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ABSTRACT

MATERIALS SCIENCE RESEARCH AND DEVELOPMENT

**EFFECT OF SINTERING ON
DIMENSIONAL CONTROL OF
FERROUS PM ALLOYS**

**Mihaela MARIN, Elena DRUGESCU,
Octavian POTECASU, Rui CORDEIRO
SILVA**

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Key words: powder metallurgy, iron powder, dimensional changes, green density, sintered density.

Abstract: *The dimensional changes of iron and low alloy steel compacts during sintering are of considerable interest for the production of sintered parts. The present paper has the objective of studying the dimensional behavior of a iron powder and low alloy steel powder during presing and sintering. The powders were obtain by water atomization.*

**FUNCTIONALITY VERIFICATION OF
THE “3D_Sim” SOFTWARE FOR
CASTING SOLIDIFICATION
SIMULATION OF PARTS CAST FROM
EUTECTIC ALLOYS**

**Ioan CIOBANU, Ionel Cincă LUPINCA,
Sorin Ion MUNTEANU, Aurel CRIȘAN,
Vlad MONESCU**

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Key words: eutectic alloys, software, 3D simulation, casting, solidification.

Abstract: *At the „TRANSILVANIA” University of Brasov, the authors of this paper realized a software for 3D simulation of*

eutectic alloys castings solidification. The paper presents some results of the researches done by the authors in order to verify the functionality of this software. The results obtained simulating the solidification of a casting with 3D_Sim software were compared with the results obtained using a software, recognized at an international level. The study showed that the two software lead to very close results.

**THE CHARACTERISTICS OF
CERAMICS USED IN ORTHOPEDIC
IMPLANTS**

Virgil GEAMĂN

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Key words: HIP, orthopedic, implant, ceramics.

Abstract: *All metal and ceramic alloys used for manufacture of orthopedic implants are solidified solutions of crystals. For optimum mechanical properties of the metallic orthopedic device, the crystal size in the alloy must be uniform, the structure must be free of voids, and the alloy should not contain any impurities. Because it is virtually impossible to prevent some of these defects to occur in cast materials, the manufacturers use mechanical working of the cast alloys to close the voids between individual crystals and to expel the impurities. One such method is done by Hot Isostatic Pressing (HIP).*

ECONOMICAL MANAGEMENT

RESULTS OF EXACT AND OF INEQUABLE – LINEAR CREDIBILITIES FOR A TYPE OF NON-LIFE INSURANCE CONTRACT

Gheorghe V. LEPĂDATU

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Key words: premiums, the linear credibility formula, the exact credibility premium, applications in the actuarial calculations.

Abstract: *This is an original paper, which analyses some practical insurance problems of non-life insurance, with applications in the actuarial calculations that can be solved by means of credibility theory. All numerical results in this paper were obtained using the linear credibility premium and the exact credibility premium, i.e. the best risk premium-in the sense of weighted mean squared error and the best linear credibility estimator, which minifies the exponentially weighted squared error loss function. Examples of the credibility results for the linear premiums, as other applications for the exact credibility premium will be given and discussed. It will give more insight and understanding of the theoretical*

aspects and it will point out the way to the practical possibilities of the credibility models, and of the risk premiums.

ACCOUNTING LAW RATIO WITH THE MODERN SOCIETY AND CONTEMPORARY ECONOMY BASED ON KNOWLEDGE

Nelu ANGHEL

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Key words: accounting law, globalization, owner's equity, costs, IAS/IFRS.

Abstract: *The accounting information relevance for company patrimony approach is both an economic theoretical issue and an accounting law one. Apart from the norms regarding significance breakeven and economic axiom, contractual aspects are also important. The most precise, organized and significant data can be obtained only from accounting. In this way, managers and administrators would like to get information as much as possible ignoring the real capacity of accounting. For this kind of situations, it is the accounting law that puts things into light.*

ENVIRONMENTAL ISSUES

VISUAL POLLUTION AND AESTHETIC EDUCATION

Daniela MARINESCU, Petrică TRUȘCĂ

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Key words: Visual pollution, ecological experiments, aesthetic education, environment.

Abstract: *Pollution is one of the most insidious forms of mass attack toward the life of assemblies of people. The fact that, as human society has progressed it became more*

and more destructive in the production process and the personal household use is a paradox although it would have been expected the other way around given the accessibility to so many technical and know-how devices. Almost without realizing people have set out huge ecological experiments that encompass the whole Earth. Not even nowadays do they have the necessary means to systematically observe the results.