ABSTRAK

STUDI KELAYAKAN NILAI HASIL PENGUJIAN TAHANAN ISOLASI PMT 20 KV PENYULANG YUDHISTIRA PADA GARDU INDUK TALANG KELAPA

(2025: xvii + 64 Halaman + 10 Daftar Pustaka + 12 Lampiran)

Arif Ramadhani

062230310473

Jurusan Teknik Elektro

Program Studi Teknik Listrik

Politeknik Negeri Sriwijaya Palembang

Gardu Induk dilengkapi dengan Pemutus Tenaga (PMT), yang berfungsi memutus rangkaian listrik saat terjadi gangguan seperti hubung singkat. Perlunya untuk menjaga kinerja PMT agar sistem kelistrikan tetap stabil, dengan melakukan pemeliharaan seperti Pengukuran Tahanan Isolasi setiap dua tahun sekali. Pengukuran Tahanan Isolasi ini untuk mengevaluasi keandalan PMT, tekhusus PMT 20 kV di Kubikel Sisi Outgoing pada gardu induk Talang Kelapa. Pada PMT 20 kV di kubikel sisi Outgoing di Gardu Talang Kelapa untuk hasil pengukuran tahanan isolasi telah memenuhi nilai standar SE.032/PST/1984 dan standard VDE (catalouge 228/4) melebihi nilai minimal 20 MΩ dan 200 MΩ, nilai kebocoran arus tidak melewati maksimal 20 mA sesuai standar SE.032/PST/1984, Dengan hasil nilai tahanan isolasi, kebocoran arus, yang telah diuji pada PMT 20 kV di kubikel sisi Incoming di Gardu Talang Kelapa Baru telah memenuhi standar-standar yang berlaku sehingga PMT 20 kV tersebut dikategorikan andal dan aman untuk dioperasikan.

Kata Kunci: *PMT 20 kV, Pengujian PMT 20 kV, Keandalan PMT 20 kV*

ABSTRACT

FEASIBILITY STUDY OF INSULATION RESISTANCE TEST RESULT VALUES OF 20 KV PMT YUDHISTIRA FEEDER AT TALANG KELAPA SUBSTATION

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Arif Ramadhani

062230310473

Department of Electrical Engineering

Electrical Engineering Study Program

State Polytechnic of Sriwijaya Palembang

The substation is equipped with a Circuit Breaker (PMT), which functions to break the electrical circuit when a disturbance occurs such as a short circuit. It is necessary to maintain the performance of the PMT so that the electrical system remains stable, by carrying out maintenance such as Insulation Resistance Measurement every two years. This Insulation Resistance Measurement is to evaluate the reliability of the PMT, especially the 20 kV PMT in the Outgoing Side Cubicle at the Talang Kelapa substation. At the 20 kV PMT in the Outgoing side cubicle at the Talang Kelapa Substation, the results of the insulation resistance measurement have met the standard values of SE.032/PST/1984 and the VDE standard (catalog 228/4) exceeding the minimum value of 20 MΩ and 200 MΩ, the leakage current value does not exceed the maximum of 20 mA according to the SE.032/PST/1984 standard. With the results of the insulation resistance value, leakage current, which have been tested on the 20 kV PMT in the Incoming side cubicle at the Talang Kelapa Baru Substation have met the applicable standards so that the 20 kV PMT is categorized as reliable and safe to operate.

Keywords: *CB 20 kV, CB 20 kV Testing, Reliability of CB 20 kV*