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## **The regression analysis as the tool to determine the mathematical model of dynamic stress of the conveyor belt**

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**Abstract.** The belt conveyor system belongs to the continuous transport systems used in various industries. In terms of the belt conveyor operation, a crucial part of a belt conveyor is a conveyor belt. During the operation, the conveyor belt is exposed to the impact of several stresses of various types that result in the belt wearing and aging process. One of the main reasons why a conveyor belt is damaged, and, as frequently is a case, its service life thus terminates, is the dynamic stress. The aim of this article is to determine the relationship between the impact force or the tension force on one side and the weight of material falling onto the rubber-fabric conveyor belt and the impact height on the other side, based on the data obtained from the experimental research.

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