

PROFIBUS SEMINAR

13 June 2012

Well Positioned to meet
TOMORROW'S
Challenges





Julphar Vision :

Our endeavor is to ensure the availability of world class, quality medicines of affordable prices across the globe. We are committed to work towards a healthier and happier world by being one of the leading pharmaceutical companies in the region.

Juphar Insulin Plant (J11) :

The new Insulin manufacturing facility in Ras Al Khaimah is one of the most modern biotechnological plants designed for producing recombinant human insulin crystals. The plant is built in accordance with the latest EMEA regulations utilizing the best available technologies in the market to comply with the latest international quality standards.

Investment - \$136.1 million

Floor Space - 20,000 m²

Clean rooms - 5,000 m²

Glimpse from Manufacturing process:

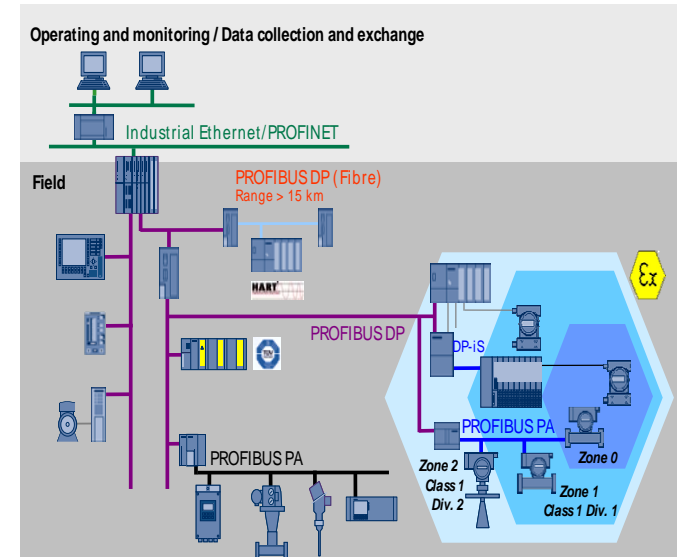
The plant is capable of producing 450 batches per year yielding 1500 kg of insulin crystals which will enable Julphar to produce more than 40 million vials of insulin, the process starts in the fermentation suite where 10,000 liters of E. coli bacterial broth is produced, in the recovery area the E.coli is removed and the pre-insulin is harvested and treated with buffers to assist in attaining its tertiary structure. In the purification suite, the preinsulin is cleaved using special enzymes to modify its primary structure and then separated by chromatography systems and high speed centrifuges.

What is PROFIBUS?

PROFIBUS (Process Field Bus) is a standard for field bus communication. Applications include manufacturing, building and process automation.

There are two variations of PROFIBUS in use today

- 1) PROFIBUS DP (Decentralized Peripherals)
- 2) PROFIBUS PA (Process Automation)



Project Requirments:

