

Evaluating the effect of economizer on efficiency of the fire tube steam boiler

ABSTRACT

In this paper, the effects of using economizer on efficiency of examined fire tube steam boiler is presented. Based on the live tests, the performance indexes of two fire tube 3 passes wet back steam boilers with capacity of 3000 kg/h (one of them with economizer and another without economizer) measured. A MATLAB analysis with the comparison of different results is developed to evaluate the results produced by the live test. The indirect method is the applied method in this study, therefore various types of losses is measured. The results show the effect of using economizer for increase the feed water temperature and improving the efficiency of fire tube steam boiler.

Keyword: Fire tube boiler; Boiler efficiency; Economizer