ENERGY EFFICIENCY IN THE REFRIGERATION SYSTEM  A CASE STUDY OF SURABAYA JUANDA INTERNATIONAL AIRPORT

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ABSTRACT

Energy is one very important thing in human life. More and more energy demand is increasing while the earth's energy resources are diminishing. Various ways that can be achieved in order to realize energy saving, such as the use of low-cost alternative energy or energy efficiency program. Juanda International Airport is one of the buildings that require much energy. Nearly 40-60% of electrical energy used for refrigeration systems, therefore we need to analyze the performances of the refrigeration system so that there can be known whether the energy is efficiently used.

The method used in this study is to calculate the performance of the chiller so that it can be compared with its design performance. It also calculates the effectiveness of the AHU / OAH. From there can know what part of the refrigeration system, the maximum performance to be analyzed in less savings opportunities.

By using such research methods are expected to note the performance as well as can be seen the value of energy savings opportunities in refrigeration systems at Juanda International Airport.

Keywords: efficiency energy, refrigeration systems, chiller performance, saving opportunities.
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