

Analisis Kerja Rele Overall Differential pada Generator Unit I PLTA Ketenger PT Indonesia Power UBP Mrica

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Abstract	Plant has two important equipment that are the generator and transformer. Therefore, it should be protected well by the overall differential relay. This relay must be reliable from the disturbances that might arise. In this study a simulation was conducted to obtain and test the overall differential relay setting at generator unit 1 PLTA Ketenger. Modelling was done with MATLAB Simulink 7.0.1 to check the overall differential relay protection system from potential problems. The model was given several disturbances, namely 1) short circuit fault in the security area, 2) short circuit fault outside the security area, and 3) lightning disturbances when damaged arrester. From the simulation results, the overall differential relay operating current is 1.73 A (primary side) and 1.64 A (secondary side). The results show that the overall differential relay provides a good response, except in the lightning fault with a current above 9×10^9 A (going the mismatch). For handling this problem another arrester should be added.
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Author	HARI PRASETIJO, S.T, M.T