

SUMAR Metalurgia nr. 9 2008

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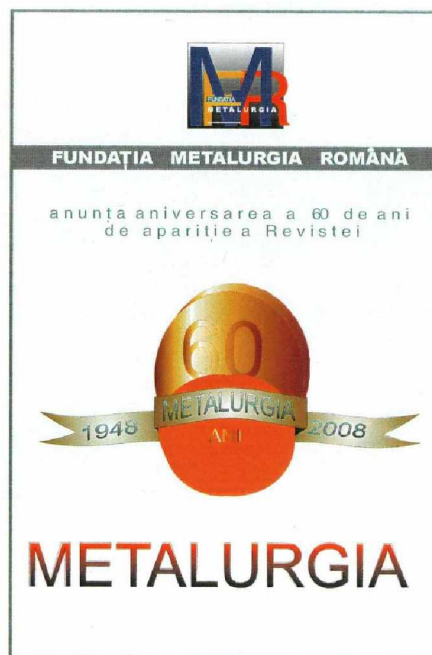
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ABSTRACT Metalurgia nr. 9 2008

SUSTAINABLE DEVELOPMENT 5-13

D.C.:621.771.23

Nicolae Avram

Mathematical models required for hot strips rolling mill are presented. Mathematical expressions of plastic deformation model are deducted, and three submodels are created: for rolling force, for power and for couple.

Metalurgia(60),nr 9 pg 5

D.C.:669.018.25

Ana Veleşanu Heat treatment applied to cobalt ferrites by precipitation are presented, together with optimal parameters setting for treatment. Interpretations of result of thermogravimetric, diffractometric and electronic microscopy analysis, is also made in the paper. Researches were performed in Bourgogne-ESIREM- Dijon University France.

Metalurgia(60),nr 9 pg 9

MATERIALS SCIENCE RESEARCH AND DEVELOPMENT 14-45

D.C.: 669.2/.8.018

Rodica Sterie N.Panait P.Moldovan

In this paper, experimental results obtained at grain refining of 6060, 6063 and 6082 alloys with AlTi5B1 master alloy are presented and are explained. The examination of samples taken from different areas of industrially cast billets was carried out by optical quantitative microscopy and scanning electron microscopy SEM/EDS. The benefic effect of titanium and boron on decreasing of grain size was observed, which is due to both morphology of TiAl₃ intermetallic phase and to the presence of (Al_{1-x}Ti_x)B₂ complex boride in AlTi5B1 master alloy. After addition of refiner in the melt, before casting, the grain size decreases at 80–118 µm, and the influence of the content of alloying elements (Mg and Si) on structure refining degree is practically very small. **Metalurgia(60),nr 9 pg 14**

D.C.:669.2&.8.018

. CIOBANU Ioan ,IULIANU Diana The paper analyzes the importance of a series of materials used for the casting of art and interior decoration objects. Starting from the main technological and aesthetic properties of each material an advanced comparative multi-criteria analysis is carried out from the viewpoint of achieving art and interior decoration objects. The analysis yields a performance coefficient for bronze that rates it practically at the same level as precious metals like gold, silver and platinum. Thus the rationale for most art works being cast of bronze is highlighted. **Metalurgia(60),nr 9 pg 21**

D.C.:539.371

AnaLuciana RUS Marius ,TINTELECAN

In the last decades aluminium alloys sheet forming at high temperatures has become of great interest in the academic research. The possibility of producing complex shaped parts in a one step process has attracted also many industrial researchers. The material which has been studied in this paper is the commercial aluminium alloy 2024-T3. This has been processed in thermomechanical way and has been obtained the sheet with grains refined (8÷10 µm), typical for superplastic behaviour of metallic materials. The discs from 2024 aluminium alloy sheet were superplastic formed in hemispheres at constant forming pressures at temperatures of 460°C and 470°C. The temporal change of pole height of the hemispheres has been measured. The thickness variation at the pole of hemispheres walls, also the variation of gas pressure forming height during forming has been experimental examined. At all the forming temperatures, the smallest thickness of hemispheres walls was obtained at the pole of the hemispheres where were produced cracks.

Metalurgia(60),nr 9 pg 32

D.C.:669.056.9

Ionică Cîrciu, Mircea Mustață Main aspects of modelling, using the finite elements method, in order to obtain stratified structures with special properties and destinations are presented in this paper. For this purpose, the nonconventional process by explosion is utilised **Metalurgia(60),nr 9 pg 41**

EMERGENT MATERIALS.....45-54

IVĂNUȘ Daniela

Key words: characteristic ions, mineral waters

This study takes into consideration the mineral waters from one of Oltenia's regions, The West Plain, an area without tradition as far as this activity field is concerned and its main purpose is to draw the specialists attention regarding these waters. The opening up of the mineral springs from Gighera-Dolj would bring great benefits both by their healing potentialities and by their properties that would make this area appropriate for the balneologic field, taking into consideration the fact that it is situated in the neighborhood of the Danube Flood Plain.

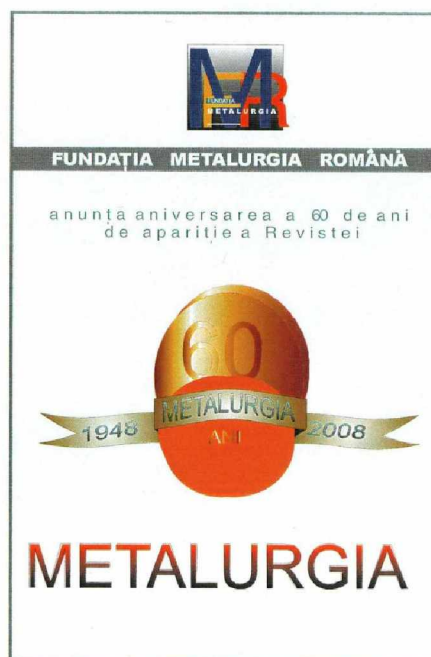
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ECONOMIC AND FINANCIAL MANAGEMENT. ACCOUNTANCY IN METALLURGY 50-58

Gheorghe V. Lepădatu Nicula Ileana Key words: Financial statements, balance sheet, income statements, cash flow statement, IAS/IFRS

The provision of transparent and useful information on market participants and their transaction is essential for an orderly and efficient market, and it is one of the most important preconditions for imposing market discipline. Left to themselves, markets may not generate sufficient levels of disclosure. Market forces would normally balance the marginal benefits and marginal costs of additional information disclosure and the end result may not be what the market participants really need.

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