CAPACITORS INSTALLATION ANALYSIS ON PRIMARY DISTRIBUTION OF INDUSTRIAL CUSTOMERS TO IMPROVE THE POWER FACTOR

ABSTRACT

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In the process of electric power distribution, we know that for PLN customers with type of I2, I3, and I4 tariffs in its electricity usage is charged kWH usage and kVARh usage every month. For customers with the type of tariff I, the load is always inductive because electrical equipment used always absorbs kVARh. If the greater the value of PF, the smaller the value kVARh so that the cost of usage kVARh the smaller. PLN customers with an industry tariff category are subject to their excess kVARh charge if PF <0.85 lagging. For use of kVARh with PF 0.85 and above, subscribers are not charged. For that in an effort to reduce the cost of kVARh some customers try to raise the value of PF to ≥ 0.85 lagging. In this thesis will discuss the analysis of capacitor mounting on industrial customers, and this research was done in PT. A engaged in the production and distribution of steel, PT. A is subject to a kVARh fine because the value of kVARh excess value for 3 months already exceeds 62% of its kVAR power requirement, therefore a large calculation of capacitor capacity is required as well as calculating its effect on the voltage improvement obtained from the PLN electricity account data. The results of calculations and analysis, then set for improvement of power factor on the operation of PT. A to 0.85 lagging need to be installed 100 kVAR

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