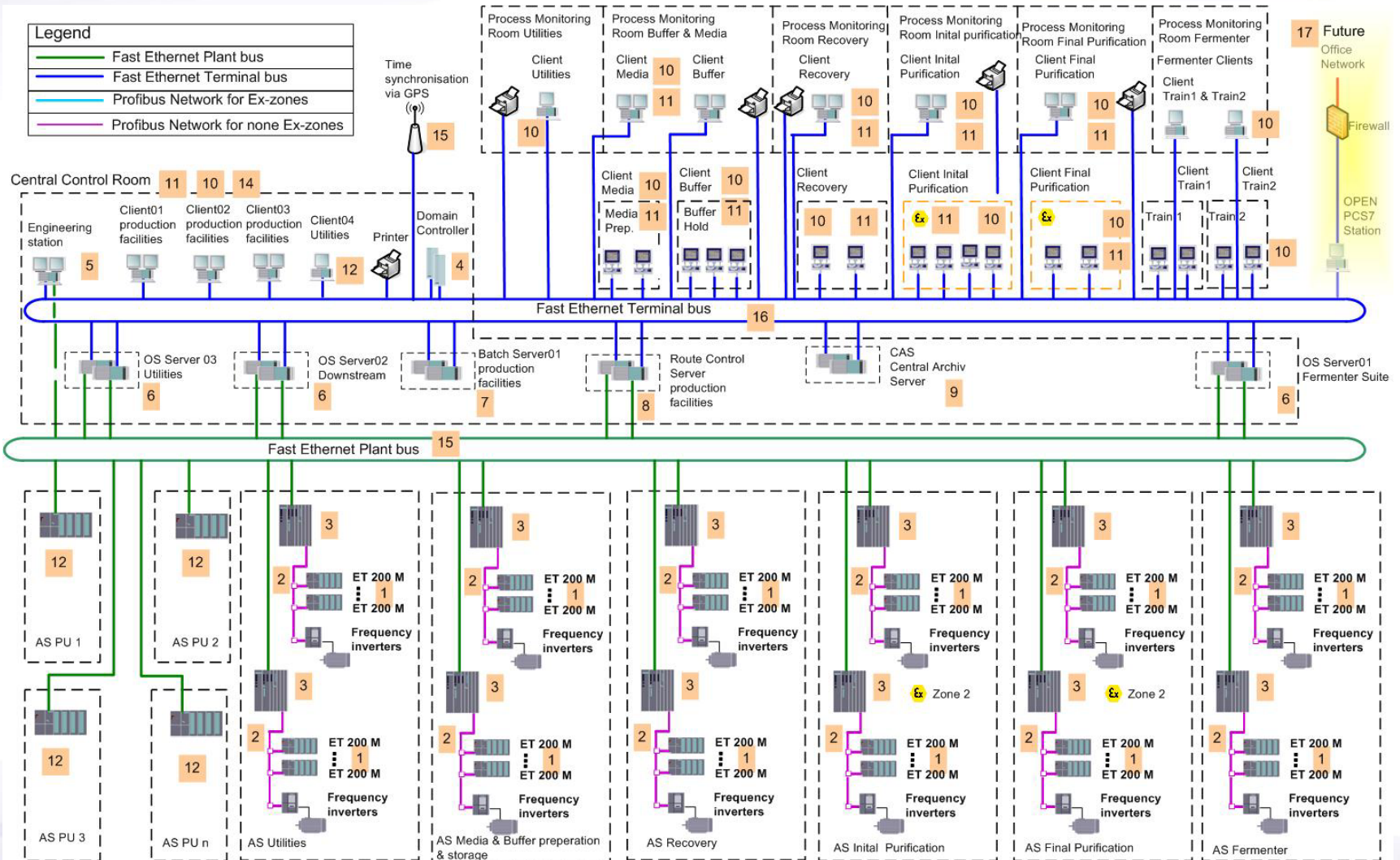
- Integration of more than 5000 actuators and equal number of sensor elements at the Field level from different venders like ABB, E+H, Phoenix Contact, Pepperl &Fuchs, Stahl .
- Faster and reliable communication
- Use in explosive/hazardous environment
- Lower installation, testing and commissioning time
- Reliable diagnostic and advance operations



System Layout:

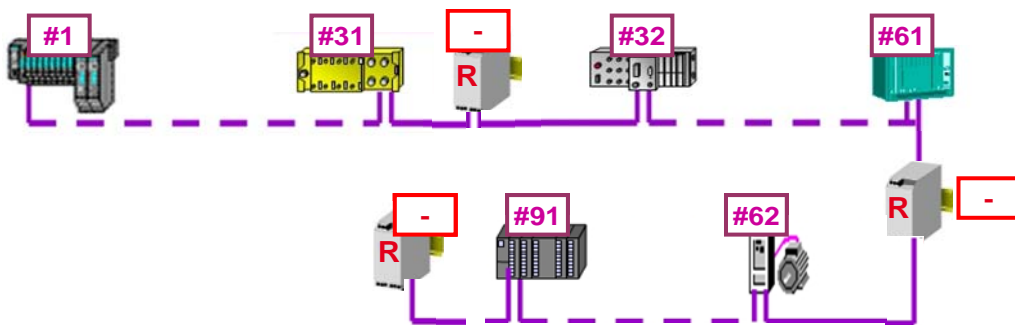


www.julphar.com



Why PROFIBUS ?

