

Automate, improve processes with innovative skid system solutions.



# Why choose Crane?

Fluid technology experts with proven examples of system innovation.

## Manufacturers around the world turn to us for the innovative skidded solutions and distinct advantages we offer every day.

- 1. Experience and expertise across multiple industries
- 2. Elite group of mechanical and electrical engineers with demonstrated system innovation
- 3. Disciplined processes in design quality, fabrication, testing and documentation
- 4. Proven examples of system innovation

Your experience with our team is important. Our Wisconsin-based team is laser-focused on providing an unmatched customer experience, and responding promptly to questions and requests. Trust our team to do the same for you.



"When I look at Crane's system side by side with their competition, there's no comparison. Crane's systems are better designed for durability, maintenance, and performance."

GLOBAL CHEMICAL MANUFACTURER



# Our Team

Work with our team of experienced engineers, fabricators, and E&I professionals to build the best engineered skid system for your process.

Our customers partner with us because we're responsive, bring innovative ideas, and have distributor access to the latest technologies. We take pride in our work, and it shows.



Trust our OptiFlow™ team to deliver solutions you need.







# Meet Some Of Our Experts

### Lane Pittner

#### Position: OptiFlow<sup>™</sup> Business Unit Manager | Experience: 27 years

With years of tissue experience, Lane ensures solutions are provided on time, on budget, and most importantly, performing exactly how the customer expects them to.

### Dale Annoye

#### Position: Senior Process Engineer | Experience: 44 years

Dale Annoye is one of the OptiFlow<sup>™</sup> team's top process engineers with experience in water/wastewater, sanitary processes, and more. Dale enjoys helping customers solve their biggest fluid process challenges.



### Trina Levesque

#### Position: Mechanical Design Engineer | Experience: 20+ years

Trina Levesque has solved customers' fluid process challenges since she joined the OptiFlow<sup>™</sup> team in 2011. In addition to extensive mechanical design engineering experience in food and beverage, pulp and paper, and oil and gas industries, she earned a degree in Quality Management and is a Six Sigma Green Belt.

# How We Work

We have years of experience building custom engineered skid systems for a diverse portfolio of industries. We know a great system starts here, with a great process.

Design **Build** Inspect **Quality Inspection** Our engineers Controls thoroughly inspect Controls engineers and test all systems Fabrication design control panels before they ship out. During fabrication System trials are to be safe, state of Sourcing and assembly, the art, easy to use completed in our inexperienced house test cell with and long lasting. Leveraging over 80 System Design technicians We can match the subject chemicals years of distribution and engineers or water to ensure components to your All systems are experience and collaborate to plant specifications, proper function. component knowdesigned using recommend potential or our experienced Autodesk Inventor® how, we carefully size improvements team will select from to create a virtual and select the right to increase leading technology model — confirming mix of equipment for serviceability or providers like Allen optimal performance. interfaces and fits function. This Bradley, ABB and are verified prior to A bill of materials vields superior Phoenix Contact. is developed, then assembly. Special workmanship and PLCs and Operator attention is placed on we work with our ensures all systems Interfaces are manufacturer component location are built to the programmed with to ensure proper partners to source correct specifications. a focus on stable at below market function, maximum All control panels are process control, serviceability, and prices. built in our UL listed ease of use and reduced operator panel shop. reliability. risk.

### Work With The Experts and Implement Faster

Our OptiFlow™ team includes an elite group of engineers and designers with proven experience in system innovation. We've streamlined the design to fabricationprocess, ensuring faster implementation of your new solution. Trust our OptiFlow™ team to deliver the solutions you need.

### **Continuous Support**

#### **Check Out**

Client visits for a final test and inspection prior to shipping.

#### Documentation

We create comprehensive manuals which include a bill of materials, BD mechanical and electrical drawings, P&IDs, equipment datasheets, and start-up/operating instructions. All documentation is developed in an electronic format and utilizes useful screenshots and photos to enhance . key topics.

#### and startup is vital to the long term operation of the system. We offer experienced mechanical and/or controls personnel to help install and startup your OptiFlow™ skid system upon request.

Install & Start-Up

Proper installation

#### Asset Management

We support our systems by providing lifecycle services such as troubleshooting, maintenance, reconditioning, and asset tracking.

