

ABSTRACT

MECHANICAL AND ELECTRICAL SCIENCE

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STUDY OF ACCURACY OF THE THICKNESS OF FINISHED PRODUCTS SUBJECT PROCESSING DRAWING

Abstract: In this paper is analyzed the accuracy of thickness of various products used in the processing type cupping of small cylindrical pieces, because of their influence on the thickness variation coefficient of thinning and the value of cupping force. This explains the different values of the cupping force recorded experimental in comparison with those resulting from the simulation with FEM or by using the relations in literature.

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INFLUENCE ON MACHINABILITY BY DRAWING THE INTRINSIC PARAMETERS OF MATERIAL

Abstract: In this paper have shown the relationship between intrinsic parameters and the technology resulting from a trial (σ , σ_c , A , IE). Has been defined notion of capacity utilization coefficient drawing and has been shown that for each group of pieces carried, the number of discards is directly related to the size (n_{med} , r_{med}).

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PRESENT AND FUTURE OF RENEWABLE ENERGY SOURCES ONBOARD SHIPS. CASE STUDY: SOLAR – THERMAL SYSTEMS

Abstract: In recent years, sustainability in a climate and an environmental perspective has become an issue of highest priority. This is an agenda that cannot and should not be ignored. The financial crisis has revealed a vulnerable global society. Fortunately, the latest developments have shown signs of recovery thanks to deliberate and well-coordinated global political actions which have created new confidence among companies and consumers. This political commitment can be seen as recognition that global production and trade create wealth for all of us, with shipping and associated maritime industries as the primary enablers. In order to keep focus on the important agenda of sustainable and green shipping attention must turn towards innovation and efficient regulation. Nowadays, shipping industry is dependent on fossil fuels. As oil price is constantly increasing, solutions must be found in order to ensure industry sustainability. Developing and implementing energy efficient and environmentally friendly technologies for energy production and propulsion of the ship will conduct to a valid non – fossil future. In this context, present paper makes a review of alternative sources of energy used in shipping and also reveals concepts of future ships. The novelty is represented by authors vision regarding implementing solar thermal systems onboard, in order to comply with thermal need of the ship.

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SOME ASPECTS ABOUT PITTING

Abstract: This paper present a specifications aspects of pitting phenomenon at the antifriction alloys.

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CONSIDERATIONS ON THE USE OF MAINTENANCE PROGRAMS FOR NAVAL PROPULSION PLANTS WITH GAS TURBINES

Abstract: The work has been done on the study of bibliography and experience in the operation of the doctoral students in the field of gas turbine power plants. The paper analyzed the main factors that require maintenance performed correctly, based on a schedule determined according to technical condition inspections, but on close monitoring of functional operation.

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COMBUSTION CHARACTERISTICS OF A MARINE HEAVY OIL-WATER EMULSION DROPLET

Abstract: The vaporization and combustion characteristics of a marine heavy oil-water emulsion droplet are investigated with graphological method. The combustion graphology of fuel oils is defined as a new technical and scientific field which deals with the graphic transposition of the processes of fuels combustion development in a simulator. Thus, it is easy to establish the ignition-combustion characteristics, including the laws that govern their changes depending on the combustion conditions and fuel specifications.

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THE COMBUSTION PARAMETER OF THE MARINE HEAVY LIQUID FUELS, SIMPLE AND WATER EMULSIFIED FUEL

Abstract: To determine the parameters necessary for making a comparison between the naval residual heavy fuels burning, simple and with water in emulsion, used in marine power systems, we conceived a computer program to establish the composition of combustion gases and combustion point on the diagram, in which the combustion processes can be interpreted and came to the conclusions regarding to the fire control. The ARDIAG program determines the amount of CO and CO₂ from flue gases, the combustion point on the diagram, for liquid heavy fuel simple and with water in emulsion.

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ABOUT RELATING TO THE RECOVERY OF ENERGY FLOWS FROM THE EXHAUST GASES FROM MARINE ENGINES

Abstract: In this paper are presented the main IMO regulations requiring energy management, the main possibilities for recovery of energy flows from the exhaust gases from marine engines and reducing CO₂ production, based on the study of bibliography and teaching experience on board ships.