



ABSTRACT

MECHANICAL ENGINEERING AND ELECTRICAL ENGINEERING

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HIGH PERFORMANCE CONTROLLABLE PITCH PROPELLERS FOR LOW ACOUSTIC SIGNATURES

Abstract: In order to maximize the design of the Controllable Pitch Propellers for low acoustic signature it is necessary to analyze more aspects the general features of propeller and the effect of air emission, the effect of cavitations by using different computer programs which can stimulate a lot of parameters developed on the model on scale and on the full scale model. The result made possible a new way for improvement of design techniques to obtain more and more less noisily Controllable Pitch Propellers

Key words: Ship propulsion, propeller, cavitations

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SIMULATIONS OF UNDERWATER VEHICLE DYNAMICS

Abstract: This article present a comprehensive analysis about the motion equations of an autonomous rapid underwater vehicle. The analysis is based on Newton's mechanical equation and data's interpretations includes a lots of coefficients and variables for the vehicle's movement and form. Also we will present Closed Loop Scheme and Closed Loop simulations for step inputs and noise input for yaw and step for pitch and roll.

Key words: Under water vehicle, Close Loop control, Open Loop Control, Simulink

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NEW ASPECTS OF PITTING PHENOMENON AT THE ANTIFRICTION ALLOYS

Abstract: This paper presents some particularity and specifies aspects of pitting at the antifriction alloys. The paper presents the theoretical aspects and observations about these phenomena.

Key words: sliding bearings, pitting, antifriction alloys

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SPEED CONTROL AT MAXIMUM TORQUE

Abstract: In the paper presented the method to maximize torque in the stator flux and current requirements. Based on orthogonal design of asynchronous machine, in the above-mentioned conditions were desus variation in time of voltage and frequency for a gap starts in an asynchronous machine. The paper continues with Part II of which shows the voltage and frequency at different speeds under the same conditions to maximize the electromagnetic torque.

Key words: voltage, frequency, maximize the electromagnetic torque

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SIMULATION AND TESTING OF A MAGNETIC FLUX COMPRESSION FOR A HIGH ENERGY MAGNETIC PULSE GENERATION

Abstract: Generation of a high energy magnetic pulse with a flux compression generator (FCG) requires first of all a good mathematical approach followed by simulations of the theoretical model in laboratory and in the field. The authors above have been members of a research team that developed an electromagnetic pulse device started by a conventional explosion. This paper describes the main steps in simulating and testing the compression of the magnetic flux needed to achieve the high energy magnetic pulse.

Key words: EMP, electromagnetic, pulse, generator, compression

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MIXTURE OF TWO EXPONENTIAL-POISSON DISTRIBUTION

Abstract: The mixture model of two Exponential-Poisson distribution is investigated. First, some proprieties of the model are discussed. In order to estimate the vector of the unknown parameters the EM algorithm is proposed. Further we carry out some simulated illustration using Monte Carlo method

Key words: exponential-poisson distribution.



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MARINE ENGINES END NITROGEN OXIDES EMISSIONS

Abstract: Current international policy initiatives by the International Maritime Organization (IMO) to reduce emissions from ship propulsion systems (NO_x and SO_x , primarily) mark the first efforts to define a framework to address this issue. Oxides of nitrogen (NO_x) emissions from ship engines are significant on a global level. NO_x emissions participate in the formation of photochemical smog and acid rain. Marine sourced emissions have significant impact on air quality on land. The challenge is to control NO_x emissions without increasing fuel consumption and smoke. Most engine manufacturers can meet the current IMO limits by engine tuning measures.

Key words: emissions, oxides of nitrogen, combustion, fuel, NO_x controls.

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ECOLOGICAL PERFORMANCE OF THE OIL TANKERS AND POLLUTION RISK

Abstract: The international practice in the environment management field shows that the analysis of pollution prevention and decrease is oriented on the following directions: pollution sources with causes which produce the environment pollution, pollution effects, the evaluation of the vulnerability type and the sensitivity of the polluted areas. In this paper elaboration of the pollution evaluation risk based on an index as a three parameters function, as well as the alternative constructive variant without double hull. The method used for the evaluation of the discharged merchandise quantity is made based on the statistic processing. This project proposes an instrument for the evaluation of the pollution risk at tanker oils in accordance with the international regulations. This method can be useful to all "the actors" who develop their activity in the naval industry (transporters, oil terminal operators, naval constructors, insurance companies etc). This project, by its content and by the information offered, can constitute a solid base for the ulterior developments in this field.

Key words: oil tanker, oil pollution, pollution evaluation risk.

ADRIAN POPA, VERGIL CHIȚAC

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THEORETICAL CONSIDERATIONS ABOUT THE INFLUENCE OF THE NAVAL BULB'S PLATE THICKNESS OVER THE EXTREME VALUES OF THE MAXIMUM EQUIVALENT STRESS WHICH OCCUR IN IT DURING THE HYDRODYNAMIC IMPACT

Abstract: During the navigation in rough sea, the bow of the ship gets off the water and at the entrance suffers a hydrodynamic impact. The structural response of the ship it's a very destructive one. That way, the designers has tried to reinforce the bow structure at the most load point. In this paper, the author makes a short theoretical analysis about the influence of the plate thickness over the extreme values of the equivalent stress.

Key words: slamming, hydrodynamic impact, structural optimisation

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THREE DIMENSIONAL NUMERICAL SIMULATION OF A MAGNETIZER BASED ON BITTER COIL

Abstract: This paper presents the 3-D numerical analysis of a magnetisation device using FLUX 3D, a software based on the finite elements method. A simplified model of the Bitter coil was built taking into account the software constraints. The simulations were conducted in stationary, steady state AC and transient regimes. The obtained results are analysed using both graphical data and numerical values of the electromagnetic field quantities. The simulations include the presence of a magnetic sample inside the Bitter coil.

