

CONTENTS

MATERIALS SCIENCE

Daniela Alina NECȘULESCU: NEW TECHNOLOGIES TO ENHANCED THE PROPERTIES OF 7075 ALUMINUM ALLOY

.....5

Ioan SÂRBU, Emilian Ștefan VALEA: COMPARATIVE CHARACTERIZATION OF PLASTIC TUBES FOR BUILDING INSTALLATIONS

.....11

Mihai NEAGU MANICATIDE, Patricia NEAGU MANICATIDE, Ana VEȚELEANU, Ioan CIOBANU: RESEARCHES CONCERNING MATHEMATICAL MODELLING OF SOLID STATE STRUCTURAL TRANSFORMATIONS THAT TAKE PLACE IN MICROALLOYED STEELS

.....19

Liliana SANDU, Sorin POROJAN, Florin TOPALĂ, Radu CIULUVICĂ, Daniela STANA, Cristina ALEXANDRESCU: DIGITAL EVALUATION OF DISCONTINUITIES ON DENTAL ALLOYS MICROPLASMA WELDS

.....24

Raluca NEAMȚU, Radu COSTEA, Mihai-Bogdan BUCUR, Victor GHIȚĂ, Kiro PAPAOKA, Augustin MIHAI: THE ROLE OF TITANIUM AND ITS ALLOYS IN THE PROCESS OF OSSEOINTEGRATION

.....28

ENVIRONMENTAL ISSUES

Constanța POPESCU, Constantin POPESCU: THE RELATIONSHIP BETWEEN MAN AND NATURE AND THE CORRELATION BETWEEN ENVIRONMENT AND DEVELOPMENT

.....32

Ioan Valentin PETRESCU-MAG, Benone PĂȘĂRIN, Camelia Fîrța TODORAN: METALLURGICAL, AGRICULTURAL AND OTHER INDUSTRIAL RELATED CHEMICAL POLLUTANTS: BIOMONITORING AND BEST MODEL ORGANISMS USED

.....38

Camelia Fîrța TODORAN, Ioan Valentin PETRESCU-MAG, Alexandru Dorel TODEA: TWO WAYS OF ENVIRONMENTAL MONITORING OF HEAVY METALS FROM AIR: NATIVE AND TRANSPLANTED LICHENS

.....49

Gabriela MANEA, Octavian COCOȘ, Adrian TIȘCOVSCHI, Viorel NEGULESCU: THE CREATION OF GREEN BELTS AND CORRIDORS: A MAJOR CHALLENGE FOR BUCHAREST CITY

.....52

Lidia BALAN, Stelian TIPA, Elena DOVAL, Dragos MICU: ENVIRONMENTAL POLLUTION AND HUMAN HEALTH

.....56

ECONOMICAL MANAGEMENT

Dan SĂVESCU, Rodica POPESCU: TECHNOLOGICAL TRANSFER REALISED BY BUSINESS INCUBATORS

.....61

Dan SĂVESCU, Rodica POPESCU: CONCEPTS OF PROJECT'S MANAGEMENT

.....66

Dana BLIDEANU, Mirela DIACONESCU, Yvonne Iulia LACROIS: ROMANIA IN THE CONTEXT OF

RECENT EVOLUTIONS IN INTERNATIONALIZATION AND GLOBALIZATION OF HIGHER EDUCATION

.....69

Ecatarina IONESCU, Mihaela Cristina DRAGOI, Bogdan PATRICHI, Elina TEODORESCU, Raluca GRIGORE: LIFE QUALITY FROM THE PERSPECTIVE OF THE RELATIONSHIP BETWEEN KNOWLEDGE AND RESEARCH IN THE MEDICAL FIELD

.....76

Andreea Raluca CĂRĂGIN, Irina Eugenia IAMANDI: THE EVALUATION SYSTEM OF HIGHER EDUCATION PERSONNEL. AN EMPIRICAL ANALYSIS ON THE ROMANIAN CASE	Florina GRECU, Liliana ZAHARIA, Cristina GHITA, Lavinia VACARU: THE DYNAMIC FACTORS OF HYDROGEOMORPHIC VULNERABILITY IN THE CENTRAL SECTOR OF THE ROMANIAN PLAIN
80	139
Adriana SCRIOȘTEANU, Daniela POPESCU: LOGISTICS AND COMPETITIVE ADVANTAGE	Elena SIMA: THE EFFECTS OF IMPLEMENTING THE PREDICTIVE MAINTENANCE FOR THE SN 400 TURNER LOCATED IN A COMPANY THAT HAS AS OBJECT OF ACTIVITY THE MANUFACTURING OF CAR PARTS
85	149
Liliana Nicoleta GRIGORE, Camelia CANDIDATU: RESEARCH AND DEVELOPMENT ACTIVITIES WITHIN THE CONSORTIA : UNIVERSITIES - RESEARCH INSTITUTES - INDUSTRY. THE CHARACTERISTIC FEATURES OF THE INVOLVEMENT OF METALLURGICAL FIELD IN THE CONSORTIA	Gheorghe V. LEPADATU: FROM THE COST ACCOUNTING TO THE MANAGEMENT ACCOUNTING, ACCORDING TO THE NATIONAL REFERENCE MARK OF FINANCIAL REPORT APPLIED IN THE METALLURGICAL INDUSTRY
89	153
Valeriu BRABETE, Cristian DRĂGAN, Magdalena MIHAI: CONSIDERATIONS REGARDING THE USEFULNESS OF SYNTHESIS ACCOUNTING INFORMATION FOR COMPANY'S PERFORMANCES ASSESSMENT	Calin Florin BABAN, Marius BABAN: AN EXPLORATORY STUDY OF KNOWLEDGE MANAGEMENT PRACTICES IN ROMANIAN UNIVERSITIES WITHIN THE UNIKM ACADEMIC RESEARCH CONSORTIUM
93	157
Adrian POPA, Ani MARINEANU (DUMITRACHE), Dragoș Laurențiu ZAHARIA: CONSIDERATIONS REGARDING RISK MANAGEMENT	Gheorghe V. LEPADATU: MODERN APPROACH OF THE EQUITIES RELATED TO THE CONTINUOUS IMPROVEMENTS OF THE INTERNATIONAL FINANCIAL REPORTING STANDARDS APPLIED IN INDUSTRY
99	163
Cristian DRĂGAN, Valeriu BRABETE, Magdalena MIHAI: DEMANDS REGARDING THE IMPLEMENTATION OF INTERNAL AUDIT IN THE CONTEXT OF INCREASING ITS CONTRIBUTION TO DECISION MAKING PROCESS	Sidonia Otilia CERNEA, Daniel Valeriu VLAD, Viorica Irina GÂRBO, Radu Florin PINTEA: CONSIDERATIONS REGARDING THE ADOPTION OF REVERSE LOGISTICS – AN E-BUSINESS APPROACH
105	168
Elvira NICA: TRAINING AND DEVELOPMENT - PRIORITY ACTIVITIES OF HUMAN RESOURCES MANAGEMENT WITHIN PUBLIC ADMINISTRATION	Viorica Irina GÂRBO, Daniel Valeriu VLAD, Radu Florin PINTEA, Sidonia Otilia CERNEA: ECOLOGICAL RISKS AND THEIR UNDERWRITING BY INSURERS
110	172
Gheorghe V. LEPADATU: THE ACCOUNTING PROCEDURES AND THEIR INTEGRATION IN THE GENERAL SYSTEM OF A MODERN COMPANY IN THE METALLURGICAL INDUSTRY FIELD	Dan GHEORGHE: THE LOGISTIC CENTRE, EXPRESSION OF THE DISTRIBUTION GLOBALIZATION
114	177
Marius MOTOCU: DEVELOPING STRESS TESTING AS RISK-MANAGEMENT PRACTICES	Georgeta BARBULESCU, Gabriela IONESCU, Romulus ANDREICA: LINKING THE INVENTIVE PRINCIPLES OF TRIZ METHOD TO EWS ETHODOLOGY
118	180
Cezar GOTCU: MEASURING THE EFFICIENCY OF INVESTMENTS IN RISK CONDITIONS	Laurențiu Cătălin FRĂȚILĂ, Adrian Dumitru TANȚĂU, Cosmin GRIGORE: PREDICTING FIRMS' PERFORMANCE USING BENCHMARKING INDICATORS
124	185
Cezar GOTCU: ACHIEVING A MODERN MANAGEMENT THROUGH MAKING EFFICIENT THE INFORMATION PROVIDED BY ACCOUNTING	George Alin HARALAMBIE: ROMANIA'S PUBLIC DEBT IN THE CONTEXT OF FINANCIAL AND ECONOMIC CRISIS
127	190
Elena DIACONU, Lucian POPESCU: THE COMPUTATION OF THE DIRECT COSTING METHOD IN METALLURGY	
130	

