



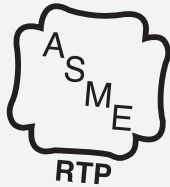
# BELCO

Leading Manufacturer of  
Fiberglass Process Systems,  
FRP Pipe, Duct, Dampers, Tanks,  
Odor & Filtration Vessels,  
Stacks, Towers, Abrasion-Resistant Pipe,  
Oil & Gas Exploration Tanks,  
Separators, Recycling, and  
Salt Water Disposals

# BELCO AFFILIATIONS & ACCREDITATIONS

**BELCO** Affiliations include: ASME, ASTM, ACMA, NACE, AMCA and API

**BELCO** Accreditations Include: ASME RTP-1, AMCA, ASTM D2996/2310 (Product has been tested and qualified to ASTM D2992 Standards), and Quality-Assurance Program



## CERTIFICATE OF AUTHORIZATION\*

The named company is authorized to use the indicated certification mark of the American Society of Mechanical Engineers (ASME) for the scope shown below in accordance with the applicable rules of the ASME RTP-1 Standard on Reinforced Thermoset Plastic Corrosion Resistant Equipment. The use of the certification mark and the authority granted by this certificate of authorization are subject to the provisions of the agreement set forth in the application. Any equipment marked with this symbol shall have been produced, assembled, and tested in accordance with the provisions of the aforementioned ASME standard.

COMPANY:

**Belco Manufacturing Company**  
2303 Taylor's Valley Road  
Belton, Texas 76513

SCOPE:

**Fabrication of reinforced thermoset plastic corrosion resistant vessels through shop fabrication, field assembly and field repair (for new construction prior to being placed in service) using hand lay-up, spray-up and filament winding fabrication methods**

ACCREDITED SINCE: October 2004

CERTIFICATE NUMBER: RTP-014

**The American Society of Mechanical Engineers**



\*Representation of ASME Certificate of Authorization

# WELCOME TO BELCO MANUFACTURING, INCORPORATED

*"We have been custom manufacturing FRP products for more than 35 years and the customer always comes first at **BELCO.**"*

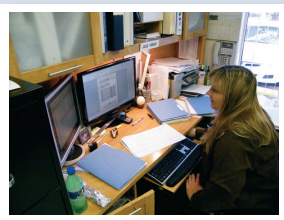
—STEVE MACY  
PRESIDENT



SALES



PROJECT MANAGEMENT



ENGINEERING & CAD DESIGN



FABRICATION



SHIPPING



## **BELCO HAS BEEN DELIVERING QUALITY PRODUCTS AND CUSTOMER SATISFACTION FOR MORE THAN 35 YEARS**

ASME RTP-1 certified, Belco Manufacturing, Inc., has been a custom manufacturer of corrosion-resistant, fiberglass reinforced products including tanks, vessels, pipe, duct, dampers, scrubbers, towers, and abrasion-resistant pipe since 1980. Belco capabilities include in-house structural and mechanical engineering as well as CAD design for custom fabrications. Belco also manufactures a full line of oil & gas exploration storage tanks, separators, and salt water disposal tanks.

## **HIGHLY MOTIVATED AND DEDICATED BELCO EMPLOYEES ENSURE CONSISTENT, HIGH-QUALITY PRODUCTS**

The Belco team is a highly motivated group of professionals providing dependable, cost effective, corrosion-resistant solutions for municipalities, chemical processing, pulp and paper, water/wastewater, metal and mining, electronics, power generating, and oil & natural gas production industries. Our core belief is that commitment is a two-way street, and that commitment to our employees helps to ensure quality products and services to our customers. An affirmative action/equal opportunity employer, Belco provides to each employee, full health and dental coverage, a generous 401K plan, quarterly Gainsharing of company profits, and rigorous Safety and Hazardous Materials Handling programs.

