

ABSTRAK

Penelitian tentang analisis kinerja alat penukar kalor sistem air pendingin siklus tertutup di Teluk Sirih didasarkan pada kondisi sebelum dan sesudah overhaul. Faktor kebersihan di pipa-pipa (*tube*) alat penukar kalor sistem air pendingin siklus tertutup dan peralatan penyaring dalam sistem air pendingin dapat meningkatkan efisiensi. Setelah overhouling, efisiensi penukar panas air pendingin siklus tertutup meningkat sebesar 5,25% dan nilai perbedaan suhu rata-rata logaritmik dari 3,21 °C menjadi 2,902 °C. Jika perbedaan suhu rata-rata logaritmik turun, efisiensi meningkat. Dari data di atas dapat disimpulkan bahwa kegiatan overhaul dapat meningkatkan efisiensi alat penukar panas sistem air pendingin siklus tertutup.

Kata kunci: Efisiensi, perbedaan suhu rata-rata logaritmik, alat penukar panas sistem air pendingin siklus tertutup

ABSTRACT

Research on the analysis of the performance of the closed cycle cooling water heat exchanger at Teluk Sirih is based on conditions before and after overhaul. Cleanliness factor at tubes of the closed cycle cooling water heat exchanger and filter equipment in cooling water systems can improve efficiency. After overhauling, the closed cycle cooling water heat exchanger efficiency increased by 5.25% and the logarithmic mean temperature difference value from 3.21 °C to 2.902 °C. If the logarithmic mean temperature difference drop, efficiency increases. From the above data it can be concluded that overhaul activities can increase the efficiency of closed cycle cooling water heat exchanger.

Keywords: efficiency, logarithmic mean temperature difference, closed cycle cooling water heat exchanger