COB1278 RESPOSTA DINÂMICA DE SENSORES DE TEMPERATURA ATRAVÉS DO DESMASCARAMENTO EM MEIO LÍQUIDO

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This work presents a comparative study between two methods for the generation of a step function temperature signal to be used in the dynamic calibration of temperature sensors in liquid. The classic method, in which the sensor is rapidly immersed in a fluid at different temperature, is compared with the unmasking method. In this method the sensor is placed in the fluid, but is isolated from it by a mask pressurized internally. An especially designed rotating tank was used in these tests. The results obtained have shown that, at least for a given type of sensor, the unmasking method presents better results than the immersion method.

Keywords: *Calibração Dinâmica, Tempo de Resposta, Sensores de Temperatura, Medição Transiente de Temperatura.*

COB1341 CONTROLE DE UM MULTIPROGRAMADOR VIA MATLAB / *CONTROLING A MULTIPROGRAMMER USING MATLAB*

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This work presents the software for the command of an interface between a Multiprogrammer STD-85MP (a data acquisition system) and the MATLAB software. The communication between the multiprogrammer and the host computer (in this case an IBM-PC) is done through a GPIB bus. Many different routines have been developed, at least one for each kind of multiprogrammer card available. The implemented routines in the form of MEX-files were developed in FORTRAN. The syntax of the commands follows the syntax used in MATLAB. The objective of this implementation is to simplify the development of software for the control of experiments in the Physical Simulation Laboratory of the Space Mechanics and Control Division - DMC of INPE. This tool facilitates the development of software at the same time that it brings the experiment data into the powerful analysis and graphical environment of MATLAB.

Keywords: *Physical Simulation, Software, Device Driver, Hardware in the Loop/Simulação Física, Software, Acionador de Dispositivos, Hardware na Malha*

COB1448 DESENVOLVIMENTO DE UM SENSOR POROSO CAPACITIVO PARA MEDIÇÃO DE UMIDADE NO SOLO / *DEVELOPMENT OF A POROUS CAPACITIVE SENSOR FOR MEASURING OF GROUND HUMIDITY*

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