

ABSTRAK

Mengevaluasi kelayakan instalasi listrik rumah tangga berdaya 900 VA yang berumur lebih dari 10 tahun di Desa Kayu Mbelin, Kecamatan Lawe Sigala-Gala, Kabupaten Aceh Tenggara. Instalasi listrik yang tidak layak dapat menyebabkan berbagai risiko seperti korsleting dan kebakaran. Studi ini menganalisis kondisi fisik instalasi, efisiensi energi, dan kepatuhan terhadap standar keamanan yang berlaku. Oleh karena itu, evaluasi kelayakan dilakukan dengan mengukur arus, daya, dan voltase, serta memeriksa kondisi komponen instalasi. Metode penelitian meliputi observasi langsung, wawancara dengan pemilik rumah, dan pengukuran menggunakan alat ukur listrik. Berdasarkan hasil penelitian, ditemukan bahwa sebagian besar instalasi di desa tersebut tidak lagi layak pakai karena banyaknya kerusakan komponen, penurunan kualitas kabel, dan kurangnya perlindungan seperti grounding yang memadai. Hasil penelitian menunjukkan bahwa mayoritas instalasi listrik yang diteliti tidak memenuhi standar kelayakan dan keamanan, dengan masalah umum meliputi penurunan kualitas fisik komponen, ketidakefisienan energi, dan ketidakpatuhan terhadap standar PUIL terbaru.

Kata kunci: Kelayakan Instalasi Listrik, Resiko Kebakaran, Efisiensi Energi, PUIL, Grounding, Daya 900 VA

ABSTRACT

Evaluating the feasibility of a 900 VA household electrical installation that is more than 10 years old in Kayu Mbelin Village, Lawe Sigala-Gala District, Southeast Aceh Regency. Improper electrical installations can lead to various risks such as short circuits and fires. The study analyzes the physical condition of the installation, energy efficiency, and compliance with applicable safety standards. Therefore, feasibility evaluation is carried out by measuring current, power, and voltage, as well as checking the condition of the installation components. The research method includes direct observation, interviews with homeowners, and measurements using an electrical measuring device. Based on the results of the research, it was found that most of the installations in the village are no longer suitable for use due to many component damages, deterioration in cable quality, and lack of protection such as adequate grounding. The results showed that the majority of electrical installations studied did not meet feasibility and safety standards, with common problems including deterioration of the physical quality of components, energy inefficiencies, and non-compliance with the latest PUIL standards.

Keywords: *Electrical Installation Feasibility, Fire Risk, Energy Efficiency, PUIL, Grounding, Power 900 VA*