

ANALISA INSPEKSI PEMELIHARAAN MALAM GARDU DISTRIBUSI JURUSAN VIP

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ABSTRAK

Gardu distribusi merupakan salah satu komponen penting dalam sistem penyaluran tenaga listrik yang berfungsi menjaga kontinuitas dan keandalan pasokan listrik kepada pelanggan. Kondisi gardu distribusi perlu dipantau secara berkala melalui kegiatan inspeksi pemeliharaan untuk mendeteksi potensi gangguan sejak dini serta memastikan seluruh peralatan beroperasi sesuai standar. Laporan tugas akhir ini bertujuan menganalisis pelaksanaan inspeksi pemeliharaan siang pada gardu distribusi jurusan VIP di PT. Sentosa Asih Jaya. Metode yang digunakan adalah metode deskriptif dengan pendekatan observasi lapangan, dokumentasi, dan studi literatur. Data diperoleh dari hasil inspeksi terhadap kondisi fisik gardu, transformator distribusi, sistem pentanahan, sambungan penghantar, pengaman, serta komponen pendukung lainnya. Hasil analisis menunjukkan bahwa inspeksi pemeliharaan siang mampu mengidentifikasi beberapa temuan yang berpotensi memengaruhi keandalan gardu distribusi, seperti kondisi peralatan yang memerlukan pembersihan, pengencangan sambungan, dan perbaikan pada komponen tertentu. Pelaksanaan inspeksi secara rutin memberikan manfaat dalam meningkatkan keandalan sistem distribusi, meminimalkan risiko terjadinya gangguan, serta mendukung terciptanya pelayanan kelistrikan yang aman, andal, dan berkesinambungan. Oleh karena itu, kegiatan inspeksi pemeliharaan siang perlu dilaksanakan secara konsisten sesuai prosedur operasional untuk menjaga performa gardu distribusi dan memperpanjang umur peralatan.

Kata kunci: inspeksi pemeliharaan siang, gardu distribusi, jurusan VIP, keandalan sistem distribusi, PT. Sentosa Asih Jaya.

ANALYSIS OF NIGHT MAINTENANCE INSPECTION OF THE VIP DEPARTMENT DISTRIBUTION SUBSTATION

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ABSTRACT

Distribution substations are one of the essential components of the electric power distribution system, serving to maintain the continuity and reliability of electricity supply to consumers. The condition of distribution substations must be monitored regularly through maintenance inspections to detect potential failures at an early stage and ensure that all equipment operates in accordance with established standards. This final project aims to analyze the implementation of daytime maintenance inspections on distribution substations along the VIP feeder at PT Sentosa Asih Jaya. The study employed a descriptive method using field observations, documentation, and literature review. The data were obtained from inspection results covering the physical condition of the distribution substations, distribution transformers, grounding systems, conductor connections, protective devices, and other supporting components. The analysis indicates that daytime maintenance inspections are effective in identifying several conditions that may affect the reliability of distribution substations, including equipment requiring cleaning, tightening of electrical connections, and repair of specific components. Routine implementation of maintenance inspections contributes to improving the reliability of the distribution system, minimizing the risk of electrical disturbances, and supporting the provision of a safe, reliable, and sustainable electricity service. Therefore, daytime maintenance inspections should be carried out consistently in accordance with standard operating procedures to maintain the performance of distribution substations and extend the service life of electrical equipment.

Keywords: *daytime maintenance inspection, distribution substation, VIP feeder, distribution system reliability, PT Sentosa Asih Jaya.*