ABSTRAK

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Program Studi : Teknik Elektro

Judul : Analisis Kelayakan Instalasi Listrik di PT. Komatsu Indonesia (KBN Plant)

PT. Komatsu Indonesia (KBN Plant) merupakan perusahaan yang bergerak dibidang konstruksi dan pertambangan, sejak awal beroperasi pada tahun 2005 PT. Komatsu Indonesia terus berkembang pesat seiring dengan perkembangannya tentunya kebutuhan pasar akan meningkat begitupun dengan perlatan yang membutuhkan energi listrik akan ikut bertambah sama halnya dengan daya listrikpun mengalami penambahan. Dengan bertambahnya kapasitas, beban serta instalasi dikhawatirkan kinerja instalasi kelistrik akan menurun, termasuk sistem penghantar, sistem pengaman instalasi yang digunakan dan sistem pembumian. Berdasarkan permasalahan tersebut, penelitian ini bertujuan untuk mengetahui kelayakan sistem instalasi listrik yang ada di PT. Komatsu Indonesia (KBN Plant) seperti sistem penghantar, sistem pengaman dan sistem pembumian. Berdasar hasil penelitian sistem instalasi di PT. Komatsu Indonesia (KBN Plant) sudah memenuhi standar yang berlaku. Sistem penghantar, sistem pengaman, dan sistem grounding menunjukan hasil yang baik sesuai standard PUIL 2020, khususnya nilai setiap perhitungan tidak melebihi standar PUIL 2020 seperti pengaman pada panel MDB Utility nilai KHA setelah dihitung sebesar 47.48 A dan bedasar PUIL 2020 nilai pengaman yang dipakai sebesar 50 A, tentunya pengaman terpasang sudah memenuhi dan bahkan melebihi standar diamna nilai rating arus pada pengaman terpasang sebesar 160 A. Nilai arus tersebut memiliki nilai yang cukup jauh dari hasil perhitungan dari beban saat ini.

Kata Kunci : PUIL 2020, Luas Penampang, KHA, Pengaman, *Grounding.*

ABSTRACT

Name : *Riky Permana Sidiq*
Study Program : *Teknik Elektro*
Title : *Feasibility Analysis of Electrical Installation at PT. Komatsu Indonesia (KBN Plant)*

PT Komatsu Indonesia (KBN Plant) is a company engaged in construction and mining, since the beginning of its operation in 2005 PT Komatsu Indonesia continues to grow rapidly along with its development of course the market needs will increase as well as the equipment that requires electrical energy will also increase as well as the electrical power has increased. With the increase in capacity, load and installation it is feared that the performance of electrical installations will decrease, including the conductor system, the installation safety system and the earthing system. Based on these problems, this study aims to determine the feasibility of the electrical installation system at PT Komatsu Indonesia (KBN Plant) such as the conductor system, safety system and earthing system. Based on the research results, the installation system at PT Komatsu Indonesia (KBN Plant) has met the applicable standards. The conductor system, safety system, and grounding system show good results according to PUIL 2020 standards, especially the value of each calculation does not exceed PUIL 2020 standards such as safety on the MDB Utility panel KHA value after being calculated at 47.48 A and based on PUIL 2020 the safety value used is 50 A, of course the installed safety has met and even exceeded the standard diamna current rating value on the installed safety of 160 A. The current value has a value that is quite far from the calculation results of the current load.

Keywords: *PUIL 2020, Cross-Sectional Area, KHA, Safety, Grounding.*