- Easy to integrate the remote I/O modules which include the ET200M, Festo valve islands ,Micro master drives,ET200S
- Each segment length of more than 200 meters
- Use of standard PROFIBUS Repeaters



Repeater RS 485

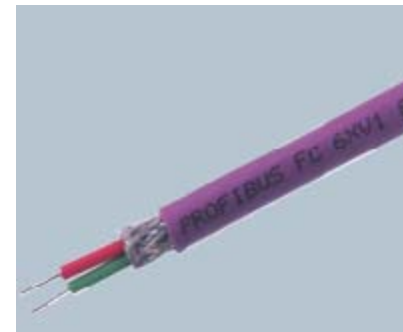
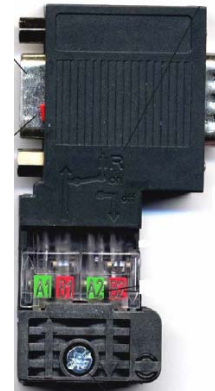






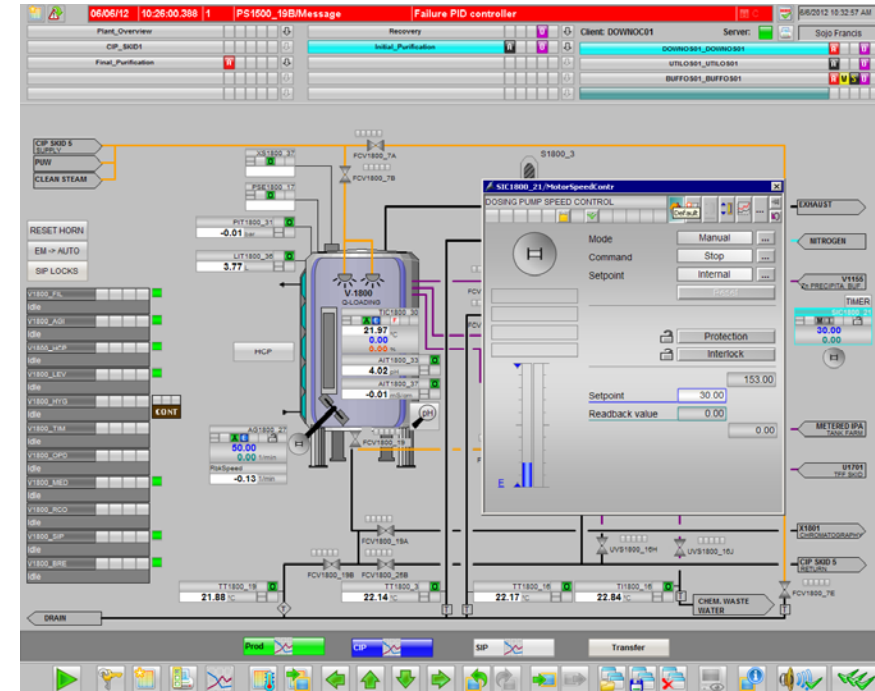
Why PROFIBUS ?

