
Determination of coefficient of restitution in impact of railway wagons

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Abstract: Experimental testing of the impact of railway wagons has shown that same test conditions with different types of cargo obtained different results. A theoretical model established in this paper enables determination of energy that is lost during the impact and coefficient of restitution. If inappropriate cargo is used, then it is possible to register forces that are more than 50% less than the actual values. It is necessary to determine limit values of coefficient of restitution for every type of wagon and cargo. The results of this paper may be important for improving the international regulations relating to the experimental testing of wagons.

Keywords: determination; coefficient of restitution; testing; impact; railway wagons.

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