

The Use of Haar Wavelet Mother Signal Tool for Performance Analysis Response of Distillation Column (Application to Moroccan Case Study)

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Abstract : This paper aims at reviewing some Moroccan industrial applications of wavelet especially in the dynamic identification of a process model using Haar wavelet mother response. Two recent Moroccan study cases are described using dynamic data originated by a distillation column and an industrial polyethylene process plant. The purpose of the wavelet scheme is to build on-line dynamic models. In both case studies, a comparison is carried out between the Haar wavelet mother response model and a linear difference equation model. Finally it concludes, on the base of the comparison of the process performances and the best responses, which may be useful to create an estimated on-line internal model control and its application towards model-predictive controllers (MPC). All calculations were implemented using AutoSignal Software.

Keywords : process performance, model, wavelets, Haar, Moroccan

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