69) Communications in Computer and Information Science

Volume 998, 2019, Pages 82-96

9th International Conference on Computational and Information Technologies in Science, Engineering and Education, CITech 2018; Ust-Kamenogorsk; Kazakhstan; 25 September 2018 до 28 September 2018; Код 224169

Computer modeling application for analysis of stress-strain state of vibroscreen feed elements by finite elements method(Conference Paper)

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Краткое описание Просмотр пристатейных ссылок (17)

The article presents a three-dimensional solid-state computational model, as well as the results of stress-strain state analysis of feed elements rods of vibroscreen. An algorithm for solving the problem numerically using the finite element method is proposed. The obtained results were used at the designing stage of the platform with feed elements for industrial vibroscreen and subsequently confirmed in work in a real experiment. The stress-strain state of feed elements rods was analyzed for various bulk materials, conditionally designated A and B, sorted by vibrating screen, where feed elements were mounted. These materials, in screening process with varying strength, acted on feed elements rods, the parameters of which did not change for the flow of various bulk materials. Rods perceived this load pressing in different ways, which was shown by the finite element analysis. 