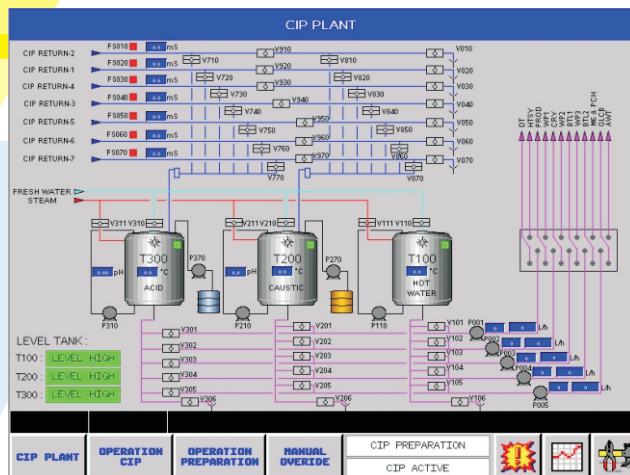


Automation Cleaning-In-Place (CIP)



Clean in Place (CIP) Automation is typically a complex part of the automation process. In many instances it is more complex to automate the cleaning process than to make the product since the final CIP automation sequence is often defined after the process equipment is built and cleaning tests are performed.



Why Automation CIP :

- ✓ Creating control code for the typical major steps of CIP including preliminary flush with water, caustic cleaning, hot water flush, acid flush, and final rinse.
- ✓ Establishing the conditions that define when a step has completed, such as waiting for a conductivity value following the preliminary flush before moving on to the next step.
- ✓ Complex routing.
- ✓ Creating control code to perform the CIP procedures as defined during automation design.
- ✓ Physical factors, biological factors, chemistry of detergents, concentration, temperature, exposure time, flow rate, etc.
- ✓ Coordination between the CIP skid and the destination to be cleaned.

Automation for Optimization

- ✓ Controls, sensors and alarms are all elements of automation that enable dashboards to be implemented and key performance indicators (KPIs) to be set. Typical KPIs may include cubic meters (m^3) of water per number of CIPs, water re-use %, mega joule (MJ) of energy consumed per ton of product, or kilogram (kg) of waste water generated per kiloliter (KL) of product.
- ✓ Automation improves the quality of information available and allows tighter control of the various parts of the cleaning process (such as creating parameters around the opening and closing of valves and pump operation). It is important that the automation architecture is open; this enables the CIP processing equipment to communicate with other process equipment such as tanks or pasteurizers. Integrated "status check" ability streamlines the efficiency of the operation.

Benefits :

- ✓ Reduce cleaning downtime.
- ✓ Recover water – mix products.
- ✓ Clean multiple equipment at the same time.
- ✓ Ensure equipment cleaning and sanitizing.
- ✓ Reduce water consumption.
- ✓ Reduce chemical usage.



Various CIP System

Our CIP Control

1 Simple

- We create specific library for every sequence of CIP Process :

- Automatic Feeding Water
- Automatic Maintain Heating Tanks
- Flushing Water / Water / Acid / Caustic
- Circulation Hot Water / Acid / Caustic
- Intermediate flushing between Water and Acid / Caustic

- Flexible sequence based on **YOUR NEED**.

- Control instrument easy using our standard library such as, valves, pumps, sensors, routes, etc., and assemble them according to your P & ID (piping & instrumentation diagrams).

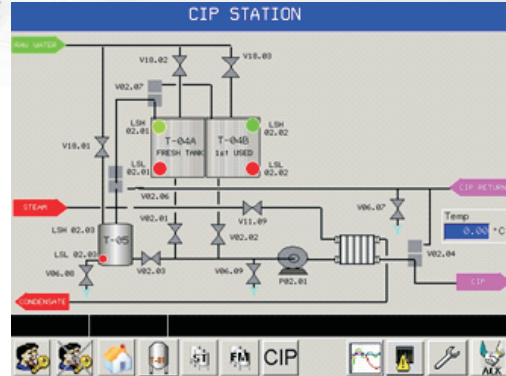
2 Effective

- Use process **AS YOU NEED** and **EFFICIENT** usage of water and chemical.

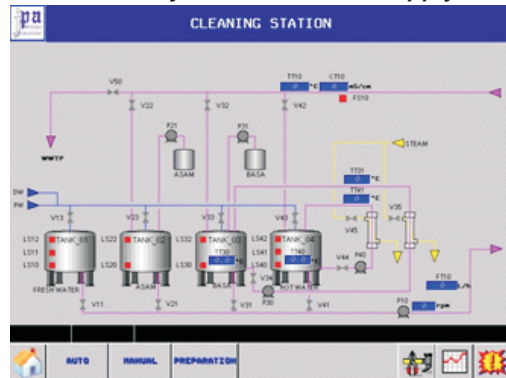
3 Reliable

- Our CIP Control tested in many CIP unit, the system improve continuously.

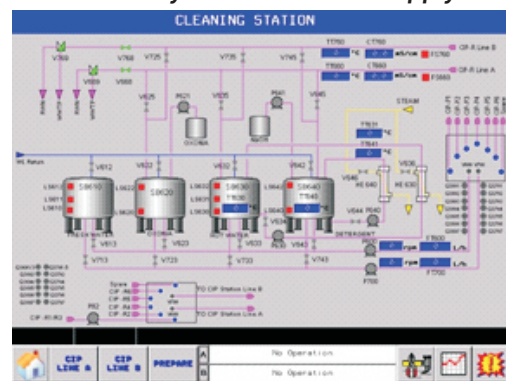
CIP Control System 2 tank



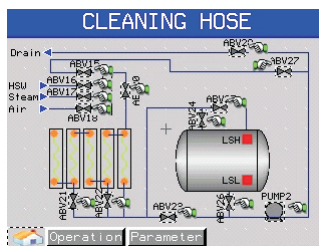
CIP Control System 4 tank – 1 supply



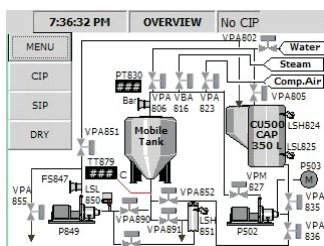
CIP Control System 4 tank – 2 supply



Control CIP Hose



Control CIP Mobile Tank



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