ABSTRACT

At the University of Indonesia Hospital project the electricity distribution network system used is the PLN-Genset synchronous system. PLN-Genset synchronous system is a system where if there is a disruption or blackout from the PLN, the generator will backup the power source so that all needs can be met. At the University Hospital in Indonesia, there is a problem where generators sometimes experience hunting when there is a backup generator power source process and when load sharing from generator sets to PLN.

To overcome this problem, a system modification is carried out so that if there is a disturbance on the genset (hunting) when the load process is sharing / transferring the load from the generator to PLN, all loads can be supplied with a good source of electricity. To modify the system, a control circuit is needed that will integrate with the PLN-Genset synchronous system.

Control circuit simulation for system modification using Zeliosoft software succeeded in overcoming the PLN-Genset synchronous system when experiencing genset hunting. This simulation is done in 2 cases, namely when the load sharing process is successful and when the load sharing process fails. The setting parameters entered during this simulation represent the actual conditions when the deepsea alarm module, synchronization between generator sets, CB incoming PLN open, load sharing process.

Keywords: synchronous PLN-generator, system modification, load sharing, simualtion