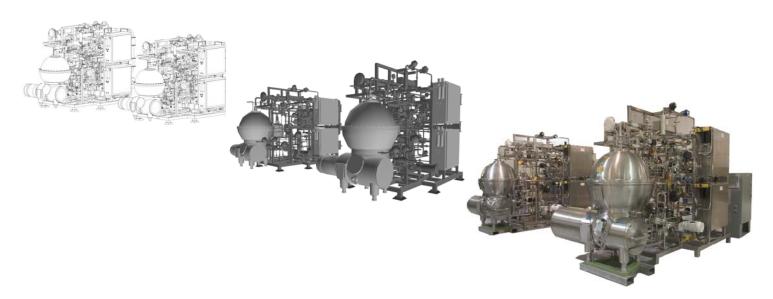


## Hygienic Process Systems Group Overview



Executing a successful design/build high purity skid/module project is not easy. A lot of good things have to happen. We know. We have been doing this for over 25 years. Over that time we have developed some principals that serve as the foundation of how we operate:

**Process Knowledge**: Having good fabrication abilities is just one piece of the puzzle. To build a truly state of the art, easily validated hygienic process system requires an understanding of the process. We have been in the Sanitary Process Industry for over 50 years. We know the environment our systems are used in and how they are applied. Our designs and fabrications reflect this.

**Ease of Doing Business**: Too often, projects end up with an adversarial relationship between the client and the manufacturer. The relationship turns into more of an ongoing set of negotiations than a business partnership. That is not our style. Being easy to do business with is one of our core principals. This means we keep our commitments. We don't harass our clients with petty change order requests. We make our delivery dates. We build long-term relationships.

**Quality**: Yes, we have extensive written quality procedures, in house trained inspectors and a broad array of inspection anddiagnostic tools. Most people in this industry do. We also have something else that not everyone has; a mindset quality is the key to our business. If we continuously improve quality we will be successful. How does this manifest itself? We'll work the extra hours to make a good design a great design. We inspect every weld we make, even if not required by the project. We make sure that the systems we build not only meet the specifications, but are functional and can easily be maintained in the field. Many companies don't. We want our customers to be proud of the equipment they purchased from us.

Chicago San Juan Indianapolis

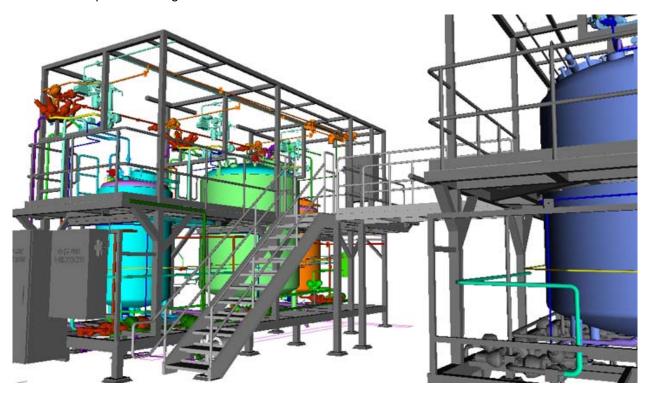
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## **Design/Engineering Capabilities**

Our engineering staff averages over 10 years in tenure at Holland. We have experience in projects ranging from small pump carts to large multi-million dollar modules. Capabilities include:

- P&ID Generation/Modification
- Process Design (3-D Model)
- Project management
- Factory acceptance testing
- Site acceptance testing



## Design Platform

- AutoCAD with Cadworx add on
- Navisworks rendering software

## Turnover Packages

- We build paper and electronic copies of the turnover package simultaneously.
- Normally completed TOP's ship with the skids, not weeks or months after shipment.
- Turnover packages are organized in such a way as to make review at FAT fast and easy.

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## **Facility**



- 40,000 ft sq Manufacturing Floor
- Module assembly area has 24ft clear height
- The entire facility is climate controlled year round to maintain the cleanliness of our fabrication areas.
- All polishing operations are confined to specific work areas that are equipped with air handling and filtration systems.
- All tools are dedicated to stainless steel and higher alloys
- Dedicated office space for module inspection teams with wireless internet access
- Networked AutoCAD system with vaulted document control system and daily backup

## **Manufacturing Capabilities**

## Welding

- Computer controlled orbital welders with weld documentation capabilities
- Jet drive welding stations
- Dedicated argon dewers with certs

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- Oxygen control system to monitor purge gasses on each orbital welder
- All welders are certified to ASME Section IX and AWS D 1.6 requirements



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#### Machining

- Hitachi Seiki machining center
- CNC vertical milling center
- Milling machines
- **Engine lathes**

#### Metal Forming

Custom pullout equipment for fabrication of multiport headers and manifolds

#### Polishing

- Assorted ID and OD mechanical polishing equipment
- Most polishing is done in a segregated room with its own air purification system
- Electropolishing is available

#### FAT Utilities Available

- 1,000lb/hr, 25 psig saturated plant steam
- 200lb/hr, 100psig clean steam
- Up to 100 gpm deionized water
- 100 psig dry filtered compressed air
- 50/60Hz, 100amp electrical service
- 3 Tank CIP system



## Quality

We have a long history of re-investing in our company for equipment that helps assure our quality. We pioneered the use of non-destructive positive metal identification equipment, computerized marking equipment and surface finish measurement in the industry. A list of our QC equipment includes:

- Multiple boroscopes with DVD capability
- Multiple profilometers
- X-ray fluorescence equipment for positive metal identification
- Computerized pin stamping equipment for ID etching

Our quality control procedures cover every facet of the project life cycle. Before a project gets to the shop floor a project specific internal quality manual is generated. This consolidates all of the germane specifications and procedures for each project and is available to all project team members at any time.



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# **Completed Projects**















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