

Thesis Title Prediction Model of Oil Analysis Result for Truck Engine Size 85 Ton of Mae-Moh Mine by Artificial Neural Network

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ABSTRACT

The objective of this research is to apply artificial neural network (ANN) in to develop the forecasting system of oil analysis result for truck engine size 85 ton (8 engines) at Mae Moh Mine, Lampang Province. The research began with the study of oil analysis procedure, data collection and data coding. Then the appropriate artificial neural network models were created. The result from ANN were compared with the analysis from expert. According to the result, it was found that the appropriate ANN model was the model which data set were coded with Binary system 3 digits and the appropriate parameter of the model was the learning rate of 0.8, momentum 0.4 and the decision level of accept and reject of 0.7 and 0.69 respectively. As the model provides the accuracy of the learning at 98.41%, while the accuracy of the testing was 95.54%. The results from ANN was compared with the using the data of 2007. The results suggested that ANN model was accurate as it achieved training and testing accuracy of 84.68% and 94.74% respectively