

A photograph of a large industrial facility, likely a brewery, featuring numerous tall, cylindrical stainless steel tanks and complex piping systems. A control panel with a digital display and buttons is visible in the center. The scene is brightly lit, possibly by large windows on the left.

Instrumentation and control in CIP

Valve Operation and Safety Mechanisms in CIP:

- Use of air-operated, solenoid-controlled valves, with positive feedback, ensuring valve position accuracy.
- Timed sequences control solution routing (rinse water, alkali, acid) and fail-safe mechanisms prevent pump dry running.

A faded background image of an industrial facility with large stainless steel tanks and piping.

Temperature Control:

- Steam heat exchangers, controlled via PID loops, regulate the temperature of cleaning solutions to specific ranges (e.g., 60°C–85°C).
- Steam thermostats ensure temperature consistency, preventing thermal degradation of cleaning agents while enhancing residue breakdown.

Backflow Prevention:

- The CIP system incorporates air gaps in return flow circuits to prevent backflow contamination.
- It ensures used cleaning solutions do not re-enter the fresh supply, maintaining sterility across all plant equipment.

Chemical Monitoring:

- Advanced CIP systems integrate pH and conductivity sensors directly into the cleaning lines.

Why?

- a) Continuously analyze and maintain the chemical concentration
- b) Ensure precise chemical action
- c) Reduces overuse of cleaning agents by up to 20%

Why PMG Engineering?

Our expertise in CIP design ensures:

- Maximum efficiency
- Compliance with hygiene standards
- Operational cost savings

We specialize in designing, Instrumentation and Automation design and Architecture, preparation of BOQ and Tender Documents, layouts and elevation, up till release of GFC drawings.