PUMPED-STORAGE SCHEDULING USING PARTICLE SWARM OPTIMIZATION

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ABSTRACT

This thesis presents the solution algorithm based on the particle swarm optimization (PSO) for solving the pumped-storage (P/S) scheduling problem. The basic PSO algorithms_is been used to determine the economic dispatch of the hydrothermal generation with pumped-storage unit. This is because particle swarm optimization (PSO) algorithm is developed to give the economical cost for the hydrothermal generation with pumped-storage unit to fulfill the constraint of thermal and hydro unit. The hydrothermal generation with pumped-storage unit is consisting of 40 thermal units and four pumped-storage units. The algorithm is been develop using Matlab software to test on comprising between hydrothermal generation with pumped-storage unit and hydrothermal generation without pumped-storage unit. Results obtained indicate the attractive properties of the hydrothermal generation with pumped-storage are better than hydrothermal generation without pumped-storage.

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