EFFICIENT OF COMBUSTION SYSTEM ANALYSIS IN
BOILER AT PLTU UNIT III PT.PJB UP GRESIK
WITH STATISTICAL PROCESS CONTROL (SPC)

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Abstract

Statistical process control (SPC), a technique used to evaluate the performance of a process that uses statistical methods to monitor, analyze, control and influence the performance improvement process. Implementation of SPC is used to analyze and improve the performance of combustion systems in boiler in PLTU Unit III PT.PJB UP Gresik. This research will make a control chart is X-bar and S to determine the mean and the boundary control of data input into the variables that influence the efficiency of the boiler unit III. Efficiency value is a measure that shows the performance on the boiler. The method used to solve the problem is that Six Sigma is a structured method of quality improvement which consists of five stages include: Define, Measure, Analyze, Improvement, and Control. Random Test results of this study found that the result of all the variables have value P-value> 5%, which means that all data meet kerandoman. Uji normality test showed that not all data is normal. Analysis of combustion systems using Xbar-S control chart on all the variables showed that all the variables there are circumstances Out Of Control. On Boiler Combustion System for Power Plant Unit 3 UP PT.PJB Gresik shows the process conditions that are not capable enough, but approaching the specification. This is indicated by the value of Cp = 1,29.

Keywords: Statistical Process Control (SPC), Six Sigma, Performance.
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