

SIMULATION OF WHEEL/RAIL DEGRADED ADHESION WITH A 1-5 BOGIE SCALED ROLLER RIG

Paolo Toni, Benedetto Allotta, Luca Pugi

Department of Energetics Sergio Stecco, University of Florence, Italy
E-mail: *paolo.toni@unifi.it* Monica Malvezzi

Department of Information Engineering, University of Siena, Italy
E-mail: *malvezzi@dii.unisi.it*

Abstract. *In railway applications, the testing activity of on board components is necessary to optimize the efficiency of the systems and to allow a proper safety level. In order to decrease the times and the costs of the testing phases, the use of dedicated test rigs is being increased. This paper summarizes some studies for the realization of a roller rig to be used to test locomotives. In these studies the main mechanical and control problems that arises in the design of this type of test rigs have been focused, in particular the feasibility of tests were degraded adhesion condition between the wheel and the rail are simulated.*