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[JAREE] Article Review Request

Dr. Vita Lystianingrum <vita@ee.its.ac.id> Wed, Nov 20, 2024 at 12:18 PM
To: "Dr. Sujono Sujono" <sujono@budiluhur.ac.id>
Cc: vita@ee.its.ac.id

Dear Dr. Sujono Sujono,

The editorial board of JAREE (Journal on Advanced Research in Electrical Engineering) believes that you would serve as an excellent reviewer of the manuscript, "Optimization Protection Coordination by Optimizing Time Dial Settings at PT. Pupuk Sriwidjaja Palembang Using Grey Wolf Method,". The submission's abstract is inserted below, and I hope that you will consider undertaking this important task for us. The manuscript has passed our plagiarism checking mechanism.

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Please log into the journal website to indicate whether you will undertake the review or not, as well as to access the submission and to record your review and recommendation.

The review itself is due 2024-11-27.

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Thank you for considering this request.

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JAREE (Journal on Advanced Research in Electrical Engineering)

"Optimization Protection Coordination by Optimizing Time Dial Settings at PT. Pupuk Sriwidjaja Palembang Using Grey Wolf Method"

Abstract

Overcurrent Rele (OCR) is an important component in the electric power protection system. One of the parameters that must be set on the OCR is the Pickup Current (Ip) and Time Dial Setting (TDS). To achieve optimum relay coordination by setting the time dial, several optimisation methods have been used such as Genetic Algorithm (GA), Particle Swarm Optimisation (PSO), Fire Fly Algorithm (FA) and Grasshopper Optimisation Algorithm (GOA).
In this study, the TDS setting was determined through Using the Grey Wolf Optimisation (GWO) method. The GWO algorithm was able to determine the optimum value of the TDS setting for each OCR process. This is validated by the results of tests conducted using the ETAP application. The primary and secondary relays are able to coordinate effectively to secure three-phase faults that occur on each bus.
Furthermore, GWO demonstrated a superior convergence rate in compared to GOA, therefore enhancing its capacity to identify a more optimal TDS setting value. Furthermore, the objective function of GWO is more effective than that of GOA, thereby enhancing its ability to function in a more optimal manner. The results of this test demonstrate that the GWO algorithm is a reliable method for directly identifying the optimal TDS setting value for

determining relay coordination settings.

Keywords—Protection Coordination Overcurrent Rele (OCR), Short Circuit Maximum (IscMax), Time Dial Setting (TDS), Grey Wolf Optimization (GWO).

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