

## **ANALYSIS OF THE EFFECT OF CHANGES IN VACUUM PRESSURE ON CONDENSER EFFECTIVENESS BEFORE AND AFTER OVERHAUL IN BLOK 1 PLTGU UP GRESIK**

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### **ABSTRACT**

The condenser in the operation of PLTGU serves to condense the residual steam of the low pressure turbine. The purpose of this study is to determine the effect of changes in vacuum pressure on condenser performance and determine the effect of overhaul on condenser performance. The variation in vacuum pressure on the condenser will be seen the effect of vacuum pressure on condenser performance. The results obtained the effectiveness score after overhaul was better than before overhaul by an average of 42.032% to 47.022%. The highest effectiveness at vacuum pressure of 679.5 mmHg was 46.103% before overhaul and 49.66% after overhaul. Meanwhile, the lowest effectiveness at vacuum pressure of 669.5 mmHg with effectiveness values before overhaul 39.45% and 45.94% after overhaul. The effectiveness of the condenser increases by an average of 4.99% after the overhaul. The level of vacuum in the condenser affects the effectiveness value of the condenser, the higher the value of vacuum pressure will increase the value of the heat transfer rate so that the effectiveness will increase. Factors that affect condenser performance are the level of tube cleanliness, the number of pluggings, vacuum pressure, and the operation of condenser supporting components.

**Keywords:** Vacuum pressure, Condenser, Effectiveness

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