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Estimation of the Vibration Energy Characteristics for Joints of Constructional Elements

Jacek Cieslik

Department of Robotics and Machine Dynamics, AGH University of Science and Technology, Kraków, Poland

Detailed estimation of energy characteristics in vibration structures such as loss factors, potential and kinetic energy, mechanical power flow is important for modeling in many fields of structural acoustics. The paper presents the approach to energy characteristics evaluation for wide range of constructional element joints based on structural intensity analysis. As the result is obtained the precise information on vibration energy flow. The analysis of spatial distribution of structural intensity vector fields enables determination and location of paths, sources and sinks of energy of vibrations in application to the mechanical systems. Gives the particular information on the streams of energy flow. The method is theoretically based and validated in computer simulations. Some selected results of calculations are discussed in particular.

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