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# Who We Serve

Crane Engineering specializes in custom engineered skid systems for virtually any type of market or application. Whether your market is food & beverage, chemical, pulp & paper, tissue, municipal, oil, maritime, power generation, mining, or general industry, we can develop a solution to meet your needs.

### Chemical/Industrial



Chemical Feed Circulation Metering Transfer Blending/Mixing Wastewater

## Paper/Tissue



Chemical Feed Circulation Polymer Transfer Wet Wipes Starch

## Food/Beverage



Blending/Mixing Circulation Transfer Metering Wastewater Pressure Boosting

## Municipal



Chemical Feed Blowers Booster Stations Lift Stations Filtration SCADA / Controls

# OptiFeatures

Our systems are designed with the operator in mind. Special attention is placed on component location to ensure proper functionality, maximum serviceability, and reduced operator risk.



# HydroForce - Skid Mounted Booster Pump Systems

## Boost and control system pressure while monitoring water and power consumption.

HydroForce provides constant water pressure with variable flow demand. The system utilizes ITT PumpSmart control in conjunction with an ABB paperless recorder. System pressure, water consumption, and power consumption are recorded and displayed in real-time and totalized for download.

Energy conservation is a key component of the system's design.



## Standard Features & Benefits For All Systems

**Custom Control Panels -** Optional Panelview touch screens provide an easy-to-use interface **UL/CUL Panels -** Built to stringent safety and quality standards

**Ergonomic -** Designed to minimize operator fatigue and discomfort

**World Class Components -** Our distributor status allows us to source the best equipment at the lowest market prices

Easy Serviceability - Easily access what you need without obstructions

**Quality Materials -** Selected for each application to ensure chemical compatibility and long equipment life

# TurboWash - Tank Cleaning Skid System

### Clean and validate your manufactured tanks.

TurboWash removes contaminants that accumulate during the manufacture of enclosed tanks. The TurboWash is a self-contained skid mounted tank cleaning system that automatically cleans and validates to complete the tank manufacturing process.

After manufacture, the tanks are located adjacent to the skid. High pressure nozzles mounted on booms are attached to the tanks using a cleaning chemical for the wash cycle. Once the tank is washed, cleanliness is validated using cleaning chemical and filter media. The tank is then dried and fogged with a rust preventative.



## **Our Capabilities**

**Controls Expertise -** Our controls engineers design control panels to be safe, state of the art, easy to use and long lasting. All control panels are built in our UL listed panel shop **Installation & Start-up Assistance -** We offer experienced mechanical and/or controls personnel to help install and start-up your OptiFlow skid systems upon request

**Intricate System Design -** Special attention is placed on component location to ensure proper functionality, maximum serviceability, and reduced operator risk

**Materials Sourcing -** Leveraging over 80 years of distribution experience and component knowhow, we carefully size and select the right mix of equipment for optimal performance. We also work with our manufacturer partners to source materials at below market **prices** 

**Asset Management -** We support our systems by providing lifecycle services such as troubleshooting, maintenance, reconditioning, and asset tracking

# ResOut Injection & Monitoring System

#### Return surface water without disinfection agents.

ResOut removes residual levels of chlorine or bromine used in the treatment of surface water for industrial applications before returning it back to the environment.

ResOut is a self-contained skid mounted sodium bisulfite injection and monitoring system utilized by large surface water users such as steam generation power plants, paper mills, fruit and vegetable producers.

The sodium bisulfite is modulated to match the chlorine and bromine residual for removal. The water is monitored to verify successful treatment prior to discharge. Data logging is provided to record residual levels of chlorine or bromine prior to treatment, sodium bisulfite consumption, and water quality prior to discharge.



# TurboFlush - Container Flushing Skid System

### An industrial flushing skid system to remove debris.

TurboFlush is perfect for shipbuilders looking to automate manual or time-consuming processes. It removes small and large metal, plastic and other debris along with liquids that accumulate during the construction phase of fluid support systems used on ships.

The TurboFlush consists of oil and water flushing skid systems designed for both new construction and retrofits.

The systems are housed in a container that can be located on or adjacent to a ship. Once electric power is provided to the main control panel and the piping is attached to the system, the system is filled with the appropriate liquid and the flushing process begins. The systems are portable and customized to handle the variety of fluid support systems used on ships.



