reference

ELCOM d.o.o. is specialized in Totally Integrated Automation (TIA), containing electrical engineering and software development for the automation of production processes and machines, production of MCC and control cabinets as well as onsite installation, commissioning and acceptance testing (FAT, SAT, SIT)

Automation of HVAC system in drugs production facility

Customer: ZADA Pharmaceuticals, B&H

Solution Partner
Automation
SIEMENS

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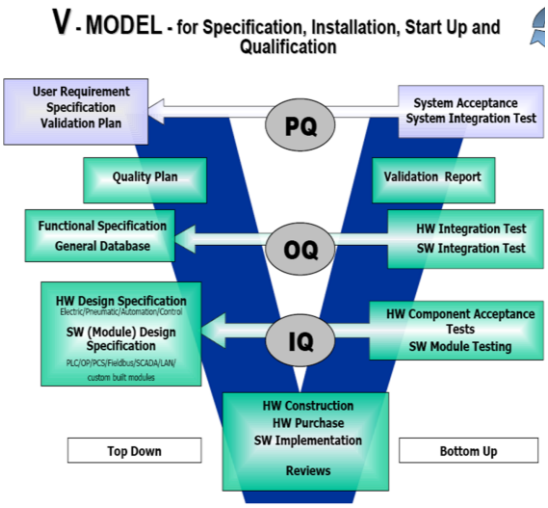

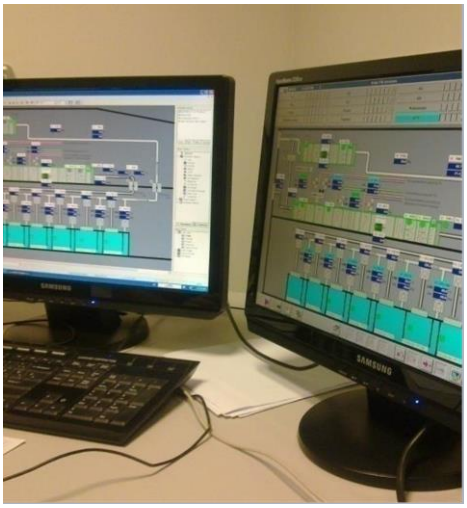

Certificates

We have proven our competence as Siemens Solution Partner Automation in the following areas:

- Automation System SIMATIC
- Human Machine Interface SIMATIC HMI
- Process Control System PCS7

Process description

The main purposes of a Heating, Ventilation, and Air-Conditioning (HVAC) system are to help maintain good indoor air quality through adequate ventilation with filtration and provide thermal comfort.

HVAC systems had to be designed to achieve the following:

• Appropriate level of air filtration and the number of air exchanges. In the zones where the product could have been exposed to the environment , zones had to be controlled so that tey are supplied with filtered, conditioned air. Such zones had to be so designed to achieve the ISO EN 14644-1:1999 Class 8 for particle sizes >0.5 µm in the 'At Rest' conditions.

• Filtration of air output.

• The corresponding pressurizing in the rooms and air exchanges to minimize the risk of contamination / cross contamination with the projected value of differential pressure between the critical production zones and adjacent extra space of 10-15 Pascals.

• Proper Temperature and humidity of the rooms.

Challenge

Implementation of a cost efficient and user friendly process control system with as less as possible classical cabling which have to result in a very fast and easier cabling, engineering and commissioning of a very high level.

Very detailed diagnostics and intuitive representation of current step for fast fault analysis and low deadlock times. Control system was to meet requirements of GAMP and Food and Drug Administration (FDA) 21 CFR Part 11 regulations.

Robust solution to endure harsh environmental conditions and 24h 7 days a week work.

Solution

The solution is a totally integrated automation architecture with PROFIBUS based topology. Distributed single ET200M stations with PROFIBUS interface are connected to the central 414-4H redundant processor via Y-links. Two PC stations are connected via Industrial Ethernet to the controllers.

Compliance with GAMP and Food and Drug Administration (FDA) 21 CFR Part 11 regulations is achieved through system design and with utilization of Simatic Logon, WinCC Audit Trail.

Project overview

- 250 drives
- 500 measuring instruments
- 1500 digital signals
- Control system with 414-4H
- 2 OS stations with WinCC v6.2
- 15 ET 200M
- Industrial Ethernet and Profibus DP
- Based on network topologies
- Micromaster 4 frequency drives

Information about the Siemens Solution Partner Program

Under the Siemens Solution Partner Automation and Power Distribution Program, we join forces with our Solution Partner. By merging our product and systems expertise with the application and industry knowledge of our partners, we have created a common basis for the fast, smooth and highly efficient implementation of your requirement –customized solutions for your competitive advantage.
www.siemens.com/automation/solutionpartner

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