

# **PENGATURAN EKSITASI PADA TEGANGAN KELUARAN GENERATOR UNIT 1-4 PLTU SURALAYA**

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## **ABSTRAK**

Energy requirement is very important for people to increase prosperity. One of energy requirement for people now is electric energy. In PLTU Suralaya unit 1-4, generator convert motion energy from steam to electrical energy that is used by people to fulfill electric energy requirement, PLTU Suralaya produce the generator voltage out as uch as 23 KV. Excitation system is giving direct current to make magnetic field in rotor of generator. By controlling excitation current power plant can control reactive power and the generator voltage out that is determined by infinite bus that connected parallely with generator. If the load in infinte bus is low so the generator voltage out is up above the reference voltage the opposite if the load in infinite bus is high so the generator voltage out is down under the reference voltage. If the generator voltage out rises up to exceed the reference voltage so in excitation system will reduces excitation current supply to rotor of generator, it will reduce flux magnetic in rotor of generator. This condition made reactive power and the generator voltage out is down and oppositely. In this final project colleger uses qualitative methode that observes about changing of excitation current with the generator voltage out and reactive power. Colleger got an conversation in PLTU Suralaya unit 1-4 in 4 February – 31 May 2019, getting conversation with electrical engineer and taking data in 10 March 2019. The result from this observation is the generator voltage out in the range of 23 KV, it's proving that the system maintained its stability.

Key words : load , the generator voltage out, excitation current