Otomatisasi Pompa Dan Instrumen Instalasi Pengolahan Air Kota Batam Menggunakan Sistem Scada dengan Memanfaatkan Remote Terminal Unit dan Data Logger = Pump and Instrument Automation of Batam City Water Treatment Plant with SCADA System Using Remote Terminal Unit and Data Logger

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Abstrak

Sistem SCADA (Supervisory Control and Data Acquisition) merupakan suatu sistem yang dapat integrasikan instrumen, sistem kendali, software, network data communication, dan GUI (Graphical User Interface) sehingga dapat memudahkan pengguna untuk melakukan pengawasan dan pengendalian suatu instrumen dengan proses yang cukup kompleks dan dapat dilakukan secara real time.

Demi memenuhi kebutuhan sistem SCADA, perlu adanya perangkat pendukung, seperti RTU (Remote Terminal Unit) dan Data Logger yang merupakan perangkat berbasis mikroprosesor yang terhubung dengan input dan output sinyal digital ataupun analog dengan protokol komunikasi tersedia pada RTU tersebut, pada RTU menggunakan bahasa perangkat lunak seperti C, LD (Ladder Diagram), IL (Instruction List), ST (Structured Text), FBD (Function Block Diagram) dan SFC (Sequential Function Charts).

Pada hasil praktik keinsinyuran yang telah dilakukan selama kurang lebih 1 tahun ini, beberapa instrumen dan pompa distribusi air bersih telah berhasil diintegrasikan ke sistem SCADA, sehingga lebih mudah untuk melakukan pengawasan dan pengendalian di beberapa titik instrumen dan pompa distribusi air bersih.
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The SCADA (Supervisory Control and Data Acquisition) system is a system that can integrate instruments, control systems, software, network data communication, and GUI (Graphical User Interface) so that it can make it easier for users to supervise and control an instrument with processes that are quite complex and can be done in real time.

In order to meet the needs of the SCADA system, it is necessary to have supporting devices, such as RTU (Remote Terminal Unit) and Data Logger which are microprocessor-based devices that are connected to input and output digital or analog signals with communication protocols available on the RTU, the RTU uses software language. such as C, LD (Ladder Diagram), IL (Instruction List), ST (Structured Text), FBD (Function Block Diagram) and SFC (Sequential Function Charts).

As a result of engineering practice that has been carried out for approximately 1 year, several instruments and clean water distribution pumps have been successfully integrated into the SCADA system, so that it is easier for the user to carry out supervision and control at several points of the instrument and clean water distribution pumps.