trains of great importance to study and generalize the experience of the best engineers. The growth of qualification of locomotive crews, improvement of quality of repair and maintenance of locomotives necessary for effective use of traction properties and power.

Great influence on the use of the locomotive capacity will also detect system operating locomotives. An important role is played by train schedule, which should provide the most favourable conditions skip areas [1-4].

Material of research.

Experience shows that even in the presence regime cards and implementation of recommended modes of driving trains, are technically feasible for some medium operating conditions, the actual consumption of electricity and fuel in various operators on the same area are different, deviations can be more or less than the established norm [5]. Experienced drivers skilfully take into account the specific operational conditions, quickly make decisions, corrective recommendations regime cards and achieve significant savings of electricity or fuel.

Rational consumption of fuel and energy resources management trains should provide optimal use of the power of the locomotive on the conditions of heating of traction electric equipment, adhesion of the wheels with the rails on hills, limiting, plot. Of course modes of doing trains, rational conditions of use of the locomotive capacity on hills, limiting, not inconsistent with the modes, rational consumption of electricity or fuel.

Great influence on the energy consumption provides technical condition of locomotives, which can have significant differences of characteristics of fuel economy, power and traction characteristics, due to the poor quality of repair and maintenance, the status changes in the between-repairs period, as well as the inconsistent parts of control systems of diesel generators.

Therefore, an indispensable condition of economical consumption of diesel fuel with diesel traction are high-quality Rheostat test after planned repairs adjustable fuel equipment, electrical devices and machines in accordance with the applicable requirements. Significant reserve power saving enclosed in the application of regenerative braking trains. As calculations and experienced trip expansion of landfill use energy recycling gives a great reduction of its consumption [1].

Conclusions.

To reduce the consumption of fuel and energy resources can decrease the mechanical energy of a locomotive and energy losses in its transformation. A significant reduction of mechanical work, you can increase the operating time for the race.

To reduce mechanical work, reducing the average speed of the train and the speed of his entrance to the bows with harmful slopes and uneven speed, the speed of the beginning of braking trains. It should be remembered that the decrease of the average velocity at a given time course unacceptable. The reduction of non-uniformity of speed makes a noticeable effect in saving power and fuel on flat areas path with a relatively rare train stations.

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