George Alin HARALAMBIE: **THE IMPACT OF FISCAL POLICY OVER THE NATIONAL BUDGET**

.....195

Octavian STROIE, Daniela HINCUI, Robert SOVA: **THE PROCESS OF ASSESSING RISKS IN AUDITING RESEARCH ORGANIZATIONS**

.....199

Gheorghe V. LEPADATU: **THE ROLE OF FINANCIAL STATEMENTS IN THE MANAGEMENT OF REPORTING COMPANIES**

.....206

SOCIAL ENGINEERING AND OTHER ACTIVITIES

Laura COMĂNESCU: **THE EVALUATION OF THE GEOMORPHOSITES' VALUE. CASE STUDY THE BUCEGI MOUNTAINS**

.....212

Steluta RADU, Aurel CHIRAN, Elena GÎNDU, Andy-Felix JIȚĂREANU: **RESEARCHES CONCERNING THE DYNAMIC OF THE MINERAL NUTRIENTS CONTENT AT THERMICAL TREATMENT OF SEMI-MANUFACTURED POULTRY PRODUCTS USING THE "KNOWHOW" TECHNOLOGICAL EQUIPMENT**

.....217

Steluta RADU, Mihaela CONSTANDACHE: **THE DYNAMICS OF THE ESSENTIAL AMINO ACIDS CONTENT OF THE BAKERY PRODUCTS FORTIFIED WITH NATURAL ADDING'S FOR OBTAINING ECOLOGICAL FOOD PRODUCTS USING THE "KNOWHOW" COOKING BAKERY EQUIPMENT**

.....223

Cristian Oliviu BURADA: **DIFFICULT SOILS FOUNDATION, CALCULATION AND IMPROVEMENT SOLUTIONS**

.....229

Cristian Oliviu BURADA: **LABORATORY TESTS FOR ASPHALT MIXTURES**

.....233

Viorica TOMA: **INNOVATION AND CREATIVITY WITHIN THE ECONOMICAL ORGANIZATIONS NEW PRODUCTS – THE MAIN FORM OF MANIFESTATION OF THE CREATIVITY**

.....238

Viorica TOMA: **EUROPEAN UNION STRATEGY FOR BUILDING A KNOWLEDGE-BASED ECONOMY**

.....250



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REDACTION

ABSTRACT

MATERIALS SCIENCE

NEW TECHNOLOGIES TO ENHANCED THE PROPERTIES OF 7075 ALUMINUM ALLOY

Daniela Alina NECŞULESCU

.....5

Key words: 7075 aluminum alloys, recrystallization, super plasticity, retrogression, re-ageing, heat treatments.

Abstract: 7000 series aluminum alloys are currently machined from the wrought state with much waste. There is therefore a motivation to identify effective near net shaping routes. Semi-solid processing is one such potential route. It relies on the thixotropic behavior of alloys with non-dendritic spheroidal microstructures. In the semisolid state the material thins when sheared and will flow to fill the die. When worked material is reheated, it recrystallizes and moving into the semisolid state, the required spheroidal microstructure develops. Here we examine the early stages of spheroid formation in 7075 aluminum alloy reheated from the as-supplied T6 condition. This alloy is very resistant to recrystallization in the solid state due to the presence of dispersion particles pinning grain boundaries. There is a sudden increase in the appearance of spheroidal grains. There is a close association with the position of the first liquid to form. On reheating as-supplied material to around 580°C (fraction of liquid ~5%), a fully spheroidal microstructure can be obtained. The study of the influence of the retrogression and re-ageing heat treatments (RRA) on the mechanical properties and microstructure of 7075 show that RRA are capable of producing a material with mechanical and stress corrosion strengths higher than those presented by the T6 temper; this remaining true even for a lower range of retrogression temperatures

COMPARATIVE CHARACTERIZATION OF PLASTIC TUBES FOR BUILDING INSTALLATIONS

Ioan SÂRBU, Emilian Ştefan VALEA

.....11

Key words: Building services plastic materials, Composites, Mechanical properties, Thermal properties, Comparative analysis, Energy saving.

Abstract: The development of modern technologies in chemical industry has allowed the production of plastic tubes, corresponding from point of view of material quality and duration of use, with superior performances to classical materials. The great number of sorts offered by producers, as the diversity of possible execution technologies, selectively impose their promotion, so could be used those types of materials that meet the requirements imposed by final destination of the installation. That is why it is necessary a correct information about these materials, in order to identify the differences from metallic tubes systems, and also about the characteristic proprieties which differ among themselves. The paper presents the main plastic materials used for the manufacturing of tubes for building services and the general properties of them and is performed a comparative analysis of the physical, mechanical, geometric and hydraulic characteristics of the tubes produced both from classical metallic materials and from different plastic materials,

highlighting also the specific consumption of energy embedded in manufacturing these tubes, as the use possibilities for them.

