

1

Proiectarea transformatorului de putere Design of Power Transformer

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Abstract Power transformers are one of the main elements of the grid because electricity transportation from the producer to the consumer at large distances require five, six- transformation. Transformers design is oriented towards minimizing idling losses, which do not depend on the task, and losses cage directly dependent task.

Keywords: power transformers, grid, electricity,

2

Analiza sistemelor de propulsie pentru ROV Propulsion systems analysis for ROV

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Abstract In this paper I have made an introduction in the world of underwater robots, highlighting the constructive principles and modern requirements imposed by this category of vehicles also I have studied the operational needs of ROV systems, compared different delivery systems and ROV control, mechanical and electromechanical characteristics. I have presented two constructive options, analyzing their advantages and disadvantages. In the final part I have present the thrusters used in moving a ROV, analyzing their performance.

Keywords: ROV, underwater, hydrodynamics, propeller, maneuver

3

Alimentarea cu energie electrică a unui cămin Supply with energy of a hostel

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Abstract This paper will analyse the power supply of a hostel to be build. It will be established the active power calculation for each consumer, will be determinated the reactive and apparent powers for each consumer will be computed.

Keywords: reactive power, power factor $\cos\phi$, low voltage, electrical appliances, transformer.

4

Aspecte ale influenței crizei economice asupra activității Portului Constanța Aspects of the influence of economic crisis on the activity Constanta Port

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Abstract This paper presents an analysis of Constanta Port activity during 2008 - 2014. It shows the influence of economic crisis on port activity, shows the variations in services offered, the quantities of goods, the main types of goods and the number of sea and river vessels that have transited port during this period, income gains, resources and investment in infrastructure, superstructure, port operating equipment and makes recommendations on increasing productivity of Constanta Port.

Keywords: goods, services, ship, projects, productivity, infrastructure, port logistics, recommendations.

5

Metode preliminare de determinare a greutateii navei
The preliminary method of determining the weight of vessel

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Abstract This part illustrates how a ship is designed from limited information supplied from the shipowners to the shipbuilders. This paper present the preliminary method of determining the weight of vessel. Is calculated the weight of steel, wood and equipment. It also shows how, after having obtained the main dimensions for a new ship, the marine engineers select the right powered engine to give the speed requested by the shipowner in the Memorandum of Agreement.

Keywords: steel, wood, outfit, engine

6

Studiu privind aplicarea preîncălzirii în vederea eliminării riscului de durificare și fisurare la execuția prin sudare a rezervorului de sulf
Study on the application of preheating to eliminate the risk of hardening and cracking in welded execution of sulfur tank

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Abstract . This paper presents a study on the application of preheating to eliminate the risk or hardening and cracking in welded execution of sulfur tank. In the first phase was studied modes of occurrence of cold cracking and was presented ways of applying preheating and its necessity. Determining minimum preheat temperature was achieved using a special program, which was introduced in welding regime parameters and the chemical composition of analyzed steels.

Keywords: preheat, hardening and cracking, welding regime parameters, chemical composition.

7

Elemente de operare automată a docurilor plutitoare
Operating elements for floating docks

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Abstract The main idea of this project is represented by the automatic operation means and remote control of a floating dock with a 15000 tdw capacity. The floating dock is using operating means to remote control the valves and a general control system of tanks. This control system of tanks contains a lot of sub systems. A first subdivision is represented by the measurement function of tank level gauging. Balast level, oil, fuel, fresh water, can be measured. Another function can be the draft measurement of the lenght of the dock, trim and dock inclining. The last function is the measurement of the vessel deflection. All measurement values are received in the control cabin, where the remote control is achieved.

Keywords: Remote control systems, actuators, ESG equipment, sensors.

8

Criterii de acceptare și măsuri tehnologice de evitare a imperfecțiunilor și defectelor din îmbinările sudate ale structurilor navale
Acceptance criteria and technological actions for avoiding imperfections and defects of naval structures welds

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Abstract: In this paper we will talk about acceptance criteria regarding imperfections and defects of naval structures welds and the actions taken in order to avoid their appearance.

We shall begin with an introduction of imperfection and defect in relation to acceptance limit and a short classification of them, continuing with the description of discontinuities acceptance level followed by its application for three cases of non-destructive examinations.

