



APPLICATION OF ARTIFICIAL NEURAL NETWORK IN TECHNOLOGY ASSESSMENT OF COAL GASIFIER PERFORMANCE

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The entrained flow coal gasifier products have different performance parameters because of the different of the coal, the operator's factors, etc. Thus, we require a general method to evaluate the technical applicability of coal gasifier and improve the using efficiency of coal.

This thesis selected a large number of industrial samples and set up a artificial neural network(ANN) model by BP method which includes two hide layer. ANN method has the nonlinear and self-adaption characters which are applied to predict the coal gasifier's parameters. Several universal engineering parameters such as operating pressure, the analysis of the coal property, are input values. Five universal technical performance index such as specific coal and oxygen consumption, effective gas content, the cold gas efficiency, are predicted by this ANN method. The method can provide a reference for the user who need to choose the best alternatives.

References

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