RESEARCHES CONCERNING MATHEMATICAL MODELLING OF SOLID STATE STRUCTURAL TRANSFORMATIONS THAT TAKE PLACE IN MICROALLOYED STEELS

Mihai NEAGU MANICATIDE, Patricia NEAGU MANICATIDE, Ana VEŢELEANU, Ioan CIOBANU

.....19

Key words: mathematical modelling, microalloyed steel, grain size.

Abstract: The paper presents the researches made in order to analyse the influence of plastic deformation parameters upon the structural characteristics of microalloyed steel, having the chemical composition: C = 0,41%; Mn = 1,42 %; V = 0,1 %. This type of steel is characterized by the fact that after the application of a hot plastic deformation, controlled as thermal regime and as deformation diagram, the structural transformations lead to the obtaining of a thin austenite granulation at the temperature of the end of plastic granulation, which, at cold transforms itself into a thin ferrite-perlitic structure. The steel is ensured with superior resistance and toughness characteristics and it is permitted its utilization in the motor vehicle industry without secondary thermal treatment

DIGITAL EVALUATION OF DISCONTINUITIES ON DENTAL ALLOYS MICROPLASMA WELDS

Liliana SANDU, Sorin POROJAN, Florin TOPALĂ, Radu CIULUVICĂ, Daniela STANA, Cristina ALEXANDRESCU

.....24

Key words: internationalization of higher education, mobility students, staff mobility.

Abstract: Aim: The purpose of the study was to evaluate interruptions in the structure of the weld by digital analyses on radiographic images. Materials and methods: Two types of base metal alloys were used, Ni-Cr and a Co-Cr dental alloys. For the experimental studies plates were cast using classical technologies. After preparing the surfaces to be welded, the plates were matched and microplasma welded. For all samples radiographic images were performed in order to analyze and measure discontinuities. Therefore the ImageJ software was used.

Results: Pores or lack of fusion between the plates were observed as darker lines or spots. Wolfram electrode inclusions appeared as lower density spots.

Conclusion: Digital evaluation of light and dark regions on radiographic images allows the interpretation of their shape and is important to evaluate discontinuities inside weldments.

THE ROLE OF TITANIUM AND ITS ALLOYS IN THE PROCESS OF OSSEOINTEGRATION

Raluca NEAMȚU, Radu COSTEA, Mihai-Bogdan BUCUR, Victor GHIȚĂ, Kiro PAPAKOCA, Augustin MIHAI

.....28

Key words: titanium, osseointegration, alloys.

Abstract: Titanium and titanium-based compounds are used successfully in medical practice, especially in orthopedics and dentistry. Conferring special properties, titanium is currently one of the most important materials, with more than promising results in the osseointegration processes. Therefore, in this paper, we suggest an approach to titanium osseointegration in the medical practice

ENVIRONMENTAL ISSUES

THE RELATIONSHIP BETWEEN MAN AND NATURE AND THE CORRELATION BETWEEN ENVIRONMENT AND DEVELOPMENT

Constanța POPESCU, Constantin POPESCU

.....32

Key words: environment, the economic growth, sustainable development, the solar age, new culture of sustainability.

Abstract: The increase in human population, accompanied by the increase of the need for goods and services of the members of different communities are the main motor forces of the development of the human society, which determined the diversification, improvement and increase in capacity of the means and technologies allowing the access to and the use of the resources and the services provided by the natural ecosystems. People's imprint on the world's natural ecosystems has not been noticed or quantified for millennia, until the recent period in-between centuries and millennia when mankind realized that the great planetary ecosystems have begun to disappear, that forest are being rapidly removed and the global effects of this disappearance can be seen everywhere. The economic growth at all costs and the demographic explosion of the second half of the last century disturbed the harmony of the relationship between man and nature, on the one hand, and between environment and development, on the other hand.

METALLURGICAL, AGRICULTURAL AND OTHER INDUSTRIAL RELATED CHEMICAL POLLUTANTS: BIOMONITORING AND BEST MODEL ORGANISMS USED

Ioan Valentin PETRESCU-MAG, Benone PĂSĂRIN, Camelia Firuța TODORAN

.....38

Key words: pollutants, heavy metal, pesticides, endocrine disruptor, dioxin, bioindicator, fish, lichens.

Abstract: Development of good methods of analysis, based on most suitable model organisms, is essential for the environmental monitoring and conservation of the natural resources. The present paper is a survey of the literature and reviews the best model organisms used for biomonitoring. A general view of the most important chemical pollutants of industrial and agricultura originl in air, soil and water is presented.

TWO WAYS OF ENVIRONMENTAL MONITORING OF HEAVY METALS FROM AIR: NATIVE AND TRANSPLANTED LICHENS

Camelia Firuța TODORAN, Ioan Valentin PETRESCU-MAG, Alexandru Dorel TODEA

.....49

Key words: air pollutants, heavy metals, biomonitoring, lichens, *Xanthoria*, *Physcia*, *Pseudevernia*.

Abstract: The present short note highlights some relevant aspects of the monitoring work of Mag-Muresan's dissertation (2003). Biomonitoring of heavy metals can be done in two ways: either by analysis of native lichens collected, either by analysis of transplanted lichens from unpolluted areas in some polluted areas. The results of two methods of analysis were found to show the same thing: lichens in the urban area, both native and the transplanted ones, accumulate large amounts of heavy metals in their tissues. *X. parietina* accumulates more Zn and Cu, while *Physcia stellaris* accumulates mainly Pb. *Pseudevernia furfuracea* accumulates rapidly heavy metals, mainly Cu. Lichens, which were transplanted in the urban area, have accumulated in just 5.5 months of exposure to urban heavy metal concentrations up to 3.07 times more Zn, 2.63 times more Cu and 11.70 times more Pb, compared to control.

THE CREATION OF GREEN BELTS AND CORRIDORS: A MAJOR CHALLENGE FOR BUCHAREST CITY

Gabriela MANEA, Octavian COCOȘ, Adrian TIȘCOVSCI, Viorel NEGULESCU

.....52

Key words: Bucharest, environmental quality, green belts, green corridors.

Abstract: This paper looks at the quantitative and qualitative alterations of Bucharest cityscape in the context of the economic development and territorial sprawl of the settlement to the detriment of green areas. Great emphasis is placed upon highlighting the environmental imbalances, and particularly on the reduction of oxygen generating forest areas, which entail serious consequences for human health. The analysis of current situation and the review of other countries experience have led to a clear conclusion: it is imperative to create green belts and corridors. These should increase the green space surface area thus solving the problem of the lack of recreational areas and children's playgrounds. Unfortunately, however, the present circumstances are hardly favorable, inasmuch as Romania is going through a serious economic crisis, which could prevent the implementation of such a project.