Key words: Magnetic materials, 3-D numerical analysis, electromagnetic potentials.



ECONOMICAL AND SOCIAL SCIENCES

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PHYSIOLOGICAL DIFFERENCES

Abstract: To provide insight into the difference between males and females students from Naval Academy which impact on physical performance. While teachers must require equal efforts of male and females during the training period, they must also realize the women have physiological limitations which generally preclude equal performance. The present paper describes the most important physical and physiological differences between men and women.

Key words: performance capabilities, body size, strength, stress.

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STRUCTURAL VS DYNAMIC-EVOLUTIONARY AND A METHODOLOGICAL OPTION RELATED TO PSYCHOLOGICAL INCIDENCE

Abstract: The study deals with the double incidence between a set of constitutive variables of emotional intelligence and another set of variables in the area of cognitive abilities (of general intelligence). The idea of double incidence is proper and necessary here due to the common factor underlying the two interactive psychological subcategories. The test resides in the multitude of high correlation coefficients between the investigated variables of the two psychological subcategories. As a result of the psychological incidence we believe we have to do with an interaction of the reciprocal maximizing type of interactional vocations. Hence, the test of such a supposition should be established as a confirmation according to the degree of simultaneous and autonomous implication in the configuration of the determining factors, in the extended area of cognitive abilities with their structural function in the whole personological profile.

Key words: psychological incidence, navy personnel personological profile, cognitive abilities

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THE JURIDICAL REGIME OF THE SALVAGE AGREEMENT LOF 2000

Abstract: Lloyd's Standard Form of Salvage Contract, otherwise known as Lloyd's Open Form (LOF), celebrates its centenary in 2008. After 100 years of use in marine emergencies around the world, LOF remains the most frequently used form of salvage agreement. The International Salvage Union (ISU) represents the global salvage industry. ISU members are responsible for well over 90 per cent of all salvage activity. In 1978 the ISU began to publish annual salvage statistics. In the 1978-2005 period, ISU members performed 5,135 salvage operations – 2,701 of which were carried out under LOF contracts.

LOF's benefits become clear whenever there is a severe threat to ship, cargo and the environment. Lloyd's administers the contract. The salvor's reward is set to match the nature of the services provided, the risks faced by the casualty and successful outcome in accordance with criteria set out in Article 13 of The Salvage Convention, 1989. Awards are modest when the services are provided on a modest scale. Equally, the Lloyd's Arbitrator will recognise the salvor's achievement when prompt and decisive intervention prevents substantial property loss and environmental damage.

Key words: salvage, salvage contract, clauses, importance, advantages

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CONSIDERATION CONCERNING EUROPEAN GEOPOLITICAL SITUATION BETWEEN FRENCH REVOLUTION AND VIENNA PEACE

Abstract: The French Revolution triggered a series of conflicts over the European continent, through that time empires tried to bring back the absolutist monarchies, the feudal binds and privileges. Napoleon Bonaparte obtained great victories against the coalitions arose to fight him back, but he kneeled all the Europe spreading the ideas of liberty and nation. One may say nowadays Europe is the result of Napoleon's actions even if he was defeated in the end.

Key words: campaign, coalition, continental system, Directory, Napoleonic Era, Republic, Revolutionary Era

ION LAZĂR

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SPEED-DEVELOPING STRATEGIES IN JUNIOR SWIMMERS

Abstract: The experiment was conducted in the pre-competitive period, when the preparation is focused on the solicitation of the anaerobe glycolysis, as well as on the system of „explosive” energy provision, the alactacid one.

From this perspective, the present paper attempts to bring about a number of improvements in the preparation of sprint swimmers in our country, while taking into account the latest novelties that have emerged in international swimming.

Key words: exercise, experiment, swimmers, speed, training, optimization, method



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SKIING – THE DIDACTICAL APPROACH TO MOTOR LEARNING

Abstract: Skiing as any other complex sporting activity has a dominant feature: "the task difficulty". Skiing as any other complex sporting activity has a dominant feature: "the task difficulty". Obviously, there are also less challenging tasks, but these ones only allow a mediocre expression. "The difficult task" is the one that requires quality, quantity and complexity at the level of the maximal challenge degree that can generate performance.

Key words: skiing, learning, teaching, motor structures, challenges, evaluation, accommodation

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IMPORTANCE OF STANDARDIZATION FOR SMEs

Abstract: SMEs play an important role in the economy. They represent about 95% of all operators in Europe and provides 55% of total employment in the private sector. There are clear, tangible benefits for SMEs in using standards. They can use established standards in the development of new products in order to reduce the resources spent on research and development and improve their ability to innovate. They can also employ best-practice guidelines to increase efficiency, improve safety and measure performance. And by proving they adhere to standards, they can win new customers and retain existing ones by demonstrating the quality of products. The potential benefits for SMEs far exceed the cost of accessing and using standards.

Key words: SMEs, standard, benefit, strategy

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EXPERIMENTAL SCIENTIFIC INVESTIGATIONS TO GET AN OBJECTIVE CHARACTER OF THE SWIMMING TRAINING OF THE NAVIGATORS

Abstract: The study's main task was to evaluate the swimming technique of the naval students, at various speeds, in order to increase their specific capacity to develop practical activities, in wreckage cases and survival cases, in extreme situations. The results in the study were obtained by scientific interference in a 30 students' group, (15+15). It was relieved that a technical response to the increasing speed action, already exists. The response was relieved inside many compounds, as: the increasing rhythm of the rowing, the optimal distance of every low heart stroke, the optimal speed at one can get advantage as maximal distance of each stroke.

Key words: applicative swimming, economical swimming, efficiency, speed, endurance, testing, etc.