

IMPROVEMENT IN LIFE OF WHEELSETS DUE TO WEAR-RESISTANT WHEEL PROFILES

The paper deals with the problem of improvements in life of the wheelset due to a rational use of metal for truing the wheel rims to wear-resistant profiles. In the presence of ITM-73 and ITM-73-01 wear-resistant profiles the pressing problem arose for analyzing their versions in repair considering their advantages. The research subject is to compare versions of wheel truing to mentioned profiles to improve life of wheelsets and to study selecting rational versions of rim truing as related to fault types of wheels and their operational stages. The graphical and analytical method was used to resolve the problem under consideration allowing the estimation of metal saving associated with the ITM-73-01 wear-resistant profile and the determination of a rational version of wheel truing to one of wear-resistant profiles. A number of dependencies of a possible number of wheel truing on geometrical parameters of the rim of a railway worn wheel have been derived in this paper. A rational version of one of wear-resistant profiles related to fault types of wheels and their operational stages can be established using these dependencies. Wheel truing based on the versions proposed results in the increased number of possible retruing the wheelset due to a rational use of metal according to the rim thickness. It is expected that a rational use of these two wear-resistant wheel profiles could be instrumental in improvements of the wheelset life and would result in substantial cost advantages.

Keywords: life of wheelset, truing wheel rims, wear-resistant profile of wheels.

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