The Impact of Vibration on the Technological Head

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The aim of the measurement was the observation (examination) and evaluation of the vibration impact on the technological head in the technology of abrasive water jet when changing the selected technological parameters, namely the feed rate of the technological head. The experiments were carried out on one kind of material - steel HARDOX 500 with a thickness of 10 mm. The impact of the change of the technological head's feed rate (400, 200,100, 50, 40 mm/min) on the size of the vibration acceleration amplitude and its frequency were examined. A database was created from the measured vibration values on the technological head and from that database the data was evaluated in selected softwares (LabVIEW, SignalExpress a Microsoft Excel). Graphical dependencies, frequency spectra covers and covers comparison graph were created from which new findings and conclusions were formulated.

Keywords: Hydroabrasive water flow, technological head, vibration, vibration acceleration amplitude, frequency.

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