Keywords: imperfections, defects, discontinuity, acceptance level, non-destructive examination.

9

Examinarea prin metode nedistructive a imperfecțiunilor și defectelor de suprafață din îmbinările sudate ale structurilor navale
Non-destructive methods for examining surface imperfections and defects for naval structures welds

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Abstract: In this paper we will talk about non-destructive testing of welds used to detect surface defects or imperfections.

We shall begin with an introduction into non-destructive examination's purpose, classification of weld imperfections and methods used for observing them continuing with the study of this testing methods.

Keywords: examination, non-destructive, welds, imperfections, defects.

10

Aspecte privind construcția podului hobanat de la Agigea
Aspects on construction of cable-stayed bridge from Agigea

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Abstract The story of Agigea bridge since in 80' years when in south of Constanta need a way for pass Danube-Black Sea canal. After two years of work, in 1984, the bridge has opened at maximum intensity. This bridge is crossed by thousands of people every day. It is considered an engineering miracle because it was built in a time when technology was not developed. This paper presents the story, work mode, the parts and costs of Danube bridge from Agigea.

Keywords: bridge, cable-stayed bridge, tension, pylon, beam, support

11

Analiza tehnico-economică privind conversia cargoului de 15000 tdw în navă portcontainer
The technic-economical analysis about conversion of the 15000 tdw cargo into a port container

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Abstract: In this pice of work I wrote about the conversion of a cargo into a port container. I made a study on the economically efficiency of this type of change-over. Nowadays, marine transport has been developed and there is an inclination for reducing the time of a vessel which is waiting in the harbour during the shipment/ discharge. For this accountancy I took into consideration the freight and the embarrassment. After I made a rough calculation, I conclude that this type of process can yield a superior profit to the ship owner.

Keywords: transport, conversion, economic efficiency, profitability, containership

12

Aspecte privind industria petrolului în România și platformele de foraj marin
Aspects of the oil industry in Romania and marine drilling platforms

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Abstract This paper aims to explain and finding out some useful information about marine platforms in general, but also those of the Black Sea. Another important point is the dynamic analysis on the marine platforms, which helps us to find the resistance of the structure in contact with dynamic phenomena. In conclusion, marine platforms, aiming extracting natural gas and oil drilling, but also sending them to shore. Help develop the country's economy, mainly due to fuel extraction.

Keywords: marine platforms, Black Sea, dynamic analysis, natural gas and oil, marin drilling

13

Paioale în compartimente Plate floor in compartments

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Abstract In this paper we discuss about a plate floor protection that ships used to cover pipes, valves or cables in certain compartments. Besides being designed to protect these straw they have the role of ensuring safe and quick access of crew member's to the ship. Plate floor protection can be of two types: floating and raised (shelves).

Keywords: floating floor plates, floor plates raised in compartments, offshore ship, mineral wadding

14

Analiza sudabilității oțelurilor din structura metalică a reperului coș de fum și optimizarea procedeelor de sudare aplicate Analysis of weldability of steel metal structure of the landmark chimney and optimize welding processes applied

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Abstract This paper work propose to study weldability about unalloyed construction steel processes applied, this construction steel is part of the structure metal chimney. Weldability is the property of a material of a non-removable to combine with another material by forming atomic connections between atoms marginals joined of surfaces under certain conditions of temperature and pressure. In this paper calculated welding processes optimization. Optimization consists in determination each arc welding process what size is optimal diameter for welding structures.S235JR and optimization of welding.

Keywords: weldability, optimization, construction steel, unalloyed steel.

15

Studiu privind analiza structurii îmbinărilor sudate din oțel inoxidabil utilizând diagramele Schaeffler,De Long și WRC Study regarding the structure of stainless steel welded joints using Schaeffler, De Long and WRC diagrams

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Abstract The elaboration of an optimal welding technology is essential for welded construction which must satisfy the customer and in the same time to with stand at the imposed work conditions. By combining the qualities of the base metal and the additional one, an optimal mode for preparation the welding and through elaborating an optimal welding technology we can optimize the welding process, obtaining complex structures with reduced costs. The Schaeffler, De Long și WRC diagrams are one of the instruments which help us to know if the welding technology choose for the execution of a welded construction is correct one or must be reconsidered.

