

OrCAD versus Simulink Model of Cascade Control Using PI Controlers

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Abstract

In this paper a comparison between OrCAD and Simulink control model of a DC motor using PI controllers is presented. Furthermore, a way of designing a control system based on the “cascade adjustment” principle is also described. The use of cascade technique has an increased flexibility on the control of the system because of the control possibility of both the speed and current. The control of the system was performed both in Simulink 7.1 and in Orcad 9.2., in order to observe the difference between schematics and simulation characteristics. With the purpose of emphasizing the simplicity of the Simulink model, in this paper is taken into consideration only the Simulink library. Schematics and simulated responses for different adjustments of the P and PI controllers are displayed.