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INFLUENCE OF ORAL ENVIRONMENT ON RESTORATION ALLOYS

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Corrosion and dissolving of thin films laid on the surface of restorative materials represents two phenomena which take place in salivary environment (natural or artificial). Degradation of metallic and non-metallic materials is, usually, a combination of electrochemical and mechanical effects. In a watery environment, like the salivary environment, electrochemical corrosion prevails, associated in lower proportions with the occurrence of chemical corrosion cells (uniform dissolving of the restorative dental material). Above these two phenomena, a third form of corrosion takes place in the oral environment, biologic corrosion, held under the direct influence of the bacterial microflora.

INFLUENȚA CONTAMINĂRII ULEIURILOR HIDRAULICE ASUPRA PERFORMANȚELOR SERVOVALVELOR / INFLUENCE OF HYDRAULIC OIL CONTAMINATION ON THE SERVOVALVES PERFORMANCE

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This paper presents findings regarding the influence of hydraulic oil contamination upon the quality indicators of servovalves. In this paper hydraulic oil contamination is considered a result of abrasion and erosion wear. Lubricant degradation lead to viscosity decreasing; this conclusion is affirmed by many researchers. Using Czarny's relation was determined H46 hydraulic oil viscosity in various stages of degradation (working hours). By simulating with MATLAB-SIMULINK program was examined how the viscosity variation causes changes of servovalves performance, measured with quality parameters, especially overadjustment and the period of transitory regim, for two servovalves with different characteristics.

ASPECTE PRIVIND RUPEREA MATERIALELOR METALICE SUB INFLUENTA TEMPERATURI / SOME ASPECTS REGARDING METALLIC MATERIALS FRACTURE DUE TO TEMPERATURE INFLUENCE

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The paper presents the results of a comparative study regarding metallic material fracture due to temperature variation. It was analyzed, for a simple metallic sample, the corelation between the results obtained using the experimental method and than the finite element modeling. The analysis offers informations that helps the results validation obtained by finite element modeling of a metallic structure, considering the structure temperature.

REALIZAREA MODELULUI CU ELEMENTE FINITE A ASAMBLĂRILOR NITUITE DIN STRUCTURILE DE AVIAȚIE / FINITE ELEMENT MODEL OF RIVETING ASSEMBLIES FROM AVIATION STRUCTURES

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The fatigue phenomenon appears especially during the exploitation of certain marks of the bodies subjected to variable requests in time or repeated. Usually the cracks start in no visible places, with the limit of the opening of a rivet or on the surface of assembly of the plates.
Generally the riveted joints problem it is a problem of non-linear fracture mechanic. Calculus effort is considerable enlarged by the numerical approach of the non-linear problem of fracture mechanics by comparison with that one of linear mechanics without a considerable intake on solution precision. For that reason fatigue durability prediction methodologies and fatigue damage risk prevention, generally take account on the linear elastic materials bearing. In this paper it is formulated a model which allows numerical problems solving in reasonable time.

SCULE MINIERE DE PERFORAT/ MINING EXPERIMENTAL TOOLS FOR DRILLING OPERATION

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The excavation of mine workings in hard rocks is made through drilling-blasting technology; in the frame of this method, the holes drilling is one of the basics operations of this technology and is realised by percussive procedure.
Single edge chisel bits, D.C.P., with Φ 40mm diameter, are the most usual mining tools for holes drilling, both for coal and ores mining; its consumption has a significant "weight" for the cost of drilled rock ton, depending on rocks physical-mechanical properties.
With a view to reducing the costs for simple edge chisel bits, was investigate the possibility to use hard alloys with structural gradient for producing the tippeds which are the edges of these tools, also,the pulverization on the bit surface.

EXPERIMENTAL PLANS METHOD WITH APPLICATION TO THE MODELING OF AN ELECTROSTATIC SEPARATION PROCESS

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Electrostatic separation process is based on the electrical forces acting on charged or polarized particles in an electric field, generated by an electrode system connected to a high-voltage supply. The aim of this paper is to obtain a mathematical model capable to reflect the effects of a large number of controllable factors. The statistical analysis of the data revealed a significant correlation between the high-voltage, the roll-speed, the angular position and the quantity of the middling product in the processed material. These findings could be helpful for the optimisation of the operating conditions of the electrostatic separation applications where the metal content in the feed materials is characterized by important fluctuations with time.

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Michelle Moore, John Moore
Exponential Training & Assessment Limited **,** Earl Shilton, ENGLAND**,**

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Michelle Moore, John Moore
Exponential Training & Assessment Limited **,** Earl Shilton, ENGLAND

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