

## **SOLUTION OF ROTATING MASSES OF TRANSPORT SYSTEM USING MATLAB/SIMULINK**

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In the article we give attention to mechanical system and related subject of controlling dangerous vibrations of mechanical systems propulsion. In the center of attention there is namely the mechanical system of conveyor propulsion. In order to specify the intensity of vibrations, dynamic analysis is used and for its realization we have to reduce mechanical system. The article therefore presents also the kinetic differential equations that describe reduced mechanical system with damping. Besides mechanical system there is also a brief description of simulation program MATLAB/Simulink, which is closely related to the topic of controlling torsional vibrations, because this program manages to predict it, to a certain extent. Using this program we are able to solve different kinds of systems and vibrations, in our case it is the three-mass torsionally oscillating mechanical system and this solution is also encompassed in the article. It is important to note that this is only the plan of solution description.