Modelling and simulation of a production line in an automotive company.

R. Riuz-Usano, J.M. Framiñán-Torres, M.A. Muñoz-Pérez, Crespo-Márquez, P. Moreu de León,

Escuela Superior de Ingenieros, Universidad de Sevilla , Camino de los Descubrimientos, s/n., 41092 – Sevilla (Spain)

usano@cica.es

A. Castellano-Paulis

Factoría RENAULT de Sevilla (Spain)

Alberto.Castellano@renault.com

The goal of this research is the modelling and simulation of an Integrated Manufacturing Line (as it is named in the factory) that produces the third idle gear in the Renault Factory located in Seville in order to find out the true capacity of the line and to make improvements leading to a better behaviour of the system. The item produced is one of the parts manufactured and assembled by the company into the Renault car gear boxes. To construct the models two approaches have been used: a continuous system dynamics model, using VENSIM, and a discrete model using a interactive and user friendly simulation package, named WITNESS.