

LOSSES POWER CONDUCTOR HIGH VOLTAGE OVERHEAD POWER LINES 150 KV ON GARDU INDUK DURI KOSAMBI - GAS INSULATED SWITCHGEAR (GIS) GROGOL

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ABSTRACT

Electrical systems between power centers and load centers are generally separated in hundreds or even thousands of kilometers, so the generated electricity must be channeled through the wires of the transmission line. Electricity distribution has three levels, among others, the power level, transmission rate and distribution level. The power loss that occurs in the transmission line is very important, because it can cause considerable power loss. Power loss is a loss of energy that is completely impossible to avoid. The method used is a quantitative method where the researcher takes load data at 10:00 and 19:00 WIB. The recording is done by reading the control panel that is already in the substation. The control panel system at the substation functions as a reader as well as storing current and voltage data. The transmission line distance between the Duri Kosambi Substation - Grogol Insulated Switchgear (GIS) Gas is 8.35 km. The conductive wire used is the Zebra manufacturer's ACSR 2x400 mm² dimension with a resistance value of 0.0337 Ω / km. The calculation results show that the highest power losses for one month occurred on February 4, 2018 with a value reaching 92,589 kW. The total amount of energy lost for one month was 51478.1064 kWh, so the results of the analysis of the calculation of losses due to PT PLN losses were Rp.84,681,485.

Keywords: Losses Power, Transmission Line