Abstract

This paper deals with the identification of MIMO cement mill process using Non-linear Autoregressive with Exogenous Inputs (NARX) models with wavelet network. NARX identification, based on a sequence of input/output samples, collected from a real cement mill process is used for black-box modeling of non-linear cement mill process. The NARX model is considered for two inputs and two outputs of seven hours of data with sample time of five
seconds. In order to assess the suitability of identified model, Model validation tests are
performed by means of auto-correlation function and cross-correlation function. The fitness of
NARX identified model is compared with ARX model. The identified NARX model is converted
to discrete transfer function and the dynamic characteristic of the identified model are evaluated
and results are given.

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Index Terms
Key words

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