Keywords: welding; characteristics; diagrams; austenite; ferrite.

16

Studiu privind analiza câmpului termic la sudarea oțelurilor pentru conducte
Study on thermal field analysis at welding pipeline steels

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Abstract The welding operations now a day are vital. Developed greatly, the basic welding materials offer and the welding technologies led to better services when it comes to welding joints in certain given environmental conditions.

The look and intensity of the thermic field in the welding process can be influenced by the shape and dimensions of the welding cord. This influences the joining that was welded, process better observed in alloys with more complex characteristics.

Keywords: welding; properties; thermal field; pipe.

17

Tehnici și tehnologii de obținere a gazului inert
Techniques and technologies for obtaining of inert gas

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Abstract In the introduction we mentioned the three condition needed for the burning to take place. The result of the fuel burning is a rapid gain in pressure and temperature. We have to minimize to almost nothing the time with flammable gases are present in the fuel tank at an critical level. This is achievable by using the inert gas system. In the second chapter the Hydrocarbons commonly found on a oil tanker and that cannot burn at less then 11% oxygen in the atmosphere. In figure 1 it's presented the flammable mixtures diagram. I continued the article by explaining the methods for obtaining the inert gas. In chapter 4 I wrote about the variety of methods to produce a inert gas generator. Classification of autonomous inert gas generators can be made depending on the device that produces exhaust gases. We talked about autonomous inert gas generator with gas turbine and inert gas generator with combustion chamber. In concluding I put some calculation of the full item of inert gas system.

Keywords: burning, inert gas generators, gas turbine

18

Modelarea planului de forme a portcontainerului de 132 m
Modeling the lines plan of a containership of 132 m

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Abstract A vessel is designed with the aim of having insured under technical performance and economic efficiency, specific functionality. The lines plan is the graphical representation of the hull geometry in longitudinal, transversely and horizontal section. The design of the lines plan depends the next steps of building the entire body of the ship. The paper presents plan presents the lines plan in 2D and 3D representation for a containership.

Keywords: containership, the lines plan, AUTOCAD,

19

Analiza amplasării unei instalații de generare distribuită pe baza energiei vântului
An analysis regarding the location of a distributed generating system based on wind energy

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Abstract In this paper is presented the steps of the installation of a distributed generating system based on wind energy. In the first instance, a Romania's wind potential analysis is performed, describing the concept of distributed generating, and then it is

explained all stages of the project.

Keywords: wind, distributed generating, wind power

20

Proiectarea unui sistem de producere de energie electrică din surse solare pentru o locuință situată în Județul Constanța

The design of a system for producing electricity from solar sources for a house located in Constanța County

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Abstract This paper presents a study on the existing methods of producing electricity using solar radiation energy for a home located in Constanța County. The first step was a study of the possibilities of solar power to produce electricity using photovoltaic modules, and then an economic and technical analysis of facilities studied were performed.

Keywords: solar radiation, photovoltaics, electricity

21

Optimizarea funcționării unui cazan cu abur

The optimization of the operation of a steam boiler

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Abstract This theme is based on a thorough technical study on the functioning of the boilers CR 12 in order to find the best technical solutions to rehabilitate their operation in order to raise parameters and maximum security with minimal burn emissions. It must be stated from the start that any technical solution must be realized and appreciated in close correlation with the environmental impact that we can generate .

Keywords: the boilers CR 12, maximum security, environmental impact

22

Avariile Maritime

Maritime Damages

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Abstract In this paper we discuss about maritime damage as a result of shipping accidents, which are harmful both to the shipowner and for the owner of the goods transported. Consequently, shipping accidents constitute a permanent source of damage and human losses. This paper presents: definitions and categories of damages, causes of occurrence and a range of ways of preventing and remedying maritime damages

Keywords: damages, common and particular damages, fire, running aground, rescue.

23

Considerații privind utilizarea energiei valurilor în porturi

Considerations regarding the use of wave energy in ports

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Abstract Full use of wave energy is hampered by the fact that this source of energy is very uneven. In this context wave energy can be used only if the waves are high and constant over time. Contemporary technique does not know at this point, through which wave energy systems can easily be converted completely and economically into electricity.

