

Analisa kestabilan sistem eksitasi pada PLTMH dengan pengendalian tegangan DC-Link = Stability analysis of excitation system on micro hydro power plant with DC- Link voltage control

Muhammad Shanizal Hasny, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20386831&lokasi=lokal>

Abstrak

[ABSTRAK]

Pembangkit Listrik Tenaga Mikro Hidro (PLTMH) merupakan salah satu topik yang menarik untuk dilakukan terutama di Indonesia. Dalam skripsi ini akan dibahas mengenai analisa kestabilan sistem pengendalian tegangan eksitasi pada PLTMH. Pengendalian tegangan eksitasi pada sistem ini dapat dilakukan dengan cara mengendalikan Mesin Sinkron Magnet Permanen (PMSM) dengan algoritma tertentu sehingga tegangan pada DC-link sistem dapat terkendali. Tanpa mengetahui spesifikasi dari parameter sistem yang tepat, maka kemungkinan besar akan terjadi ketidakstabilan. Oleh karena itu pada kesempatan ini akan dilakukan permodelan, simulasi, serta analisa kestabilan sistem secara matematis sehingga bisa didapat spesifikasi parameter agar sistem tetap stabil.

<hr>

<i>ABSTRACT</i>

Micro Hydro Power Plant is one of the interesting topic to be researched especially in Indonesia. This final project will be discussing about the stability analysis on control system of excitation voltage on Micro Hydro Power Plant. The control of this voltage can be achieved by controlling the Permanent Magnet Synchronous Machine (PMSM) with particular algorithm so the voltage on DC-link part of the system can be controlled. Without knowing the exact specification of system parameters, the system will be most likely unstable. Therefore, on this occasion the system stability will be modelled, simulated, and mathematically analyzed so the parameter specification for the stable system can be obtained., Micro Hydro Power Plant is one of the interesting topic to be researched especially in Indonesia. This final project will be discussing about the stability analysis on control system of excitation voltage on Micro Hydro Power Plant. The control of this voltage can be achieved by controlling the Permanent Magnet Synchronous Machine (PMSM) with particular algorithm so the voltage on DC-link part of the system can be controlled. Without knowing the exact specification of system parameters, the system will be most likely unstable. Therefore, on this occasion the system stability will be modelled, simulated, and mathematically analyzed so the parameter specification for the stable system can be obtained.]