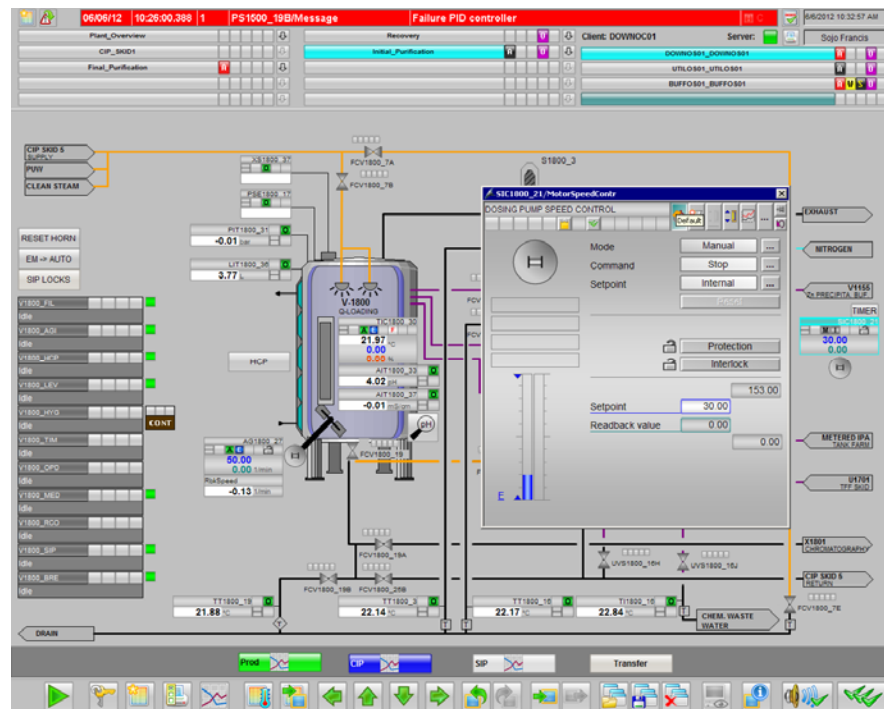
- Reduced commissioning and testing time
- Use of BT200 , strip tools and Fast connect reduced the commissioning time drastically(30mins/segment)
- Use of standard PROFIBUS FC cables



Why PROFIBUS ?

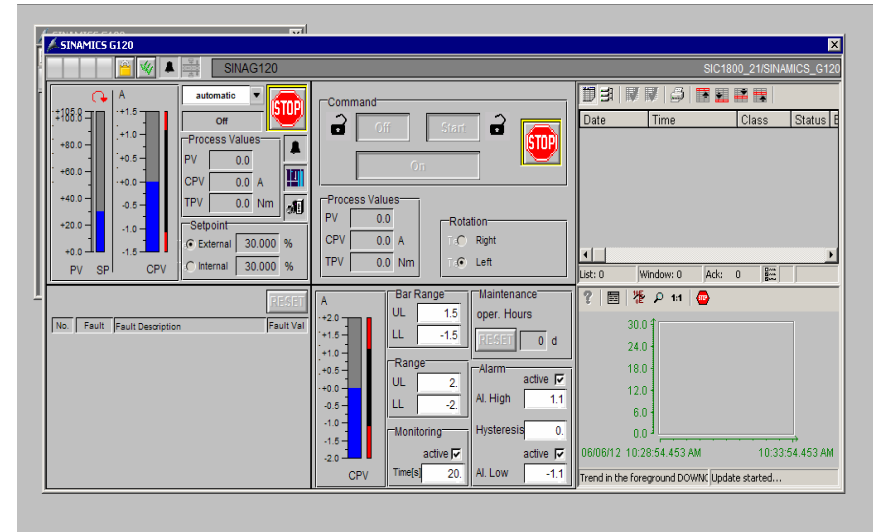
- Advance use of software blocks and more process data transfers between the PLC and motor Drives
- Help achieve precise material addition and optimization during the running process.





Why PROFIBUS ?

