MODIFIKASI RANGKAIAN TRIPPING RELAI MEKANIK SUDDEN PRESSURE DAN BUCHOLZ UNTUK PENCEGAHAN GANGGUAN NSF (*NON-SYSTEM FAULT*)

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ABSTRACT

Maintenance of Power Substations and Networks is crucial for ensuring the reliability of power systems. Non-System Fault (NSF) disturbances in mechanical relay transformers can cause power outages and equipment damage. Cases in point include short circuits at Trafo Mobile GI Kudus' sudden pressure relay and Trafo #4 GI 150kV Sunyaragi's Bucholz relay, leading to 150kV and 20kV PMT trips. This research proposes modifications to the tripping circuitry of sudden pressure and Bucholz relays, identifying additional factors causing disturbances to minimize NSF occurrences. Implemented at PLN ULTG Purwokerto, these modifications aim to enhance transformer protection system reliability within PLN UITJBT, particularly at PLN ULTG Purwokerto.

Research findings indicate that these modifications improve transformer protection system reliability, reduce power outage risks, and Energy Not Served (ENS) losses. This research is expected to be applicable across PLN UITJBT's service area, enhancing power system reliability and quality.

Keywords : Power System Realibility, Mechanical Transformer Relay, Non-System Fault.