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Analisis Stabilitas Transien dan *Load Shedding* pada saat Terjadi
Generator *Outage* pada Sistem Tenaga Listrik
PT Pertamina (Persero) RU IV Cilacap

xxiii + 130 halaman + 20 tabel + 56 gambar + 5 lampiran

Abstrak

Stabilitas sistem tenaga listrik adalah kemampuan dari suatu sistem tenaga listrik untuk memberikan reaksinya terhadap gangguan dalam keadaan kerja normal serta kembali normal dalam keadaan semula. Stabilitas frekuensi bergantung pada kemampuan untuk mengembalikan keseimbangan antara sistem beban dan pembangkitan dengan meminimalisasi pelepasan beban. Sebagai perusahaan yang bergerak di bidang minyak bumi dan gas, PT Pertamina RU IV Cilacap memprioritaskan pelayanan listrik untuk kebutuhan proses produksi. Untuk menjaga keberlangsungan proses produksi diperlukan suatu sistem tenaga listrik yang handal. Untuk mempertahankan kestabilan sistem tenaga listrik akibat lepasnya generator dari sistem tenaga listrik, PT Pertamina RU IV Cilacap melakukan pelepasan beban, yaitu beban-beban yang apabila dilepas tidak mengganggu proses produksi kilang. Setelah dilakukan pelepasan beban dengan menggunakan UFR (*under frequency relay*), sistem tenaga listrik dapat kembali normal sesuai standar sistem tenaga listrik PT Pertamina RU IV Cilacap.

Daftar Pustaka: 2010 – 2016

Kata Kunci: Stabilitas, Lepasnya Generator, Frekuensi, Pelepasan Beban

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Transient Stability Analysis and Load Shedding When the
Generator Outage on Power System of PT Pertamina
(Persero) RU IV Cilacap

xxiii + 130 pages + 20 table + 56 pictures + 5 attachment

Abstract

The stability of the power system is the ability of an electricity system to give his reaction against a disruption in normal working state as well as returning to normal in original state. Frequency stability depends on the ability to restore balance between load and generation system by minimizing load discharge. As a company engaged in the field of petroleum and gas, PT Pertamina (Persero) RU IV Cilacap prioritize service needs for the electricity productios process. To maintain the sustainability of the production process needed a reliable power system. To maintain the stability of the power system due to the loss of a generator of electric power system, PT Pertamina (Persero) RU IV Cilacap did the release of load, the load is a load which when removed do not interfere with the process of the production of the refinery. After the release of the load by using UFR (under frequency relay), power system can be back to normal according to the standard power system PT Pertamina (Persero) RU IV Cilacap.

Bibliography: 2010 – 2016

Keywords: Stability, generator loss, frequency, release the load