ENVIRONMENTAL POLLUTION AND HUMAN HEALTH

Lidia BALAN, Stelian TIPA, Elena DOVAL, Dragos MICU

.....56

Key words: pollution, nature, development, human health, environmental.

Abstract: The paper shows the results authores research by the existing correlations between environmental pollution and human health, highlighting the effect of squadrons multiplier allocations to remove the consequences of pollution on its prevention.

ECONOMICAL MANAGEMENT

TECHNOLOGICAL TRANSFER REALISED BY BUSINESS INCUBATORS

Dan SĂVESCU, Rodica POPESCU

.....61

Key words: technological transfer, energy, incubator, innovation, business.

Abstract: Paper presents some aspects regarding the Technological and Business Incubators, the specific activities in these entities, strategies of incubation's process, selection of incubates, incubation spaces, having a real example, ITA Pro-Energ, an institution built under "Transilvania" University of Braşov, having like research applications "Products and Technologies in Sustainable Energy".

CONCEPTS OF PROJECT'S MANAGEMENT

Dan SĂVESCU, Rodica POPESCU

.....66

Key words: project, management, leader, budget, quality, time.

Abstract: In this paper there are presented conceptual elements who give us to a good and a competent project's management. There are presented aspects regarding the budget, time, quality and participant's expectations, taking into account the bonds between them, compromises, which appear in the project unreeling time.

ROMANIA IN THE CONTEXT OF RECENT EVOLUTIONS IN INTERNATIONALIZATION AND GLOBALIZATION OF HIGHER EDUCATION

Dana BLIDEANU, Mirela DIACONESCU, Yvonne Iulia LACROIS

.....69

Key words: internationalization of higher education, mobility students, staff mobility.

Abstract: Internationalization and Globalization are two of the major challenges facing higher education in the last decades. The issue is equally complex and controversial and has been the focus of reflection and debates not only at the academic community level but also at the political one and last but not least at the civil society level. Following the economic model, internationalization and globalization in higher education are uneven processes with different effects on the actors involved: they may bring benefits or losses, may represent opportunities or risks, may create global champions or may grow the number of losers. The consequence is that governments and university leaders are equally preoccupied to elaborate strategies in order to mostly benefit from international mobility of students and academic staff, from cross border cooperation at regional or global level and last but not least from increased competition in the higher education market. This paper is structured in two parts. In the first, the authors are trying to identify the major recent evolutions in the internationalization and globalization in the higher education worldwide and in the second Romania is presented in this context. The main aim of the authors is to give a better understanding of the opportunities and risks derived from the internationalization of the higher education in Romania.

LIFE QUALITY FROM THE PERSPECTIVE OF THE RELATIONSHIP BETWEEN KNOWLEDGE AND RESEARCH IN THE MEDICAL FIELD

Ecaterina IONESCU, Mihaela Cristina DRAGOI, Bogdan PATRICHI, Elina TEODORESCU, Raluca GRIGORE

.....76

Key words: life quality, interdisciplinarity, medicine, education, research

Abstract: Teaching and research activities in the medical field are mainly focused on creating and developing a coherent framework for research and education dedicated to interdisciplinary training of medical specialists which is meant to give the most efficient solutions for diagnosis and treatment and health services at European standards. For the University of Medicine and Pharmacy "Carol Davila" Bucharest, these coordinates stand for components of its entire activity, and also represent the main criteria for qualification and academic performance assessment. The University of Medicine and Pharmacy "Carol Davila" Bucharest has highly specialized human resources and the development of teaching and research is a natural consequence, with positive consequences on quality of life.

THE EVALUATION SYSTEM OF HIGHER EDUCATION PERSONNEL. AN EMPIRICAL ANALYSIS ON THE ROMANIAN CASE

Andreea Raluca CĂRĂGIN, Irina Eugenia IAMANDI

.....80

Key words: Higher Education, Evaluation System, Teaching and Academic Activity, Research Activity, Scientific Contribution, Professional Prestige.

Abstract: The aim of the present research paper is to present a set of measures in order to improve the evaluation of higher education personnel in Romania, in general, and in the economic higher education, in particular, taking into account the experience in the field of different universities from our country and from abroad. The paper is structured into four main sections emphasizing the following aspects: an introduction on the activity and purposes of evaluation of higher education personnel; a general presentation of the academic evaluation system in Romania, based on the example of the Bucharest Academy of Economic Studies; a plan for an improved model of academic evaluation; some suggestions and conclusions in order to synthesize the main debated aspects and proposed action lines.

LOGISTICS AND COMPETITIVE ADVANTAGE

Adriana SCRIOŞTEANU, Daniela POPESCU

.....85

Key words: logistics, competitive advantage, customer service, marketing.

Abstract: This paper presents the relationship between logistics and the competitive advantage. Logistics can offer a source of competitive advantage, such as a superior position compared to the competitors regarding cost reductions, service diversity and satisfaction of consumer requirements. The logistic activities generate cost and give value to the final product. Despite that the same logistic activity can be done in many ways, with different costs and performance ,

the evaluation of the activities and the links between them are essential for understanding the influence of logistics regarding the competitive advantage. The links in the chain of value show the synchronization of activities to obtain competitive advantage.

RESEARCH AND DEVELOPMENT ACTIVITIES WITHIN THE CONSORTIA : UNIVERSITIES - RESEARCH INSTITUTES – INDUSTRY. THE CHARACTERISTIC FEATURES OF THE INVOLVEMENT OF METALLURGICAL FIELD IN THE CONSORTIA

Liliana Nicoleta GRIGORE, Camelia CANDIDATU

.....99

Key words: research and development, academia-industry interface, metallurgical domain, economic progress.

Abstract: This article presents some relevant aspects of academia-industry partnership: how academic environment can work closely with industry, and also how industry may efficiently contribute to the improvement of the academic research and development activities. The extremely dynamic and challenging world imposed the emergence of the knowledge based economy and the demand for excellence both of professionals (academic staff, graduates, researchers, managers in industrial field, engineers etc..) and of cooperative relations among them, as stakeholders, aiming to create and develop a beneficial consortia. Taking into consideration the opinion of the specialists, that industrialization is based on the development of metallurgical industry, the paper points out that this domain increasingly depends on the process of research and innovation and on the dissemination and application of its results.

CONSIDERATIONS REGARDING THE USEFULNESS OF SYNTHESIS ACCOUNTING INFORMATION FOR COMPANY'S PERFORMANCES ASSESSMENT

Valeriu BRABETE, Cristian DRĂGAN, Magdalena MIHAI

.....93

Key words: accounting information, economic performances, economic analysis, historical cost, monetary instability.

