Neural Network Applied To Predict the Parison Dimensions in Plastics Extrusion Blow Molding

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ABSTRACT

This paper is the continuity of our work on predicting the parison dimensions in extrusion blow molding using the artificial neural network (ANN) method. In order to predict the dimension of any location on the parison, an ANN model is developed. The input parameters of the ANN model are the flow rate, the drop time corresponding to any location, and the weight of parison segment between the location and bottom of the parison; the output parameter is the parison dimension (diameter or thickness) of the location. Less experiment is required to provide sufficient patterns to train the model. Trained and tested with the patterns determined by experiments, the ANN model can be used to predict the dimension of any location on the parison within a given range determined by the training patterns.

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