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EFFICIENCY OF ELECTRICAL ENERGY IN HVAC SYSTEM (HEATING, VENTILATION, AIR CONDITIONING) IN PT. SELTECHINDO SERVIS

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ABSTRACT

Electrical energy is a source of energy that will run out and can't be renewed. Along with the higher industrial growth of a country in modern times, the level of electrical energy needs will be higher, so that efficiency efforts are needed in the use of electrical energy so that there is no waste of electricity usage. In the industrial sector, the most use of electrical energy is in the HVAC system (Heating, Ventilation, Air Conditioning). This efficiency program is applied to HVAC systems because the biggest use is in this system. This efficiency program aims to reduce the use of electrical energy in order to create Green Buildings in industrial companies.

The efficiency process is carried out on the HVAC system by making improvements to the HVAC system, especially on the chiller, optimizing the set point temperature, and doing the time management process for the HVAC system so that all HVAC systems can achieve efficiency in the use of electrical energy. Campaigns and training for people in the company not to use excessive electrical energy on every piece of equipment.

The results of implementation for the process of electrical energy efficiency in the workplace of this practice were successfully implemented. The electricity efficiency of the chiller is 31.8% in Building A and Building B is 24.21%. HVAC systems after electrical efficiency can operate normally without reducing the functional requirements and achieved environmentally friendly High Performance Building in industrial companies.

Keywords: HVAC, Chiller, AHU, Set Point Temperature, Electricity Efficiency