Abstract: Compliance with all accounting principles and the proper application of accounting techniques and procedures contribute to a volume of data that, in turn, must be prepared in order to adopt decisions at the highest level within an economic operator. This desideratum of transforming the accounting data into usable information, for all those concerned, regarding the financial statement of a company, is achieved through accounting – financial analysis. The results obtained through this activity are credible to the extent that accounting information is characterized by a high degree of relevance, but, in a justified way, because of the accountancy's imperfection in terms of historical costs, it arises the question to what extent this analysis answers to informational needs of the decision makers. Since the interpretation of accounting data, through the financial analysis, represents the basis of the whole decision process, it is very important that this data will better reflect economic reality within its processing. It is known that monetary instability influences, in a favorable or in an unfavorable way, all patrimony elements from an economic entity, but their vulnerability is different because, on one hand, inflation rate is statistically determined and the activities performed by these entities are in different fields and, on the other hand,

the volume of inputs used and their combining method are different.

CONSIDERATIONS REGARDING RISK MANAGEMENT

Adrian POPA, Ani MARINEANU (DUMITRACHE), Dragoș Laurențiu ZAHARIA

.....99

Key words: risk, management, opportunities, benefit.

Abstract: Risk management and the control environment are central to sound corporate governance and for this reason much of the law that has been created in response to corporate collapses and scandals now requires effective risk management. The first section discusses the concept of risk by offering a few definitions for the term in order to emphasize how the view upon it has changed over the last decade. Seen as facets of uncertainty, risks are now interpreted not necessarily as negative phenomena such as threats to success, but also as opportunities for benefit. All activities of an organization involve risks. Organizations manage risk by identifying it, analyzing it and then evaluating whether the risk should be modified by risk treatment in order to satisfy its risk criteria. Throughout the process, they monitor and review the risk and the controls that are modifying the risk in order to ensure that no further risk treatment is required. The phases of the risk management process are described in the second section. Finally, the last section describes briefly how organizations can be categorized, based on the degree on which they understand and implement risk management.

DEMANDS REGARDING THE IMPLEMENTATION OF INTERNAL AUDIT IN THE CONTEXT OF INCREASING ITS CONTRIBUTION TO DECISION MAKING PROCESS

Cristian DRĂGAN, Valeriu BRABETE, Magdalena MIHAI

.....105

Key words: internal audit, integration, audit committee, involvement, decision making process.

Abstract: Implementation of internal audit represents an intensely debated topic in literature on national and international level. This work places in center the idea according to which the proper integration of internal audit within the organization and also the involvement in a greater extent in the management of its actual activities can represent growing factors of internal audit contribution to decision making process. In this context, the assurance of necessary independence in order to achieve the missions of this nature it becomes very important, and also a services portfolio elaboration that will not negatively influence the credibility of audited information.

TRAINING AND DEVELOPMENT - PRIORITY ACTIVITIES OF HUMAN RESOURCES MANAGEMENT WITHIN PUBLIC ADMINISTRATION

Elvira NICA

.....110

Key words: training, development, management.

Abstract: Every institution has a wealth of talent, knowledge and experience to be the handle. She must increase this heritage and ensure its sustainability through training and by implementing a system of systematic transmission of knowledge and gained experience. With Romania's EU integration, the new EU membership with full rights statue, requires special attention with regard to needs of citizens, in

accordance with new European requirements, which determine the improved performance of public officials, and thus improve the quality of training of civil servants.

THE ACCOUNTING PROCEDURES AND THEIR INTEGRATION IN THE GENERAL SYSTEM OF A MODERN COMPANY IN THE METALLURGICAL INDUSTRY FIELD

Gheorghe V. LEPADATU

.....114

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

Abstract: The leap into the globalization era is not possible without remarkable progress in the generalization of some rules and norms accepted by the accountants in different countries. The relevance of the accounting information in the knowledge of the company's patrimonial situation is not only a problem of economic theory, but also of accounting law. Beyond the norms regarding the meaning threshold and the axioms of the economic sciences there appear aspects of contractual nature. The most accurate, systematized and representative data can be obtained only from accounting. The managers and members of the Board will want to obtain by this means as much information as possible, sometimes exceeding the natural capacity of the bookkeeping. For such situations, the accounting law as border discipline will have a word to say.

DEVELOPING STRESS TESTING AS RISK-MANAGEMENT PRACTICES

Marius MOTOCU

.....118

Key words: Stress tests, value-at-risk, stress scenarios, identifying stress scenarios, worst – case scenario.

Abstract: Stress testing is an appealing risk-management tool because it provides risk managers with additional information on possible portfolio losses arising from extreme, although plausible, scenarios. In a volatile financial environment, stress tests have recently become more important as an instrument to gauge the impact of specific adverse developments in the economy. Stress testing may be increasingly used by financial firms for both internal and external purposes. This Article offers a conceptual framework for defining stress testing, describing its possible applications, highlight certain techniques developed to conduct this testing including a few methods for identifying stress scenarios and survey its recent use by supervisory agencies. The usefulness of stress tests as risk management tool crucially depends on the choice of stress scenarios: if the scenario is too implausible, the stress test results will be ignored by management. There is no generally accepted standard how to choose scenarios. Many institutions apply some standardized scenarios derived from extreme market moves in the past. In addition, stress scenarios can often be an effective communication tool within the firm and to outside parties, such as supervisors and investors.

MEASURING THE EFFICIENCY OF INVESTMENTS IN RISK CONDITIONS

Cezar GOTCU

.....124

Key words: asset price, risk, investment.

Abstract: Future revenue generated by placements of funds economies differ as regards their content from one assets category to another, as follows: interest and profit (capital); rents, incoming from agriculture, rents (lands, houses). The

decision of a company to invest in an asset is influenced by more parameters, respectively more interrelated variables such as: asset price, net economic value, asset yield, and risk. Viewed in terms of efficiency, making the decision to invest in an asset can be reformulated as: if the yield is higher than market interest rate, then investment in that asset is advantageous

ACHIEVING A MODERN MANAGEMENT THROUGH MAKING EFFICIENT THE INFORMATION PROVIDED BY ACCOUNTING

Cezar GOTCU

.....127

Key words: accounting, leadership, efficiency.

Abstract: Tackling the complex processes and phenomena in the economy can be achieved only by laying the concept of efficiency at the basis of any economic and social management action as an expression of quality improvement. It is required as an objective and complex necessity the evaluation of the efficiency for each category of information that is circulated in the system and their contribution to maximizing the efficiency of the management and also global economic efficiency of the unit. Transformations that information may determine in all fields of activity require reconsideration of possibilities of knowledge of their efficiency both at the level of economic management unit and its compartments.

THE COMPUTATION OF THE DIRECT COSTING METHOD IN METALLURGY

Elena DIACONU, Lucian POPESCU

.....130

Key words: cost accounting, direct costing method, break-even point, coverage factors, safety interval, cost – volume – profit analysis.