# PureWipe (Wet Wipe) Skid System

### Automated chemical blending system for wet wipes.

The PureWipe skid system provides liquid solutions for wet wipe products. PureWipe is a selfcontained skid mounted system that automatically makes down ingredients and formulates custom recipes of wet wipe solutions. Applications vary from repeatable recipes with few components to a wide range of recipes with multiple components and consistencies.

The PureWipe skid system utilizes PLC based process control to provide precision injection

and sequencing along with homogeneous mixing of ingredients. Each batch records and verifies ingredient consumption and mix times before transfer to the day tank. An optional CIP (clean in place) system is also available to prepare the PureWipe for shutdown between production runs.



# Polymer Makedown System

### Reduce polymer cost with a makedown system.

Industries that use substantial volumes of polymer can save thousands by making down their own.

Our polymer makedown system is the most effective, efficient, and user friendly unit available.

It's intuitive touch screen display allows for precision control, system monitoring, and adjustments.

The design, with low maintenance in mind, reduces cost, clean up, and downtime.



# Custom Designs



"I've worked with Crane Engineering's OptiFlow<sup>™</sup> team for over 5 years. They're very responsive and turn requests around quickly. Their team understands my industry and the best equipment to achieve our goals. Having a partner with technical know-how and industry knowledge is huge to us."

WET WIPE MANUFACTURER



### Start with a goal.

Great custom skid design starts with a well-defined goal. Our team of experts will help you get specific about your needs and help you put numbers to your goals.

Your process engineer will draw on their years of experience with processes like yours as well as deep knowledge of process equipment to design the best solution for your needs. Your custom skid system is fabricated in our Wisconsinbased facility by experienced fabrication and E&I technicians.

Before arriving at your dock door, systems are thoroughly inspected and tested in our in-house test cell. This ensures any issues are detected and remedied here, not during start-up.



# Proven Skid System Innovation

### Inline Mixing System Saves Space, Cost

**Challenge:** Incomplete and inconsistent mixing batch process of 2-part glue (resin and catalyst) creates hot spots, resulting in product inconsistency and quality issues. Operator safety also in question due to manual handling of acid.

**Solution:** Design and build continuous, on-demand blending system that reduces product waste, clean-up, and variations in quality. Catalyst is injected at the tips of the agitator blades in the proper ratio using a metering pump. Catalyst pump to ramp up and down based on the flow rate of the resin.

**Result:** The manufacturer significantly decreased product variations and "out of spec" product, increased efficiency, and experienced easier clean up. Operator no longer responsible for handling acids, eliminating potential for accidents.

### Water Booster System Cuts Energy and Water Cost

**Challenge:** Water usage is climbing and the food manufacturer sees charges for water coming in and going out as wastewater. Track down the source of excessive water and energy consumption and resolve.

**Solution:** Discovered current water booster system was unable to keep up with increased demand, causing sanitation workers to use more water to get the plant clean.

**Result:** Implemented a new water booster system with the goal of increasing pump reliability, reducing power consumption, and monitor water consumption 24/7 to track usage and locate leaks. After implementation, power consumption dropped by 50% due to higher efficiency and smaller motors.

### Dangerous Bacteria Closes Neighborhood Beach

**Challenge:** Reduce dangerous bacteria and microorganisms without the use of chemicals in this natural environment.

**Solution:** Use weighted curtains to partition off the area around the beach, then, using a filtration system (housed in a trailer on shore), draw water in from the bay, filter it, disinfect it by way of UV light, then discharge back into the bay.

**Result:** In previous years, Bernie's Beach closed multiple times during the summer. After the implementation of the system, the beach did not close once.

Turbidity before implementation: 10 NTU Turbidity after implementation: 2 NTU

# Meet Oystra™



## Mobile System Turns Raw Septage Into Pathogen-Free Water

**Challenge:** Create a mobile septage treatment system that converts raw septage to clean and safe water for local discharge or reuse in developing countries.

**Solution:** Designed, build and test a filtering system that separates teh clean safe water from the septage solids, pathogens, and harmful materials.

**Result:** System has proven 50-70% volume recovery and excellent water quality results from human septage. It is fully automated, compact, scalable, and capable of filtering different wastes. The system's versatility allows for use in applications like dairy, landfille leachate, and PFAS removal. The system is available for use in the USA and developing countries.









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