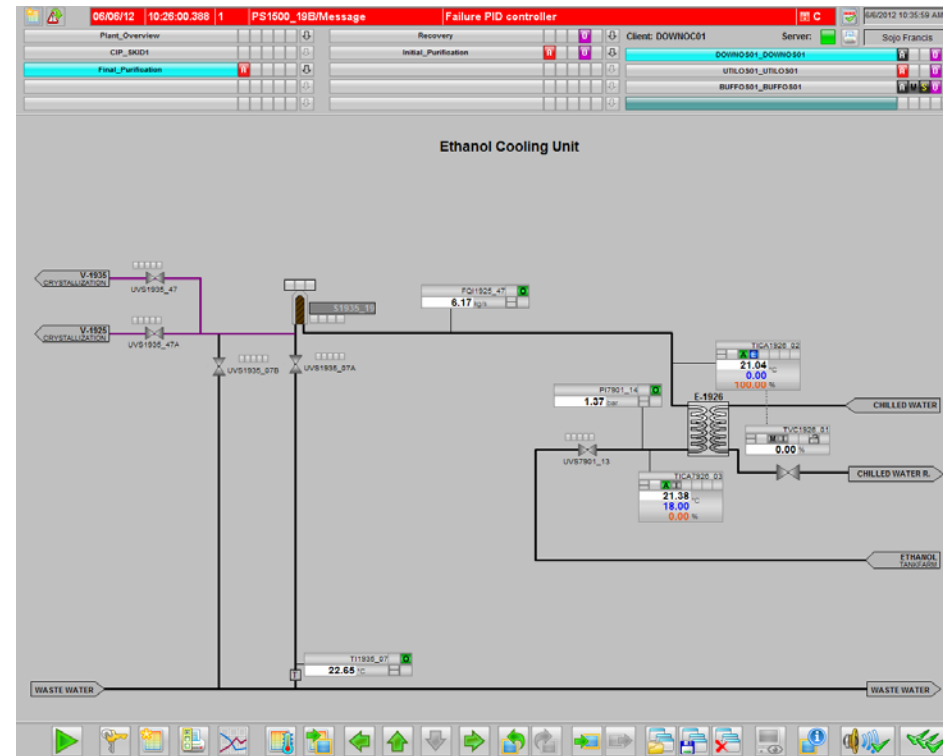
- The transfer pumps ,agitator and motors could be easily optimized during a running process
- The number of I/O cards and wiring is also drastically reduced for each motor
- Easy reconfiguration and diagnostic of the motors during run time





Why PROFIBUS ?

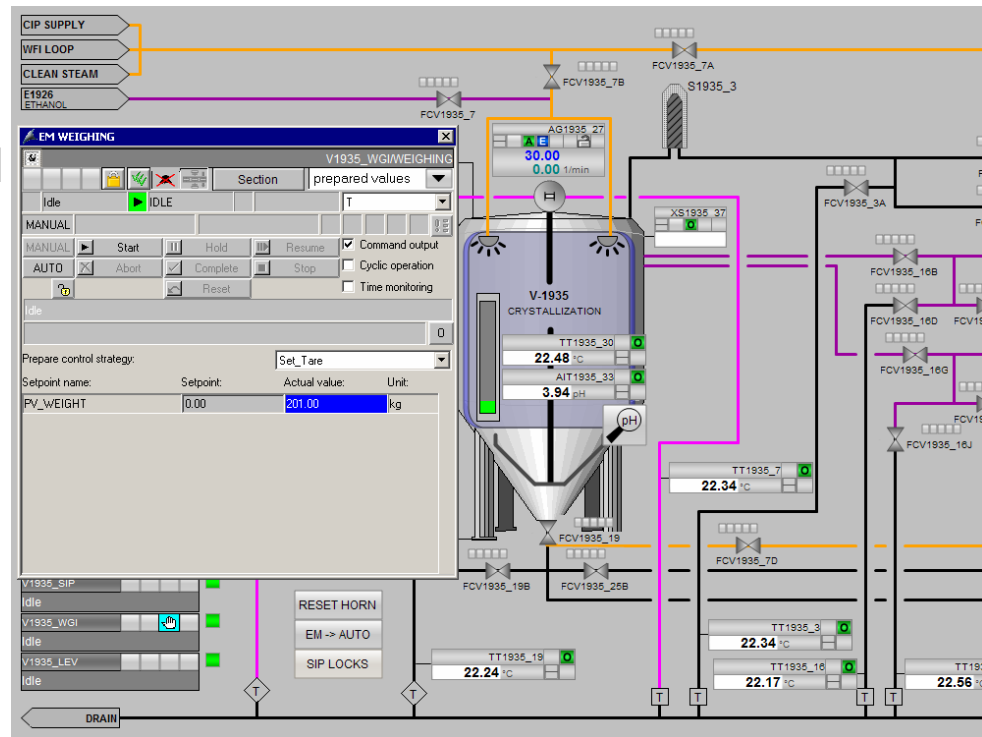
- The flow transmitters connected over PROFIBUS could be easily reset and hence provided controlled and accurate material transfer