## **BELCO HAS BEEN A DENALI INCORPORATED COMPANY SINCE 1999**

Denali is the world's largest supplier of custom engineered, corrosion resistant fiberglass reinforced composite, corrosion resistant fluid handling products. Denali has facilities throughout the United States, Canada & Chile; manufacturing a variety of critical fluid handling products including above and below ground — both factory built and field wound — FRP tanks and vessels, stacks, towers, hoods, scrubbers, piping systems (including abrasion resistant), duct, dampers, dual laminate vessels, pipe and duct systems and oil/water separators.

# BELCO TANKS & PROCESS VESSELS



- *Helically-wound, chop-hoop and hand lay-up construction*
- *Vertical, horizontal, flat-bottom, dish-bottom, cone-bottom, and slope bottom configurations*
- *Polyester, vinyl ester, fire-retardant and specialty resins with MEKP or BPO/DMA cure systems*



ASME Qualified Fabricators and  
Secondary Bonders

*BELCO is ASME RTP-1  
Certified and qualified to meet  
the industry's most  
stringent quality standard for  
storage tanks and vessels*

Belco manufactures tanks and process vessels to meet virtually any storage requirement. FRP tanks and vessels are lightweight, corrosion resistant and essentially maintenance free.

- Certified to carry ASME RTP-1 label
- Highly-resistant to a variety of chemicals, corrosive environments, and ultraviolet light
- Provide excellent thermal insulation with low heat loss when insulated
- Manufactured to national standards including ASME RTP-1, ASTM D3299, D4097, ANSI/AWWA D120, and more, as applicable
- Wide assortment of fittings, configurations and accessories available
- Tank design features include:
  - Full in-house CAD design and engineering capabilities for custom design
  - Available with FDA approved or NSF-61 certified liners
  - Available with abrasion-resistant liners
  - Insulation and heating systems

## **ODOR CONTROL & FILTRATION VESSELS:**

Odor-control system suppliers choose Belco as a leading source of scrubber vessels, carbon adsorbers, and biofiltration vessels for odor control market applications. Available in 1-foot to 20 - foot diameters for wet or dry systems.

## **BELCO STACKS, TOWERS & HOODS**

Belco stacks and tower package systems offer chemical resistance and are lightweight for easy handling and installation. They are weather resistant and easy to maintain with a long-lasting gel-coat exterior and UV protection.

## **BELCO IS A TOTAL SYSTEM SUPPLIER:**

Pipe, Stacks, Towers, Hoods, Odor and Air Filtration Vessels, Tanks, Duct and Dampers.

## BELCO DUCT & PIPE

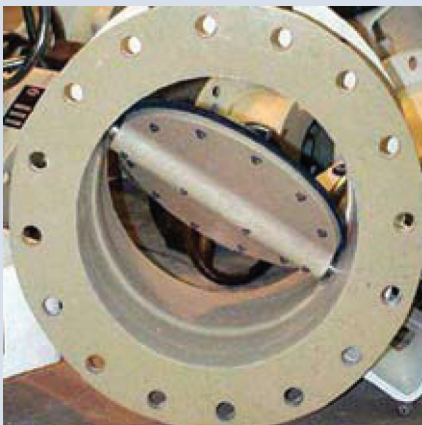


***BELCO** delivers via contract carrier or **BELCO**'s fleet of trucks and specially-designed trailers.*

Belco designs and manufactures custom, pre-fabricated FRP duct and pipe and Stoptline-G2™ abrasion-resistant piping systems to minimize field fabrication and installation costs.

- Up to 12 foot diameter
- Abrasion resistant piping for FGD power market applications
- Hand lay-up or helically wound up to 250 psig pressure or Full vacuum
- Multiple resins to handle a variety of corrosive environments
- Fire retardant resins to achieve Class 1 flame spread
- Design engineering, calculations, CAD design
- Completed ASTM D2992 testing to achieve ASTM D2996 and D2310 HDB Category U rating of 12,500 PSI

## BELCO FIBERGLASS CONTROL DAMPERS



### ***DUCT & DAMPER APPLICATIONS:***

- *Municipal Odor-control Systems*
- *Emergency Chlorine Scrubber Influent Duct Systems*
- *Air-handling Systems*
- *Fume Scrubbers/Strippers*

Used to regulate air flow or shut off and isolate a system, Belco AMCA-licensed fiberglass dampers are corrosion resistant and designed to match operating conditions of the duct system. Premium vinyl-ester resins are used throughout the damper. Fire retardant resins are also available for a Class 1 flame spread.

