

UTILITY MONITORING SYSTEM

Process Overview

In process industry, various unit operations like drying, evaporating, extracting, distillation etc., proceeds in **batch/ continuous** pattern. There are other unit processes like chemical reactions which are irreversible process are carried out in the process industry. All these **unit operations and unit processes** which requires desired condition to be provided and maintained for the **planned yield**. The **energy** demanded by each operation is provided by steam, cooling tower water, chilled water, Brine, liquid N₂ etc., these streams are collectively known as **utilities** in the process industry. These utility streams are **kept available through out the plant** for various processes for different process equipments. The aim is to make these utility streams available throughout the plant 24x7. There are main utility headers through which these streams are supplied and taken back as return.

Need For Automation

The supply of utility should be kept available through the block. The monitoring of utility is essential in case of **utility supply failure**. The **temperature** is an important parameter which also should be monitored in the utility header.

The conditions to be monitored and to alert the operator

- ❑ Utility failure
- ❑ Temperature deviation

The fundamental purpose of monitoring system is **to alert the operator** to relevant abnormal operating situations in time to ensure **Personnel Safety, Environmental Safety, Plant Operation & Equipment Safety, Product quality**

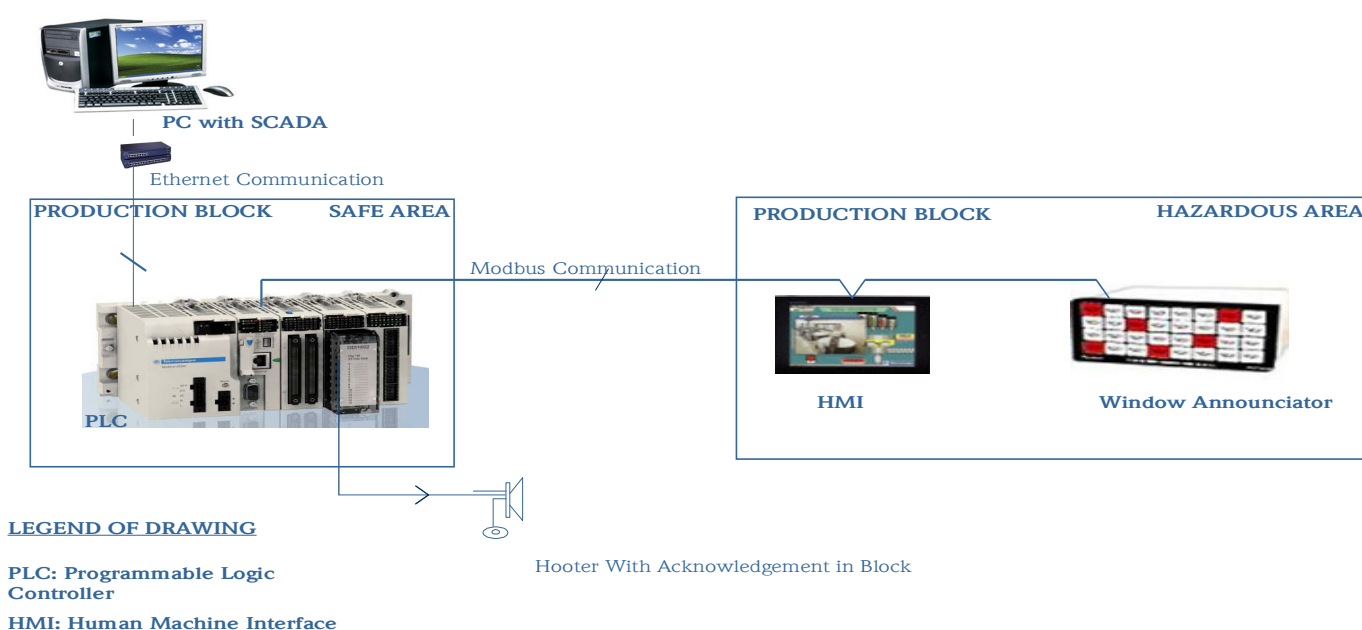
System Components Control System (Software- Hardware) HMI, SCADA

A **control system** with Open architecture design provides complete flexibility, high performance & ease of operation to the end user. The high-performance processor is considered which is capable of multi-tasking, best memory management & high reliable. **Remote I/O modules** for far spread blocks, **HMI's** at various production blocks for ease of operation. Remote process monitoring is performed by **SCADA** and various management information reports.

The system uses advanced software tools and components to build the necessary logic for better process controlling and process. The software includes features like Graphics, Trending, History and reports on customized formats.

An **internal FAT** will be conducted on the Panel Engineered & simulation test will be conducted at our in-house to analysis right logic & controlling developed in the system to ensure stringent control.

System Architecture



System Components Field Instruments (Sensors, Transmitters, Control Elements)

The better controlling needs effective sensors to read the process, transmitters to send the read parameters to control system, better logic to address and best control element to execute. The hooters & annunciators, alarms on process deviation. The precise controlling enhances the accuracy of the system. The performance of the system is dependant on the Instruments.

The field instruments used in the projects is from **POLMON manufactured** instruments or **from the reputed manufactures**. The instruments used are **tested at our in-house** and sent to end-user after checking to ensure product quality.

System Benefits

- ❑ Ensures continuous supply of utility
- ❑ Alerts operator promptly on utility failure
- ❑ Supports the batch with required energy throughout the time
- ❑ Enhances Operation safety
- ❑ Efficient utility usage
- ❑ Reduces manpower interventions
- ❑ List of Error diagnostics messages

More Information
For more information on POLMON solutions, contact your POLMON account manager

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