

# Leading Edge Cleaning Programs



Hyde Engineering + Consulting (Hyde E+C) is recognized as a world-wide leader in the development of cleaning and sterilization strategies for the bio/pharmaceutical industry.

As an industry leader, Hyde E+C has contributed to numerous written publications and books, seminars, training courses in addition to presenting for the FDA. The company also works closely with industry associations and currently serves on PDA workgroups for new industry standards in cleaning validation and SIP validation.

## Process CIP & SIP Integrated Design

From the conceptual design stage of a project, it's critical for manufacturers to integrate Clean-In-Place (CIP) and Sterilization-In-Place (SIP) with the process design of new facilities. Hyde E+C is known for our expertise in sterilization and cleaning of process equipment, and SIP and CIP systems.

We can demonstrate significant capital cost savings for manufacturing facilities by integrating CIP distribution piping and SIP piping with the process equipment from the conceptual level.

## Cleaning Engineering

Services include:

- Surveys and Assessments of existing cleaning operations
- Cleanable Process Equipment Design
- Specification, Design and Commissioning of cleaning equipment (CIP skid/ parts washers)
- Sanitary Component Design
- Spray Device Specification, Design and Testing
- Parts washer Load Configuration Design and Specification
- Cleaning Cycle Design and Development
- Cleaning Validation Strategy and Consultation

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## Sterilization Engineering

Services include the following key areas:

- Sterility Assessments and Troubleshooting
- Clean Steam Generation & Distribution Engineering and Commissioning
- Process Equipment Sterilization and Autoclave Specification and Design
- Autoclave Load Configurations Specification
- Sterilization Cycle Design and Development including Temperature Mapping
- Lethality Testing utilizing Biological Indicators
- Overkill and Product Specific Design approaches for SIP cycles
- Viral Inactivation Temperature Distribution Evaluation
- Contamination Root Cause Investigations/Prevention.

Utilizing Hyde Engineering + Consulting ensures that the best practices in CIP and SIP are key components of your project!

## Retrofitting/Remediation Support

A maturing bio/pharmaceutical industry means an increasing need for retrofitting and remediation of manufacturing facilities to produce new products or to meet cGMP requirements. Hyde's experience in process, CIP and SIP engineering makes us particularly expert in supporting retrofitting and remediation needs for your existing facilities. Remediation projects incorporate Risk Based Analysis to investigate and remediate existing issues.

Quality Services First

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