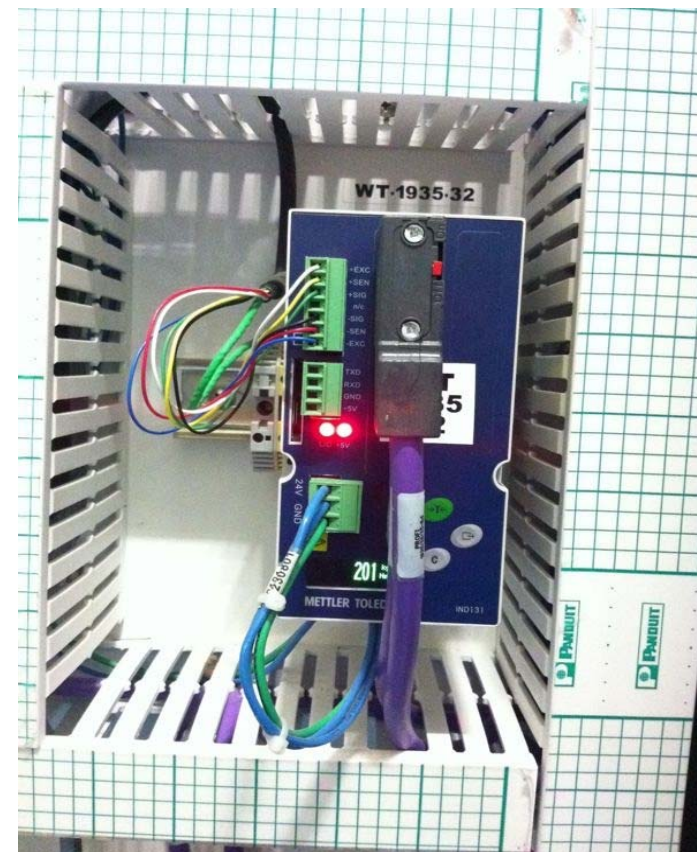




Why PROFIBUS ?

- Use of Weight Transmitters connected over the PROFIBUS network
- Easy tarring during the start of the process
- Easy calibration and configuration





Why PROFIBUS ?

- Integration of Operator station OP-73, OP-77A used for WFI request
- Provides operator with vital information like:
 - Water temperature
 - Request acknowledgment



Why PROFIBUS ?

- One software for all task

Comprehensive diagnostic is provided by the STEP7 engineering software, including operating status of the module, general diagnostics and statistics functions, connection diagnostics and diagnostic buffer

Conclusion :

- Reduced installation time , more devices can be commissioned per day
- Material (cabling) saving
- More reliable and efficient
- Standard Fieldbus Protocol
- Maximum process data with least I/O components
- Easy diagnostic and maintenance
- Less resources during commissioning



JULPHAR's Insulin Biotechnology
When Juphar Inspired
the Pharmaceutical Industry



Thank You !!!