

## ABSTRAK

PT Perusahaan Listrik Negara (Persero) mengumumkan konsumsi listrik pada paruh pertama 2018 sebesar 112,46 TeraWatt-hour (TWh) atau tumbuh 4,7 persen secara tahunan. Dengan terus bertambahnya kebutuhan energi listrik maka diperlukan penyedia listrik yang mampu memberikan produksi listrik yang handal, stabil dan efisien kepada masyarakat. Efisiensi yang tinggi dalam suatu produksi listrik pada PLTU dapat dilihat dari kinerja atau efisiensi *boilernya*, karena daya suatu *boiler* sama dengan daya mampu suatu PLTU. Efisiensi *boiler* diperoleh dari perhitungan perbandingan antara energi *output* dan energi *input* boiler. Efisiensi *boiler* dipengaruhi oleh kebersihan *boiler* dari deposit abu batubara. Pembersihan dapat dilakukan dengan pengoperasian *sootblower*. Pola pengoperasian *sootblower* mempengaruhi nilai dari efisiensi *boiler* yang akan memberikan gambaran tentang seberapa besar efisiensi dari *boiler* ketika beroperasi. Sebagaimana berdasarkan analisis perhitungan yang dilakukan di dapatkan hasil efisiensi *boiler* mengalami penurunan ketika dilakukan kegiatan *sootblower*. Penurunan tertinggi efisiensi *boiler* selama proses *sootblower* adalah 2.22%, penurunan terendah efisiensi *boiler* selama proses adalah 1.08 % dan rata-rata penurunan selama proses *sootblower* adalah 1,73%. Sedangkan dampak dari pengoperasian *sootblower*, efisiensi *boiler* mengalami 11 kali penurunan dan 8 kali mendapatkan kenaikan menandakan bahwa pola pengoperasian *sootblower* di PLTU X kurang efektif.

**Kata kunci:** *efisiensi boiler, sootblower, pola pengoperasian sootblower.*



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**ANALYSIS OF BOILER EFFICIENCY AGAINST THE SOOTBLOWER  
OPERATING METHOD AT THE PLTU X**

**ABSTRACT**

*Perusahaan Listrik Negara (Persero) PT announced electricity consumption in the first half of 2018 was 112.46 TeraWatt hour (TWh) or grew 4.7 percent on an annual basis. With the continued increase in electricity demand, electricity providers are required to be able to provide reliable, stable and efficient electricity production to the public. High efficiency in an electricity production in a power plant can be seen from the performance or efficiency of the boiler, because the power of a boiler is the same as the power of a power plant. The boiler efficiency is obtained from calculating the ratio between the output energy and the boiler input energy. Boiler efficiency is influenced by the cleanliness of the boiler from coal ash deposits. Cleaning can be done by operating the sootblower. The sootblower operation method will affect the value of boiler efficiency which gives an idea of how much efficiency the boiler when the boiler is operating. As based on the analysis of the calculations that have been made, the results of the boiler efficiency decrease when the sootblower is operating. The highest decrease in boiler efficiency during the sootblower process is 2.22%, the lowest decrease in boiler efficiency during the process is 1.08% and the average decrease during the sootblower process is 1.73%. While the impact of sootblower operation, boiler efficiency has decreased 11 times and has increased 8 times, indicating that the sootblower operating method in PLTU X is not effective.*

**Keyword:** *efficiency of boiler, sootblower, sootblower operation method.*

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