ABSTRAK

Nama : Muhammad Iqbal Faisal Zein

Program Studi : Teknik Elektro

Judul : Analisis Kualitas Daya Listrik di Gedung Baru Fakultas Ekonomi Universitas Siliwangi Kota Tasikmalaya

Ukuran keandalan pada kualitas daya listrik secara umum dapat dikatakan baik apabila pada sistem tenaga listrik bisa memenuhi kebutuhan konsumen seperti, terpenuhinya beban puncak, memiliki deviasi tegangan dan frekuensi yang minimum, menjamin urutan fasa yang benar, menjamin distorsi gelombang tegangan dan harmonisa yang minimum, menjamin suplai sistem tegangan dalam keadaan setimbang, dan memberikan suplai daya dengan keandalan tinggi dimana sistem melayani beban secara efektif. Penelitian ini bertujuan untuk menganalisis keadaan dan permasalahan kualitas daya listrik dan diberikan solusi apa saja yang dapat dilakukan untuk mengatasi permasalahan kualitas daya listrik di Gedung Baru Fakultas Ekonomi Universitas Siliwangi Kota Tasikmalaya. Standar yang digunakan dalam menganalisis Kualitas daya listrik adalah Standar Nasional Indonesia (SNI) dan *Institute of Electrical and Electronic Engineers* (IEEE). Dalam penelitian ini metode yang digunakan adalah Metode penelitian kuantitatif bersifat non-eksperimental dengan mendeskripsikan angka-angka, pengolahan statistik, struktur dan percobaan terkontrol. Dari hasil Analisis yang telah dilakukan, kualitas daya listrik di Gedung Fakultas Ekonomi Universitas Siliwangi Kota Tasikmalaya tidak sesuai standar, terdapat parameter yang menunjukan buruknya kualitas daya listrik yang diakibatkan kenaikan tegangan tertiggi sebesar 235,8 Volt, arus netral sebesar 10,65 Ampere, faktor daya terendah sebesar 0,04 dan harmonisa arus yang tertinggi sebesar 99,1%.

Kata Kunci : Arus, Faktor Daya, Harmonisa, IEEE, Kualitas Daya Listrik, Kenaikan tegangan, dan SNI

ABSTRACT

Name : Muhammad Iqbal Faisal Zein

Study Program : Electrical Engineering

Title : *Analysis of Electrical Power Quality in the New Building of the Faculty of Economics Siliwangi University, Tasikmalaya City*

A measure of reliability in the quality of electric power in general can be said to be good if the electric power system can meet consumer needs such as fulfilling peak loads, having minimum voltage and frequency deviations, guaranteeing the correct phase sequence, guaranteeing minimum voltage and harmonic wave distortion, ensuring supply system voltage in a balanced state, and provide a high-reliability power supply where the system serves the load effectively. This study aims to analyze the state and problems of the quality of electric power and provide any solutions that can be done to overcome the problems of electric power quality in the New Building of the Faculty of Economics, Siliwangi University, Tasikmalaya City. The standards used in analyzing the quality of electrical power are the Indonesian National Standard (SNI) and the Institute of Electrical and Electronic Engineers (IEEE). In this study, the method used is a non-experimental quantitative research method by describing numbers, statistical processing, structure and controlled experiments. From the results of the analysis that has been carried out, the quality of electric power in the Faculty of Economics Building, Siliwangi University, Tasikmalaya City is not up to standard, there are parameters that indicate poor quality of electrical power caused by the increase in the highest voltage of 235.8 Volts, neutral current of 10.65 Ampere, factor the lowest power is 0.04 and the highest current harmonic is 99.1%.

Keywords: *Current, Power Factor, Harmonic, IEEE, Electrical Power Quality, Overvoltage And SNI*