Abstract: The determination of the production cost is of major importance in decision-making processes and decision optimizing due to the functions this economic indicator fulfills in the production facilities. Thus, this article presents and analyzes in details the direct costing method for the computation of production costs, with applicability in the metallurgical industry, by bringing to the attention in the beginning several theoretical clarifications and classifications of production costs in general, and production costs in metallurgy in particular. Interrelationships between indicators such as: turnover, break-even threshold, profit and loss - are demonstrated under the direct costing method, together with their methods of computation. The specialized literature was concerned with extending the direct costing method for the diversification of production on range of products, by calculating specific indicators such as: coverage factors, the dynamic safety coefficient, the safety interval and others alike. The paper ends with an example to prove the computation of the production costs for Siderurgica SA for three products, and profitability thresholds and the analysis cost – volume – profit (C-V-P).

THE DYNAMIC FACTORS OF HYDROGEOMORPHIC VULNERABILITY IN THE CENTRAL SECTOR OF THE ROMANIAN PLAIN

Florina GRECU, Liliana ZAHARIA, Cristina GHITA, Lavinia VACARU

.....139

Key words: geomorphic vulnerability, rainfall, flow, floods, Romanian Plain.

Abstract: *The hydrogeomorphic vulnerability is the result of the synergistic action of several factors, both natural and anthropogenic, dynamic or passive. This work aims to highlight the main factors determining the hydrogeomorphic vulnerability in the Romanian Plain, focusing on its central area, which corresponds to a region with important stakes facing the risks induced by the river dynamics. A good knowledge of these factors would reduce these risks by adopting appropriate measures for prevention and protection. The analysis broaches especially the dynamic factors of the hydrogeomorphic vulnerability, specifically those climatic (mainly precipitation), morpho-hydrographic, hydrological (flow regime, suspended sediment load, floods) and anthropogenic (the engineering works). Particular attention is given to extreme hydro-meteorological events (heavy rains, flooding, floods), especially those of 2005, with an important hydro-geomorphological and socio-economic impact.*

THE EFFECTS OF IMPLEMENTING THE PREDICTIVE MAINTENANCE FOR THE SN 400 TURNER LOCATED IN A COMPANY THAT HAS AS OBJECT OF ACTIVITY THE MANUFACTURING OF CAR PARTS

Elena SIMA

.....149

Key words: maintenance, equipment, repair, car parts.

Abstract: *With regard to the preventive and predictive maintenance, it is considered that the equipment works safely until the installation of a certain level of wearing, or the occurrence of a fault. In this system, equipment shall be stopped at an anticipated date, weeks before, and the repair shall be made only where it is needed. This system allows discovery in time, the localization and identification of the fault or of the worn-out part, as well as the calculation of the safe operating duration of the equipment. It is possible to plan the stop, to prepare the intervention team, to order the necessary spare parts and to reduce to the minimum the pause duration for repairs. By applying the predictive maintenance we get a decrease of expenses related to maintenance and repair expenses, of the supply expenses with spare parts and materials and indirectly, by reducing the troubleshooting time, there can be noticed an increase of productivity. The paper shows the effects of implementing the predictive maintenance for the SN 400 turner located in a company that has as object of activity the manufacturing of car parts. The analysis was conducted during 2007-2009 and in 2009 there has been introduced the predictive management system on the machinery and equipment in the company.*

FROM THE COST ACCOUNTING TO THE MANAGEMENT ACCOUNTING, ACCORDING TO THE NATIONAL REFERENCE MARK OF FINANCIAL REPORT APPLIED IN THE METALLURGICAL INDUSTRY

Gheorghe V. LEPADATU

.....153

Key words: cost accounting; management accounting; control, cost, practical procedure, national reference mark, performance center.

Abstract: *Within the hard competition of the European global market, the application of the management accounting instruments could be an important element of success. We consider that in Romania weren't achieved ample researches*

concerning the accounting instruments utilization measure, but we could couch some hypothesis in this respect.

AN EXPLORATORY STUDY OF KNOWLEDGE MANAGEMENT PRACTICES IN ROMANIAN UNIVERSITIES WITHIN THE UNIKM ACADEMIC RESEARCH CONSORTIUM

Calin Florin BABAN, Marius BABAN

.....157

Key words: knowledge management practices, knowledge sharing, Romanian universities, UNIKM consortium.

Abstract: *Romanian higher education institutions are now expected to manage their knowledge more efficiently, to keep up with the changes of the knowledge-based society. The scope of this research is to offer a perspective on knowledge management employment within a Romanian academic research consortium. Knowledge management aspects in universities are emphasized and a case study is presented to explore knowledge management-based practices in Romanian universities within the UNIKM consortium. This study was carried out using a survey and practices of the management of knowledge in teaching, research and student services have been analyzed. The results of this study show the members of the UNIKM consortium are using diverse practices of knowledge management, but there is still place for more improvements in sharing of knowledge.*

MODERN APPROACH OF THE EQUITIES RELATED TO THE CONTINUOUS IMPROVEMENTS OF THE INTERNATIONAL FINANCIAL REPORTING STANDARDS APPLIED IN INDUSTRY

Gheorghe V. LEPADATU

.....163

Key words: IAS/IFRS, equity, quality / credibility.

Abstract: *equity, less discussed in the literature in our country, and the International Financial Reporting Standards are essential to initiate and conduct any financial or economic activity, i.e., a prerequisite for the establishment of an entity and for their sustainable existence. In this context it may be pointed out that attention is fully justified that theoreticians, practitioners and external users pay attention to the equity accounting information in respect of quality and reliability.*

CONSIDERATIONS REGARDING THE ADOPTION OF REVERSE LOGISTICS – AN E-BUSINESS APPROACH

Sidonia Otilia CERNEA, Daniel Valeriu VLAD, Viorica Irina GÂRBO, Radu Florin PINTEA

.....168

Key words: reverse logistics; e-business; return; supply chain.

Abstract: *E-business can provide absolute earnings both in terms of productivity and efficiency. Therefore, companies tend to incorporate information technologies within their business strategies, and, particularly, within their logistic activities. The purpose of logistics is to create supply chains with lower costs. Reverse logistics involves the layout of a product from the consumption point to another point, in case of irregularity, in order to recover the remaining value or to dispose the product. E-business development involves the transformation of traditional logistics, through a flexible and structural approach, depending on business model, products and customer services. This paper aims to present a description of reverse logistics from an e-business approach*

and also the advantages and disadvantages of adopting this activity. In order to emphasize the importance of information technologies incorporation within reverse logistics deployment, we present an image of this activity both in e-business context and that of traditional forms.