- Available in 4 inch thru 120 inch standard sizes, round
- Dampers with or without actuators
- Licensed to bear AMCA seal. (Models 203 and 204)
- Models available for balancing or isolation
- Available with:
  - Standard locking-quadrant hand lever with 316SS bracket and handle
  - Worm-gear actuators with or without chain wheel drive
  - Electric or pneumatic actuators
  - 316SS or vinyl-ester shaft

# THE BELCO ADVANTAGE:

**BELCO** Manufacturing Company is one of the largest manufacturers of fiberglass reinforced plastic vessels ranging in size from 1 foot to 20-foot diameter, as well as producing miles of duct and piping systems to the U.S. Municipal and Industrial Markets.

**BELCO** offers dependable, high-quality, corrosion-resistant solutions for the chemical processing, pulp and paper, water and wastewater, metal and mining, electronics, power generating, and oil & gas production industries.

- Highest quality products meet stringent QC requirements
- ASME RTP-1 certified vessels
- ASTM 2996 classified pipe includes ASTM 2992 HDB testing
- AMCA licensed dampers
- WBE Certified
- Equal Opportunity Employer
- High Employee Retention = Higher Quality Workmanship
- Use only premium, qualified raw materials
- In-house Engineering (PE) and CAD design
- Manufacturing Capacity up to 20 ft. Ø
- Professional, experienced sales and estimating departments



# BELCO DELIVERS TWO LARGE FRP COLUMNS TO WOODWARD IODINE



**BELCO manufactured two, 68 foot tall FRP columns for Woodward Iodine**

Belco Manufacturing delivered a stripping tower and an absorber tower to Woodward Iodine Corporation (WIC) for its iodine production process. Each packed column is 13.5 feet in diameter and 65 – 68 feet tall, weighing in at more than 37,000 lbs a piece! The stripping column, which operates near 140° F (60° C), is where the iodine is blown out overhead as a gas. The vapor is channeled through 60 feet of fiberglass reinforced plastic (FRP) duct and then captured in the absorber tower which extracts the iodine as iodine liquor. Both units run at an acid pH of three or less. The resulting iodine liquor is further processed to convert it to elemental iodine.

The two companies were first introduced in the mid 1980s when WIC was upgrading its facility. At the time WIC was looking for a new tank to replace a failing acid-proof brick tank. Replacing the tank with the original brick material was prohibitively expensive so WIC turned to Belco, who recommended an FRP tank made with Ashland Inc.'s HETRON® 197 resin. According to Greg Mitchell, General Foreman at WIC, "Stainless steel wouldn't last 30 seconds in this environment. This tank holds some of the nastiest products and there's not one leak on it with HETRON resin."

Mitchell was so impressed with the performance of FRP in this application that he ordered two more acid tanks from Belco in 1998 - this time fabricated with Ashland's DERAKANE® 470 epoxy vinyl ester resin. Mitchell went on to say, "The Belco guys are very easy to work with. When you find a manufacturer with this level of caliber and commitment from the engineering department to the CEO, everything just runs fine. If I need another tank, they're the first people I'm going to call."

Belco felt much the same way about WIC. According to Doug Preston, P.E., Belco Engineering Manager, "WIC understands what it takes to do a project like this. We went there and visited them twice. And they came here and met with us twice. Communication was the key."

Belco is very well suited to this kind of custom fabrication. The company has more than 100 years of combined FRP experience amongst the operations staff – including Preston's 22 years experience in designing FRP vessels for corrosion service. Preston points out, "Belco has complete computer-aided design (CAD) and finite element analysis (FEA) capabilities on-site along with a number of PE's for design." Steve Macy, Belco President, adds, "Belco is also accredited to carry the ASME RTP-1 label. Our company can handle large projects like this without disruption because of a large labor force (160 people) that possesses a real can-do attitude. Our crews are very experienced and people can readily be shifted to where they are needed."

# BELCO

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