



“Gheorghe Asachi” Technical University of Iasi, Romania



VIRTUAL PROTOTYPING OF A SPRAYING ROBOTIC SYSTEM

Monica Enescu*, Cătălin Alexandru

*Transilvania University of Braşov, Renewable Energy Systems and Recycling Center,
29 Eroilor Bvd., 500036 Braşov, Romania*

Abstract

The paper presents the virtual prototype of a robotic system for spray pyrolysis deposition (SPD). To design of the mechanical device model of the robotic system, the MBS environment ADAMS of MSC Software was used, while the MATLAB/Simulink of Mathworks was used for the dynamic analysis of the robotic system, according to the mechatronic concept. A control loop was chosen, composed by a multi-body mechanical model, connected to the dynamic model of each motor. The main objective is to verify the correlation between the control system (of the DC motors) and the imposed trajectories (of the end-effector).

Key words: control loop, multi-body system, robotic system, spray pyrolysis, virtual prototype

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* Author to whom all correspondence should be addressed: e-mail: monicaenescu@unitbv.ro, Phone.: +40748157008; Fax: +40268410525