

Short-term demand forecasting for Polyvinyl Chloride process scheduling

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The scheduling of plant should be determined based on the product demands correctly forecasted by reasonable methods. However, because most existing forecasting packages need user's knowledge about forecasting, it has been hard for plant engineers without forecasting knowledge to apply forecasted demands to scheduling. Therefore, a forecasting module has been developed for plant engineers without forecasting knowledge.

In this study, for the development of the forecasting module, an automatic method using the ARIMA model that is framed from modified Box-Jenkins process is proposed. And a new method for safety inventory determination is proposed to reduce the penalty cost by forecasting errors. Finally, using the two proposed methods, the automatic module has been developed.

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