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SOME ASPECTS OF DAMPING EFFECTIVENESS OF COULOMBIAN DAMPER

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The operation of dry friction dampers (Coulombian dampers) involves ensuring a optimum contact pressure between the rubber rings and rod. Tribological aspects at speeds and amplitudes of vibration are experimentally determined on washing automatic machine. The effect of damping in the longitudinal direction of the damper at high speeds and at low speeds appearances the self vibrations. It is defined the effectiveness of damper and determine the instant transmissibility of the damper.

PROTECTION ELEMENTS FOR MACHINE TOOLS

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The authors of this paper make a brief presentation of the main systems designed to protect the guideways and feed mechanisms (lead screws, pinions, racks, etc.) of the machine tools. The manufacture of such protective elements involves joint efforts of specialists in the field of machine building, textile and artificial leather production area. In this phase, particular emphasis is placed on the textile protections. These protections are complex constructions that include metallic or plastic parts too, besides the textile elements. Specific characteristics are taken into account for designing and optimal selection of the type of material used. These are: do not allow the penetration of solid and liquid impurities into the protected area, type of chips that come into contact with the bellows, weight and maximum temperature of the chips, maximum travel velocity of the bellows, the necessity of synchronized travel with protective elements of the machine tool. The paper also presents some solutions made by the authors on the occasion of the manufacturing or retrofitting some machine tools. The authors intend to develop a methodology to design and implement at request such protection for the widest range of machine tools.

VARIOUS ASPECTS RELATING TO THE GRINDING CHARGE OF THE TUBULAR BALL MILLS

I. The characteristics and composition of the grinding charge

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This paper presents the composition and characteristics of grinding media, to increase efficiency of the grinding process and performance of the ball mills. The correct adoption of grinding media greatly influences: the throughput capacity of mill, the energy consumed by it and the degree fineness of the product. The ratio of the quantity of material and the quantity of grinding balls influence the fineness of the product (at a low value, high fineness).

VARIOUS ASPECTS RELATING TO THE GRINDING CHARGE OF THE TUBULAR BALL MILLS

II. Wear of the grinding media

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This paper presents the influence of the wear of grinding media on the mills performance. Wear of grinding media has a negative impact on the performance of the mill (decreases the throughput capacity of mill, increases the energy consumption for grinding, decreases the degree fineness of the product). To maintain the performance parameters of the mill, it is necessary to rebuild the capacity of grinding media by adding of new balls.

CONSIDERATIONS ON HELICAL GEAR MESHING STIFFNESS

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This paper presents a method for measurement of static mesh stiffness and the results obtained for a helical gear. For this gear the mesh stiffness using FEA analysis method was calculated.

COMPETITIVENESS OF MANUFACTURING SMEs INFLUENCED BY INFORMATICS TECHNOLOGIES

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Small and medium manufacturing enterprises are vital to the Romanian economy. Many small enterprises have not adopted the advanced software technologies required to support the industry and to achieve competitiveness in a global marketplace. The objective of advanced software technologies is to demonstrate the cost savings and efficiency benefits. It can be showed that advanced software technologies can help even very small manufacturing enterprises increase quality, reduce turnaround time, and improve productivity and profitability. At the same time, the purpose of the paper is to identify the challenges and risks of implementing these technologies.

USING MODERN METHOD FOR RESOURCES MANAGEMENT OF A RESEARCH PROJECT

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The paper presents the management of the time and financial resources for a research project concerning a virtual instrumentation laboratory applied to the Non-Newtonian fluids flow processes. The educational software proposed allows the choice of the non-Newtonian fluid specific data and the visualization of its microscopic structure, these technical information being organized into a data base. It was necessary a structural analysis for the greases reability determination, which is useful in all industrial sectors. The purpose of this paper will discuss developing and analyzing the Critical Path Method with continuous process improvement business structures to improve task execution reliability.