

Calculating the Amount of Annual Financial Saving for Steam Boilers based on its Most Effecting Factors - A Case Study

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Abstract

This paper is concerning with calculating the annual savings from fuel and financial expenses within a power plant. For this research, a visual basic program was developed and being applied for analyzing the gathered data, collected from El-Khmus power plant, Libya. The key findings pointed to an acceptable amount of savings throughout the entire operations within the studied power plant. The highest level of findings was increasing the thermal gain and the total efficiency of the boiler as a result of using the exhaust temperature for heating-up and decreasing the humidity level of the feeding water to the same boiler. It was clearly found that because of this increasing of the total efficiency, the annual amount of consumed fuel as well as the financial expenses was both saved up to 2.6%.