
ABSTRACTS

**BASIC PRODUCTION SCHEDULING CONCEPT SOFTWARE
APPLICATION IN A DETERMINISTIC MECHANICAL PRODUCTION
ENVIRONMENT**

(pages 1-4)

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Keywords: Production Scheduling, Permutation Flowshop, Deterministic Mechanical Production, software**Abstract:** This paper deals with production scheduling in a deterministic mechanical production environment. We focus on minimizing the objective function makespan using local search. Our aim is to present developed software solution with implemented basic scheduling concepts and our approach to scheduling in deterministic mechanical production environment on the simple case of 4 jobs and 5 machines. The outputs of solution are presented in the figures and they gives reasonable results. As we want to use combinatorial optimization we have implemented a heuristic approach. This heuristic is known as a Local Search Method. This method is commonly used in scheduling.

**UTILIZATION OF THE SOFTWARE PRODUCT TECNOMATIX JACK IN
OPTIMIZING OF WORKING ACTIVITIES**

(pages 5-11)

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Keywords: ergonomics, worker, workplace, method, design**Abstract:** The article deals with the issue of ergonomics in the workplace in the environment of simulation program Tecnomatix Jack. Ergonomics deals with a complex design of work environment and environment, also deals with projection of work tools, machinery construction and with the principles of occupational health in order to reduce human effort while increasing worker productivity and efficiency of its work. The benefits related to the use of simulation programs are verifiable mainly in avoided costs that would be necessary to invest in case of direct application the proposals into practice. Designing of ergonomically optimal workplace is based on fundamental principles that take into account the adaptation of work for each employee and for each job role.

NUMERICAL SIMULATION OF STEEL PLOUGHSHARE

(pages 13-16)

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Keywords: FEM, Blade, Critical force, Yield Strength

Abstract: The text presents information about the sphere of a steel ploughshare structural design. Blade is designed as a part of the fire-recovery track vehicles. Main advantage is a general range of application in various severe conditions. The article explains the basic principles of a design proposal that are subsequently verified by a numerical simulation. The authors made two types of simulations. The first one is a calculation, when the ploughshare is under standard load created by working conditions. Second case is, when the ploughshare is under critical load. The main message of the text is present basic know-how, how to design the steel ploughshare and evaluate the plastic zone at blade, which was created by under critical load.

PERFORMANCE EVALUATION INDICATORS OF UNIVERSITY SPIN – OFF COMPANIES

(pages 17-23)

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Keywords: university spin-off, companies, evaluation of innovation performance, innovation potential, evaluation methods

Abstract: Article deals with the performance of university spin-off companies. First step of this contribution is to evaluate the theoretical results of given problems and specifications of spin-off companies. The work evaluates and compares different and existing methodologies used in the scientific literature with the characteristics of used factors. On the basis of processed methodologies there have been create the list of factors needed for evaluation of innovative potential of university spin-off companies. It was processes by comparative method. The result is a proposal of concept evaluation of recommended methodology.
