- Название: The Dynamic Model of Conveyor Belt Stresses
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- Реферат: The article considers the causes of dynamic stress when moving a conveyor belt with a material. The main factors of the occurrence of the dynamic resistance in the conveyor system are defined. It is demonstrated what the propagation speed of perturbations substantially depends on the loading level of the conveyor system with the material. When constructing a model of dynamic stresses, Hooke's law was used, which is an accurate approximation for most solid bodies, as long as the forces and deformations are small enough. In the article, the main attention is given to the causes of dynamic stresses at the start of the conveyor system. When calculating the deformations, the inertia forces of the moving material and tape are considered. The analysis of the appearance of dynamic stresses at a constant value of the conveyor belt acceleration and the linear nature of the change in the value of the conveyor belt acceleration was carried out.
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