This paper presents some of the most common use of renewable energy systems in ports and their operating principles.

Keywords: energy, renewable, wave, wind, harbour

24

Unele considerații privind metodele de tratare a apei de balast **Some considerations on methods for treating ballast water**

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Abstract Since the introduction of steel-hulled vessels, water has been used as ballast. Ballast water is pumped in order to maintain safe conditions in operation of the ship among the voyage. This practice reduces the hull stress, provides stability, improves propulsion and manoeuvrability and compensates weight changes due to operations of loading-unloading cargo and consumption of fuel and water. While ballast water is essential for safe and efficient modern shipping operations, it may pose serious ecological, economic and health problems due to the multitude of marine species carried in it. The transferred species may survive to establish a reproductive population in the host environment, becoming invasive, competing with native species. In order to reduce the number of invasive species transported in the ballast water of the vessels was imposed equipping them with a system of ballast water treatment. This system can operate according to the following technologies: ballast water exchange, filtration, ozone, heat treatment, UV radiation, deoxygenating by using nitrogen, water chlorination, the use of ultrasounds. Essential in choosing a particular technology are efficiency and outcome.

Keywords: ballast water, invasive species, treatment, shipping, chlorination, filtration.

25

Considerații privind tehnologiile de asamblare și montare a conductelor sub apă **Considerations on technologies assembly and installation of pipes under water**

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Abstract Pipe-line transportation is known since antiquity. At first there were some not very developed technologies, following the then increasingly more, to grow, reaching the latest technologies. These include the main methods of assembly and installation of pipes under water type S-lay, J-lay, Reel-lay, O-lay, respectively, each of it with advantages and disadvantages. The study aims to generalize the following installation methods, transport, installation and assembly of pipes under water, and detailing the main methods to be better understood and used for categorical.

Keywords: pipe-line, pipe, technologies, methods, pipes, S-lay, Reel-lay, O-lay.

26

Analiza mijloacelor moderne de reducere a oscilațiilor navei **Analysis of modern means for reduction ship oscillations**

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Abstract The focus of this paper is to analyze the modern means of reducing the oscillations ship, in particular rolling movement. Ship stabilizers are used to reduce the roll motion of the ship and improve the passengers comfort, however, they can be a considerable hydro dynamic brake for the ship. Stabilizers can reduce a ship's speed due to an increase in hydrodynamic drag. This increases fuel consumption and CO₂ emissions. Some ships employ systems to reduce the stabilizers energy dissipation by using computers to control their motion. This reduces their fuel consumption and CO₂ emissions.

Keywords: amortizoare hidrodinamice, amortizoare cu mase mobile, stabilizator giroscopic

27

Dimensionarea unei instalații de producere frig din biomasă pentru o pivniță a unei crame
Dimensioning of a cooling systems from biomass production for a wine cellar

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Abstract This paper presents a study on the exploitation of grape marc, the main source of biomass remaining from the production of wine. Result after its gasification will be a synthetic gas, called syngas (Syngas). Using an absorption refrigeration system the necessary cold for wine fermentation process could be generated and to keep the wine at the end of the technological process. The simulation of thermo-chemical processing of biomass was done with AspenPlus™ software.

Keywords: refrigeration, absorption gasification, biomass, biogas, Syngas, wine marc.

28

Transportul multimodal în arealul portuar
Multimodal transport in the port area

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Abstract Multimodal transport (also known as combined transport) is the transportation of goods under a single contract, but performed with at least two different means of transport the carrier is liable (in a legal sense) for the entire carriage, even though it is performed by several different modes of transport (by rail, sea and road, for example). The carrier does not have to possess all the means of transport, and in practice usually does not; the carriage is often performed by sub-carriers (referred to in legal language as "actual carriers"). The carrier responsible for the entire carriage is referred to as a multimodal transport operator, or MTO.

Article 1.1. of the United Nations Multimodal Convention defines multimodal transport as follows: "International multimodal transport' means the carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract from a place in one country at which the goods are taken in charge by the multimodal transport operator to a place designated for delivery situated in a different country"

Keywords: multimodal transport, combined transport, sea, road.

