ABSTRAK

Judul   : Rancang Bangun Sistem Otomatisasi Monitoring Power Meter Di PT. Sakafarma Laboratories Berbasis Wientek FHDX-220 Dan *Internet Of Things (IoT)*

Nama   : Nur Ngaeni

Program Studi : Teknik Industri

       Perkembangan teknologi yang semakin modern, menuntut kita untuk selalu mengembangkan teknologi pengukuran listrik dari sistem konvensional menjadi sistem digital yang bekerja secara realtime. Salah satu alat yang digunakan untuk pengukuran listrik adalah power meter. power meter adalah suatu alat ukur yang bisa mengukur besaran listrik secara terintegrasi dari beberapa komponen alat ukur menjadi satu kesatuan yang terangkai dalam suatu alat ukur. Dengan kata lain dalam satu alat sudah dapat digunakan untuk mengukur berbagai macam jenis besaran listrik antara lain arus, tegangan, daya, faktor daya, frekuensi bahkan Total Harmonik Distorsion. Panel listrik di PT. Sakafarma Laboratories seluruhnya menggunakan power meter merek socomec yang di gunakan untuk melihat arus, tegangan, daya, faktor daya, frekuensi dan lain-lain. Sistem power meter di PT. Sakafarma Laboratories saat ini belum terintegrasi dan terletak di beberapa tempat atau area yang berbeda serta berjauhan, kondisi tersebut mengakibatkan proses monitoring dan reporting dengan pencatatan manual sehingga membutuhkan waktu lama karna harus menuju ke tiap-tiap panel yang terdapat power meter. Hal ini mengakibatkan waktu reporting dan monitoring menjadi lama yaitu 67 menit dari 22 panel yang terdapat power meter, setelah dilakukan proses otomasi menggunakan SCADA WIENTEK FHDX-220 dengan sistem IOT, sistem programing SCADA WIENTEK FHDX-220 menggunakan software *easy builder pro*, monitoring dan reporting bisa dilakukan dengan waktu 3,2 menit dari total 22 power meter yang sudah di otomatisasi, hal tersebut membuktikan bahwa otomasi reporting dan monitoring menurunkan waktu kerja operator sebesar 95.2%.

Kata Kunci : Power meter, *Internet of Thinks*, SCADA WIENTEK FHDX220, otomasi, *easy builder pro*

ABSTRACT

Title : *Design and Build of Power Meter Monitoring Automation System at PT. Sakafarma Laboratories Based on Wientek Fhdx-220 and Internet of Things (IoT)*

Name : Nur Ngaeni

Study Program: Industrial Engineering

The development of increasingly modern technology requires us to always develop electricity measurement technology from conventional systems to digital systems that work in real time. One of the tools used for measuring electricity is a power meter. A power meter is a measuring tool that can measure electrical quantities in an integrated manner from several components of a measuring instrument into a single unit assembled in a measuring instrument. In other words, in one tool it can be used to measure various types of electrical quantities, including current, voltage, power, power factor, frequency and even Total Harmonic Distortion. Electrical panels at All of PT. Sakafarma Laboratories use the Socomec brand power meter which is used to see current, voltage, power, power factor, frequency and others. The power meter system at PT. Sakafarma Laboratories is currently not integrated and is located in several places or areas that are different and far apart, this condition results in the monitoring and reporting process with manual recording so it takes a long time because you have to go to each panel that has a power meter. This resulted in a long reporting and monitoring time of 67 minutes from the 22 panels that contained a power meter, after the automation process was carried out using the SCADA WIENTEK FHDX-220 with the IOT system, the SCADA WIENTEK FHDX-220 programing system used easy builder pro software, monitoring and reporting can be done in 3.2 minutes out of a total of 22 automated power meters, this proves that automated reporting and monitoring reduces operator work time by 95.2%.

Keywords : Power meter, Internet of Thinks, SCADA WIENTEK FHDX220, automation, easy builder pro.