Diesel Fault Prediction Based on Optimized Gray Neural Network

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Abstract : In order to analyze the status of a diesel engine, as well as conduct fault prediction, a new prediction model based on a gray system is proposed in this paper, which takes advantage of the neural network and the genetic algorithm. The proposed GBPGA prediction model builds on the GM (1.5) model and uses a neural network, which is optimized by a genetic algorithm to construct the error compensator. We verify our proposed model on the diesel faulty simulation data and the experimental results show that GBPGA has the potential to employ fault prediction on diesel.

Keywords : fault prediction, neural network, GM(1,5) genetic algorithm, GBPGA
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