CONTRIBUTIONS TO THE ASSESSMENT OF THE VIBRATION BEHAVIOUR OF THE FEED DRIVE ON THE CNC MILLING MACHINE MCV-300

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Rezumat. *Evaluarea comportării vibratorii a maşinilor de lucru şi a utilajelor tehnologice în regim static sau dinamic asigură prelungirea ciclului de viaţă al acestora. Monitorizarea vibraţiilor perturbatoare din lanţurile cinematice ale maşinilor de lucru ajută la prevenirea apariţiei de defecte la componentele acestora. Astfel, se poate stabili şi un program de mentenanţă predictiv pentru maşina studiată. Toate, cu scopul unei intervenţii eficiente, în caz de defecte, care ar influenţa buna funcţionare a maşinii, prin abateri de la parametrii iniţiali de funcţionare. [1], [2], [3], [4]*

Abstract. *The evaluation of vibration behaviour of machinery and technological equipment working in static or dynamics helps to extend their life cycle. Monitoring, vibration disturbing of the kinematic chains of the working machines contribute to prevent defects in their components. Thus, a predictive maintenance program studied of machinery may be established. All this in order to intervene effectively in the event of faults that might affect the proper functioning of the machine, the deviations from the initial operating parameters. [1],[2],[3],[4]*

Keywords: speed vibration, kinetics chain advance, predictive maintenance, defect.

1. Introduction

Assessing the vibration behaviour and the maintenance of machine tools is required to increase their processing accuracy. Monitoring the operation of the machines by predictive maintenance and by the assessment of the vibration behaviour and by the analysis of the vibrations present in the feed drive, respectively, proves to be efficient due to the information it provides in the decision-making process in case of failure. Thus, this research aims to study the vibrations that would result in deviations from the initial geometrical parameters of the feed drive for the FIRST MCV 300 processing centre. The geometrical parameters of the machine tool must be verified both when receiving the machine

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