ECOLOGICAL RISKS AND THEIR UNDERWRITING BY INSURERS

Viorica Irina GÂRBO, Daniel Valeriu VLAD, Radu Florin PINTEA, Sidonia Otilia CERNEA

.....172

Key words: pollutant, ecological risks, natural calamities, climate shifts, ecological casualties, cover by insurance, limitations of insurer responsibilities

Abstract - Security implies that environmental risk is insured subject to the civil side of third persons affected due to the fault of the insured. Environmental liability system implements the polluter must pay for damage caused. How to ensure financial security for environmental responsibility and no liability is contrary to the principle of buying insurance. Essential condition for an ecological risk to be governed by the laws is the responsibility of criteria that will allow the risk of default, assumed to be calculated correctly. This applies in particular severe risk.

THE LOGISTIC CENTRE, EXPRESSION OF THE DISTRIBUTION GLOBALIZATION

Dan GHEORGHE

.....177

Key words: independent logistic centre, globalization, logistic activities, connectivity, competitive advantage..

Abstract: "Within the current market expansion and globalisation of the product distribution, which becomes an essential element of the economic and social International Systems, their specific economic activities and the modern trend have made possible the building of different trade channels. Based on this theory the logistics centers - Strategic Investment Projects, enables the implementation of the most advanced technologies within merchandise logistics and distribution, achieving economical efficiency through costs benefits and in the same time competition advantage, followed up by all the marketing channel actors."

LINKING THE INVENTIVE PRINCIPLES OF TRIZ METHOD TO EWS ETHODOLOGY

Georgeta BARBULESCU, Gabriela IONESCU, Romulus ANDREICA

.....180

Key words: Early Warning System (EWS), problem solving risk assessment, TRIZ (Theory of Inventive Problem Solving).

Abstract: The authors' intention was to correlate the basic knowledge in using the TRIZ (Theory of Inventive Problem Solving or in Russian: Teoriya Resheniya Izobretatelskikh Zadatch) methodology as a problem solving tools meant to help the decision makers to prioritize scarced resources with the attempt to provide a more systematic and improve Early Warning System (EWS) methodology. The idea is to identify the TRIZ instruments (40 inventive principles) as applicable to EWS development. A complete and effective early warning system comprises four inter-related elements, spanning knowledge of hazards and vulnerabilities through to preparedness and capacity to respond. Best practice early warning systems also have strong inter-linkages and effective communication channels between all of the elements. The

interest in connecting TRIZ methodology to EWS approach is to empower knowledgeable individuals in making forecasting exercises to recognize as the system under study is threatened by hazards, to enable them to act in sufficient time and in an appropriate manner to reduce the possibility of personal injury, loss of life and damage to property and the environment.

PREDICTING FIRMS' PERFORMANCE USING BENCHMARKING INDICATORS

Laurențiu Cătălin FRĂȚILĂ, Adrian Dumitru TANȚĂU, Cosmin GRIGORE

.....185

Key words: forecasting, benchmarking, indicators.

Abstract: The relevance of the chosen topic is explained by the meaning of the firm efficiency concept - the firm efficiency means the revealed performance (how well the firm performs in the actual market environment) given the basic characteristics of the firms and their markets that are expected to drive their profitability (firm size, market power etc.). This complex and relative performance could be due to such things as product innovation, management quality, work organization, some other factors can be a cause even if they are not directly observed by the researcher. The critical need for the management individuals/group to continuously improve their firm/company's efficiency and effectiveness, more specifically, the need for the managers to know which are the success factors and the competitiveness determinants determine consequently, what performance measures are most critical in determining their firm's overall success. Benchmarking, when done properly, can accurately identify both successful companies and the underlying reasons for their success. Forecasting and benchmarking firm level performance are critical activities for the managers. Firm level variables, used to infer performance, are often interdependent due to operational reasons. Hence, the managers need to take the dependencies among these variables into account when forecasting and benchmarking performance. This paper studies firm level performance using financial ratio and other type of profitability measures. It uses econometric models to describe and then propose a method to forecast and benchmark performance.

ROMANIA'S PUBLIC DEBT IN THE CONTEXT OF FINANCIAL AND ECONOMIC CRISIS

George Alin HARALAMBIE

.....190

Key words: economic crisis, public debt, debt service, budget deficit, public expenditure.

Abstract: This article discusses the negative impact of economic crisis triggered in 2007 at a global level over Romania borrowing on the domestic and foreign capital, as a result of financing budget deficit.

THE IMPACT OF FISCAL POLICY OVER THE NATIONAL BUDGET

George Alin HARALAMBIE

.....195

Key words: budget, collecting, fiscal policy, fiscal efficiency, public revenues.

Abstract: This paper presents the impact of fiscal policy over the national budget revenues. An efficient fiscal policy means so growing the budget income collecting rate as reducing the costs of that collecting. Public expenditures, public revenues, public borrowings and budget applications are important

tools of fiscal policy to obtain economic stability. According to this idea, the present paper analyzes the fiscal efficiency in Romania.

THE PROCESS OF ASSESSING RISKS IN AUDITING RESEARCH ORGANIZATIONS

Octavian STROIE, Daniela HINCUI, Robert SOVA

.....199

Key words: audit, fuzzy set, risk model, audit risk.

Abstract: The business environment is subject to continuous change and this reality interferes with the need to re-design the audit methodology in the sense of increasing its transparency and the efficiency. Recent changes in the business environment have included the way entities are organized and conduct their business; the effects of globalization and technology; the increasing use of judgment and estimates, including fair values, required by accounting standards; and significantly increased pressures that may cause fraudulent financial reporting. Auditing practices follow such changes needed to keep standards under review to ensure that they still remain appropriate. The audit risk model (identifying and assessing audit risk) is at the core of the audit process is a key part of the audit process. The paper regards the problem of risk audit in the view of traditional approach performed with fuzzy sets. Involving such fuzzy – based instruments for conducting the risk analysis may be

seen as a result of it is difficult to translate in deterministic measures the whole range of vague information necessary to perform the auditing process and to draw the relevant, close to reality and unbiased conclusions without consuming much/unjustified effort. Beside this, even the auditor is often exposed to risks that are not embraced in the audit risk model (auditors may be exposed to loss or injury to their professional practice from litigation, adverse publicity, or other events arising in connection with financial statements they audited and on which they reported).

THE ROLE OF FINANCIAL STATEMENTS IN THE MANAGEMENT OF REPORTING COMPANIES

Gheorghe V. LEPADATU

.....206

Key words: accounting information, financial statements, economic decisions.

Abstract: The information used for decision making by the management of the economic entity derives mostly from the management accounting as the main source of information in the activities' administration and management. However, financial accounting, summarized by its annual accounts, is still providing information needed for managing relations with third parties, agreeing upon investment projects and financing resources.

SOCIAL ENGINEERING AND OTHER ACTIVITIES

THE EVALUATION OF THE GEOMORPHOSITES' VALUE. CASE STUDY THE BUCEGI MOUNTAINS

Laura COMĂNESCU

.....212

Key words: geomorphosite, evaluation, value, Bucegi, Romania.