29

Analiza acționării hidraulice a sistemului de guvernare prin pilot automat
Analysis of hydraulic driving system of government through Autopilot

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Abstract This article refers to the design and verification of the hydraulic plant connected with an autopilot HSA III adapted to a ship with manual governance plant. It contains a few considerations about hydraulics and autopilot with a graphical representation of the plant, autopilot and the main diagrams related to the equations of the design and verification of the hydraulic plant. Also are listed the main advantages and disadvantages of a hydraulic plant.

Keywords: Hydraulic, Plant, Autopilot, Governance, Ship

30

Analiza prin element finit a structurii metalice de la nivelul punții principale destinată lansării
conductelor subacvatice
Finite element analysis of structure on main deck used for pipe laying

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Abstract There are many variables to take into account when one decides to transport liquide products through underwater pipes. Depending on the weather conditions, sea deapth, the stat of the sea bed and on the liquide that will be transported, one cand opt for a rigid or a flexible pipe. Once the type of pipe is chosen, the decision for the pipe laying method can be taken. The finite element analysis was made on a section of hte pipe laying runway. It shows that the chosen profile does not meet the structural safety requirements so the decision was made to reinforce it with a midplate.

Keywords: underwater pipe, mounting methods, slipways, Von Mises finite element

31

Verificarea conform SR EN ISO 15614-1 a procedurilor de sudare utilizate la execuția rezervorului de cracare catalitică

According to EN ISO 15614-1 verification of welding procedures used in the execution of catalytic cracking reservoir

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Abstract This article shows how a welding procedures can be verify after the main variables was enestablish by formulas or by other method of determination. Paper work begin with very few words about verify method of welding procedures. Second part of the article illustrate how verification was done, order of distructive and nondistructive testing and if first attempt has fail how testing can be repeat and also the acceptance criteria of defects. WPAR – Welding Procedure Approval Record was made after all the testing results are declared positive. Finally are illustated all the WPAR of catalitic cracking tank made after 4 major criteria named: welding method, types of weld, material thickness and pipes diameter.

Keywords: verification, welding procedure, tank, destructive testing, NDT.

32

Automatizarea si robotizarea santierelor Site automation

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Abstract As you can deduct from the title this article aims to develop the concept of automation for using it on the dangerous and harmful sites.This project is used for distance control of rotation mechanism of a crane,and is based on a programmable logic controller,a SCADA aplication developed in Labview,a home PC or notebook,an ethernet web,a variable frequency drive,a circuit breaker a contactor two relays and an asynchronus machine.This sistem can be adopted by a diferent kind of machines.

Keywords: SCADA

33

Senzori anti-furt Anti-theft sensors

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Abstract The APDS-9900/9901 provides digital ambient light sensing (ALS), IR LED and a complete proximity detection system in a single 8 pin package. The proximity function offers plug and play detection to 100 mm (without front glass) thus eliminating the need for factory calibration of the end equipment or sub-assembly. The proximity detection feature operates well from bright sunlight to dark rooms. The wide dynamic range also allows for operation in short distance detection behind dark glass such as a cell phone. In addition, an internal state machine provides the ability to put the device into a low power mode in between ALS and proximity measurements providing very low average power consumption. This sensor can turn a simple wallet into a smart wallet. For example, when a thief is stealing SmartWallet from your pocket, the SmartWallet would warn you immediately. But when you open the SmartWallet by yourself to make payment, or when you go back home and put the SmartWallet on the table, the SmartWallet can recognize you and won't make any noise. This is what we say smarter.

Keywords: smart, sensors.

34

Proiectarea unei linii tehnologice mecanizate pentru sudarea secțiilor navale din structura petrolierului de 112 tdw
Designing a mechanized technological line for welding naval departments of structures 112000tdw

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Through this paper we present you achieve technological line for welding mechanization naval sections of the structure of a vessel of 112,000 dwt tanker type. The work consists in designing technological line mechanization began to serve as board ie deposit and to ship finished product ie. During this continuous flow manufacturing longer present: organization, transport and naval enforcement departments using special machines presented in the paper contents. The purpose of this paper is to highlight the importance of the development and organization of mechanized production cycle leading to increased productivity.

Keywords: mechanization, productivity, development and organization.
