

A nonlinear dynamic fuzzy model for natural circulation drum–boiler–turbine is presented. The model is derived from Åström–Bell nonlinear dynamic system and describes the complicated dynamics of the physical plant. It is shown that the dynamic fuzzy model gives in some appropriate sense accurate global nonlinear prediction and at the same time that its local models are close approximations to the local linearizations of the nonlinear dynamic system. This closeness is illustrated by simulation in various conditions