About Crane Environmental

Water is one of the most precious resources on the planet. Fresh water makes up less than 2% of all water on Earth and is increasingly scarce. Crane Environmental plays a vital role in increasing the supply of purified water for people and industry worldwide.

For over 150 years, Crane has led the way in the development of water purification and fluid handling equipment. Crane Valves literally wrote the book on the "Flow of Fluids" which is the industry standard. Beyond "first generation" water technology, however, Crane Environmental has engineered and manufactured cutting-edge Reverse Osmosis systems that remove salt and other impurities from seawater, surface water, and aquifers. Its water purification systems are producing millions of gallons an hour in over eighty-three countries.

Headquartered in Venice, Florida, Crane Environmental provides jobs in a wide range of skill sets from engineering to assembly and fabrication. In addition to building advanced water treatment systems, Crane Environmental employees also utilize state-of-the-art lean manufacturing techniques to insure world-class customer service, operating performance, and quality.

Faster, Better, Easier! Employees are empowered at all levels of the organization to identify ways to continuously improve all aspects of the business, from safety to sales growth. Customers benefit from best-in-class performance metrics in safety, quality, delivery and total cost of ownership.

Crane Co., (CR) NYSE, established over 150 years ago, is one of the oldest publicly-held companies in the United States. It is also one of the ten most profitable companies of all time for its investors.

Timeless Ethics: Every internal Crane Co. presentation begins with the following statement by our founder, and it is the cornerstone of what we expect from ourselves as professionals:

"I am resolved to conduct my business in the strictest honesty and fairness; to avoid all deception and trickery; to deal fairly with both customers and competitors; to be liberal and just toward employees; and to put my whole mind upon the business." Richard Teller Crane - 1855

Crane Environmentality™: Water is a precious resource, but it is not the only one. Crane Environmental adheres to an Environmental Policy that is good for the environment and even better for business. In addition, ***all Crane Train™ Water Purification Systems are designed with the lowest possible total cost of ownership in mind.***

By 2020, over two thirds of the world's population will be facing water shortages and Crane Environmental is ready to intervene with tomorrow's desalination equipment solutions. Our mission is to make sure that pure water is available and affordable for every generation to come.

Approach to Quality at Crane Environmental

The Crane Business System promotes quality at every step of every process in every one of our value streams.

INCOMING MATERIAL

All material is visually inspected when received. Electrical parts are verified for correct voltages and frequency. Date sensitive material on the shelf and confirmed fit for use.

STAINLESS STEEL FITTING AND PIPES

When stainless steel is specified by a customer or is required by the design parameters, we have found through experience and via empirical tests that 316L or 904L stainless steel fittings from qualified suppliers provide excellent reliability and durability for the application. All incoming material is labeled by our suppliers indicating place of manufacture and type of stainless steel alloy.

TRACEABILITY

Major components such as membranes, pumps, motors and such are serialized for traceability and warranty tracking.

TESTING OF COMPLETED PRODUCT

All manufactured products are 100% tested for performance, to meet and exceed specifications quoted to the customer. Any repairs and adjustments are noted and product is tested once more to verify final performance. Test results are maintained as Engineering records.

PACKAGING

Method of packaging is selected for each product and each customer destination or mode of transportation. For instance, an air shipment may get a light crate, where as an ocean shipment will get a full wooden crate with several reinforcing cross members for sturdiness.

QUALITY OF PEOPLE

Quality in manufacturing comes from qualified material, controlled processes and qualified people. We hire very good people and we invest many hours in training our people to produce quality products. As we gradually document our procedures, the demand on training hours will diminish somewhat.

Crane Environmental Quality Assurance Manual - Index

Standards

All wetted parts of Crane Train™ Water Purification Systems manufactured by Crane Environmental comply with applicable US Food & Drug Administration (FDA) regulations regarding materials used with potable water systems. The following is a summary of materials used with applicable FDA citations:

Pumps: Brass, cast iron, 304, 316L and 904L series stainless steel, and thermoplastic. 21 CFR Section 174.5(d); 21 Section 184.1375.

Membrane Elements: Thin Film Composite (TFC) polyamide. 21 CFR Section 177.2550.

Flowmeters: Acrylic and PVC plastic. 21 CFR Section 177.1010; 21 CFR Section 1980.

Pipe, Valves and Fittings: 316L and 904L stainless steel, PVC, brass and bronze. 21 CFR Section 174.5(d); 21 CFR Section 177.1980.

Pressure Vessels: Fiberglass Reinforced Polyester (FRP), PVC, 304 and 316 stainless steel. 21 CFR Section 177.2260; 21 CFR Section 174.5(d); 21 CFR Section 184.1374; 21 CFR Section 177.1980.

Sediment Filters: 304/316 stainless steel, polypropylene, polyethylene. 21 CFR Section 174.5(d); 21 CFR Section 184.1375; 21 CFR Section 177.1520; 21 CFR Section 177.2260.

NSF/ANSI Standard 42: Aesthetic Effects
NSF/ANSI Standard 53: Health Effects
NSF/ANSI Standard 58: Reverse Osmosis Drinking Water Treatment Systems
NSF/ANSI Standard 44: Cation Exchange Water Softeners
SECTION IX (ASME): Welding and Brazing Qualifications
ASME Section VIII-DIV 1: Unfired Pressure Vessels
ASME B31.3: Process Piping
ASTM A967 - 05e1: Standard Specification for Chemical Passivation Treatments for Stainless Steel Parts
ASTM D859 – 05: Standard Test Method for Silica in Water
ASTM D1067 – 06: Standard Test Methods for Acidity or Alkalinity of Water
ASTM D1125 – 95: Standard Test Methods for Electrical Conductivity and Resistivity of Water
ASTM D1068 - 05e1: Standard Test Methods for Iron in Water
ASTM D1126 – 02: Standard Test Method for Hardness in Water
ASTM D1193 – 06: Standard Specification for Reagent Water
ASTM D1293 – 99: Standard Test Methods for pH of Water
ASTM D1998 – 06: Standard Specification for Polyethylene Upright Storage Tanks
ASTM D3370 – 08: Standard Practices for Sampling Water from Closed Conduits
ASTM D4453 – 02: Standard Practice for Handling of Ultra-Pure Water Samples
ASTM D4517 – 04: Standard Test Method for Low-Level Total Silica in High-Purity Water by Flameless Atomic Absorption Spectroscopy
ASTM D5391 – 99: Standard Test Method for Electrical Conductivity and Resistivity of a Flowing High Purity Water Sample
ASTM D5542 – 04: Standard Test Methods for Trace Anions in High Purity Water by Ion Chromatography