INTISARI

Kawasan gedung sentra IKM Painan Pesisir Selatan terletak di Nagari Corocok Anau, Kecamatan. Koto XI Tarusan, terdiri dari 7 unit gedung (produksi bersama, produksi tipe 1, 2A dan 2B, restaurant, display, kantor). Kawasan gedung sentra IKM Painan Pesisir Selatan disupply listrik dari PT. PLN (Persero) sistem distribusi tegangan rendah, sistem kelistrikan memiliki kriteria handal, aman dan ramah lingkungan. Setiap gedung memiliki panel panel listrik yang disupply dari sumber listrik panel utama tegangan rendah (PDUTR). Pendistribusian sumber listrik menggunakan kabel tanah jenis NYFGbY. Ukuran kabel tanah dan rating pengaman pada masing-masing panel tergantung dari kapasitas beban masing-masing gedung. Dalam penelitian ini, total beban pada kawasan gedung sentra IKM Painan Pesisir Selatan adalah 107.393 Watt atau TDL PT. PLN (Persero) 105 kVA sistem 3 fasa 380/220V. Ukuran kabel tanah yang digunakan jenis NYFGbY, dengan ukuran 4x95mm^2, 4x35mm^2, 4x10mm^2, 4x4mm^2, 2x4mm^2, 2x2,5mm^2, dan NYY 4x95mm^2, 3x2,5mm^2. Total rugi-rugi daya pada kabel tanah adalah 1.689,81 Watt (1,60%). Drop tegangan listrik sesuai dengan standard dibawah 5% sedangkan drop tegangan maksimal adalah 2,13%.

Kata Kunci: Sistem kelistrikan, PUIL 2011, drop tegangan, losses.

ABSTRACT

The area of the IKM Painan Pesisir Selatan center building is located in Nagari Corocok Anau, District. Koto XI Tarusan, consists of 7 building units (joint production, production types 1, 2A and 2B, restaurant, display, office). The area of the IKM Painan Pesisir Selatan center building is supplied with electricity from PT. PLN (Persero) low voltage distribution system, the electrical system has the criteria of being reliable, safe and environmentally friendly. Each building has an electrical panel which is supplied from a low voltage main panel (PDUTR) power source. The distribution of the power source used NYFGbY type ground cables. The size of the ground cable and the safety rating on each panel depends on the load capacity of each building. In this study, the total load in the IKM Painan Pesisir Selatan area is 107,393 Watt or TDL PT. PLN (Persero) 105 kVA 3 phase 380 / 220V system. The size of the ground cable used is the NYFGbY type, with sizes 4x95mm2, 4x35mm2, 4x10mm2, 4x4mm2, 2x4mm2, 2x2.5mm2, and NYY 4x95mm2, 3x2.5mm2. The total power losses in ground cables are 1,689.81 Watts (1.60%). The voltage drop in accordance with the standard is below 5%, while the maximum voltage drop is 2.13%.

Keywords: Electrical system, PUIL 2011, drop voltage, losses.