Abstract: Geomorphosites represent landforms which, in time, due to the perception of the human society, have achieved certain values (scientific, cultural, aesthetic, ecological, economic). Obviously, a geomorphosite cannot have all these values, this being the element which differentiates them. The present article aims to analyse the results obtained for the evaluation of the geomorphosites. The Bucegi mountains were chosen as a sample for the analysis, because this is the massive where geomorphosites have a great complexity, being well represented, the touristic activity is intense and the infrastructure is the best represented in the entire Carpathian area. The most representative geomorphosites in the massive were chosen in order to verify the proposed method.

RESEARCHES CONCERNING THE DYNAMIC OF THE MINERAL NUTRIENTS CONTENT AT THERMICAL TREATMENT OF SEMI-MANUFACTURED POULTRY PRODUCTS USING THE "KNOWHOW" TECHNOLOGICAL EQUIPMENT

Steluta RADU, Aurel CHIRAN, Elena GÎNDU, Andy-Felix JIȚĂREANU

.....217

Key words: thermal treatment, mineral content, dynamic, dietetic nutrition.

Abstract: The quality of food products is a means used for a certain purpose, according to which a company or an economic agent exists on the market and it can remain competitive continuously although it develops in a changing environment. The level of nutrients of the food products generates the quality of them and the essential method for the resolving of the consumer's. The study of the researching welcome of the actual tendency by the supplementing of the processing food. The research method used for obtaining some functional poultry aliments will be made of nutritive characteristics, making of new technological recipes which should contain nutritive elements with a determinative role in controlling the human metabolism, testing the new products on variable periods of time, at the thermal treatment, in order to be stored and kept in proper conditions, testing the recipes from a sensorial point of view by comparing with the qualitative standards valid for the presented qualitative characteristics and watching of qualitative losses according to the storage conditions of products stored by freezing and after thermal treatment, analyze and their interpretation. In order to measure and evaluate the qualitative characteristics of raw materials and of finite products we will develop our own processes of testing in research activity. Through an innovative design it is possible to assure the competitiveness of any food products which it is necessary the development of the partnership between the University of the Agricultural Sciences and Veterinary from Iasi and the production unit SC SAFIR SRL from Vaslui county.

THE DYNAMICS OF THE ESSENTIAL AMINO ACIDS CONTENT OF THE BAKERY PRODUCTS FORTIFIED WITH NATURAL ADDING'S FOR OBTAINING ECOLOGICAL FOOD PRODUCTS USING THE "KNOWHOW" COOKING BAKERY EQUIPAMENT

Steluta RADU, Mihaela CONSTANDACHE

.....223

Key words: bakery products as function food.

Abstract: Amino acids are organic substances with essential role in the function of the human metabolism .The most important saturate amino acids, which are the main components of the proteins. Due to the protein hydrolysis there were identified 18 amino acids, out of which 8 are for the adults and 10 for the children, designated as essential, which cannot be synthesized in the human organism. This is why they should be ensured via nourishment. For the adults the essential amino acids are: valine, leucine, isoleucine, phenylalanine, threonine, lysine, tryptophan, methionine. In the case of the children we can add glutamine and histidine. Amino acids are synthesized only by plants due to the synthesizing of the plants by synthesizing the atmospheric or mineral nitrogen, and the animals are obtaining it from the plants. The level of amino acids are recommended by FAO and the assimilation of them are very important for the organism. In this study are watching by compare the level of amino acids from the bakery products enriched with insulated of peas and soy.(14), (15).

DIFFICULT SOILS FOUNDATION, CALCULATION AND IMPROVEMENT SOLUTIONS

Cristian Oliviu BURADA

.....229

Key words: terrain, geological study, foundation.

Abstract: As a result of some new researches on terrain, laboratory research as much as the study of several geological, geotechnical, hydrogeological documentation came out the following conclusions:

Regarding the foundation soils it can be considered that in Craiova are the following distinct areas:

- a)the meadow area of the lower terrace of Jiu river
- b) the middle terrace area of Jiu river
- c)the upper terrace area , the plate area

LABORATORY TESTS FOR ASPHALT MIXTURES

Cristian Oliviu BURADA

.....233

Key words: road structure, layers, mechanical-physical characteristic.

Abstract: The road layer that deals directly with the volume of traffic and which is affected by the outside factors (hydrological and climatic) represents the coating of the road structure. As a consequence, the latter must be made of the strongest materials, by using technologies capable of achieving superior mechanical-physical characteristics, in order to ensure a strong durability. With regard to the modern road metals, the bituminous ones are the most widespread, due to their advantages concerning their

building possibilities, the comfort offered to the users, the exploitation and maintenance conditions, the cost etc.

INNOVATION AND CREATIVITY WITHIN THE ECONOMICAL ORGANIZATIONS NEW PRODUCTS – THE MAIN FORM OF MANIFESTATION OF THE CREATIVITY

Viorica TOMA

.....238

Key words: new products, economical organizations, creativity.

Abstract: On the economic organizations one of the most important ways of manifestation of the creativity is the development and the marketing of new products meant to increase or remain competitive. The analysis of the development process of the new products within a new organization, offers a much clear image regarding the role and the importance of the creativity, the practical way of its manifestation, the opportunities to stimulate and value this valuable human capabilities.

EUROPEAN UNION STRATEGY FOR BUILDING A KNOWLEDGE-BASED ECONOMY

Viorica TOMA

.....250

Key words: knowledge- based economy,economy based on knowledge and creativity, sustainable development, recession, innovation, creativity, research and development and innovation.

Abstract: If we can talk about intellectuals, we cannot talk about nonintellectuals, since there is no human activity which might preclude intellectual participation : „homo faber can not be separated from homo sapiens".Romania's current policy in the areas of research, development and innovation must follow the objectives set by the Lisbon European Council and , in this purpose, should be a necessity both formation of a new mentality regarding the innovation process and development of such process by implementing in the economy of the results of creative intellectual activity. The actual exploitation of the creative potential could be achieved only if the creators will have working conditions that provide them with the certainty that they can co-participate in achieving the proposed goals and their creative activity will be assessed objectively. Intellectual activity is an activity with several levels of complexity, at the first level it means knowledge, at the second one is more complex, being creative thinking. Knowledge is like light, weight free, intangible, can travel easily through the world illuminating the lives of people everywhere. Any new knowledge contributes to a proper interpretation of the world, clarifying any commercial transaction, informing the market, facilitating the establishment of preferences for certain goods and making the exchanges more efficient. The experience of the industrially developed countries has shown that for a successful development of a process of research, development and creativity at the macroeconomic level, it's not sufficient only to have more science. It is necessary to increase the effectiveness and usefulness, the applicability of this science