

Design of Fuzzy based Linearizer to eliminate the effect of Swelling and Shrinkage for accurate level measurement in Industrial Boiler

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Abstract

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Abstract:

Boiler drum is an important process of any thermal power plant. For the safe operation of boiler drum accurate level measurement is the key factor. Researchers have developed many level sensors for continuous level measurement in boiler drum. However, the measurement is significantly affected because of the cross sensitivity effect of various influencing factors. To linearize these cross sensitivity of level sensor, various soft computing based methods have been reported in the literature. Fuzzy Based linearizer has been successfully used for the said purpose. Swelling and Shrinkage of boiler drum is found to be one of the factor which affects the accuracy of the level measurement. An attempt has been made to develop a Fuzzy based linearizer which is capable to generate corrected level with the variation of errors in real-time basis.

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