

# Townley Topics

Fall 2004

*Inside Story:*

***A New Spin  
on an Old Pump***

# TOWNLEY

Over forty years ago, a creative, hard working coal miner by the name of J.O. "Jake" Townley founded a company built on the value of hard work and Christian principles – Townley company.

He created many innovative solutions for industry-wide problems by pioneering specialty casting of urethane, metals, and large bore rubber hose for use in the mineral beneficiation and coal-fired power industries.

Early customers included coal, copper, sand and phosphate mining. The more abrasive the environment, the better.



## A Message from the CEO

### *The Tradition Continues...*

As we begin the next forty years, we continue to embrace my father's principles and have been blessed with loyal customers and service oriented employees.

We value the hundreds of mining customers who challenged our ingenuity, provided our growth from the very beginning and still represent a major share of our core business. With a market resurgence of oil and

raw material shortages, we expect a continued growth in these areas.

Additionally, as coal fired electric power plants in North America upgrade the flue emissions to comply with more stringent standards, our products and skills appear to be an excellent fit.

We must "earn the right" to be your preferred supplier and we work on that principle every day.

Townley field representatives are well versed in power plant and mining technology and continue to provide unique solutions for material handling problems on a daily basis. If you are considering new or rebuilt pumps, valves, expansion joints, rubber hose, or lined pipe, take a few moments to review this newsletter and give us a call.

You will find that we are easy to do business with.

**TORO TOWNLEY**

*"Beloved, I wish above all things that thou mayest prosper and be in health, even as thy soul prospereth." John 3 1:2*

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This issue: Townley's Foundry and our Candler, Florida headquarters.

# Letter from the Editor

Townley is pleased to bring to you an updated version of our classic Townley Topics. This quarterly feature aspires to bring informative and relevant articles about Townley's products and services to the many different industries we serve.

In this issue of Townley Topics, our WRK retro-fit kit is the feature. For those of you who don't know much about our centrifugal pumps, this is your chance to learn. Our goal is to provide you with useful information and an understanding of why our pumps stand apart from our competition.

You can tell from the table of contents that we have a new selection of departments. These articles will be featured quarterly to keep you up-to-date on the various Townley activities, products, locations, and outstanding service.

We hope you enjoy the new Townley Topics format. Please let us know what you think about it by filling out the reply card inside. We want to provide the best information and articles to our readers, so your feedback is invaluable.

Happy Holidays!

**-Wayne Smith**  
*Editor*

# What's New @ Townley?

## *Welcome To Townley!*

Joining the Townley sales team this quarter is Brian Butz, our new Regional Sales Director. Brian comes to us with more than twenty years of experience selling and servicing abrasion resistant pumps and related equipment around the world. We're excited to have him on board.



## *Improvements: Optical Emission Spectrometer*

Alan Garri, Materials Manager, recently installed a new Thermo-Electron, ARL Quantris model Optical Emission Spectrometer. This significant investment was made to ensure our continued leadership role in metallurgy white irons.

## *Expansions: New Machine Shop*

Our new CNC machine shop with turning capacity of up to 144" for final machining of cast pump casings is operational. We are able to provide precise fit for all the pumps manufactured here.



## *Where's Townley Next?*

Townley will be at the next PowerGen show being held at the new Orlando Convention Center in Florida. The show will be from Wednesday, November 30th to December 2nd of 2004. Visit us at booth #4826. We can't wait to meet you at the show!

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Visit us on the web @ [www.townley.net](http://www.townley.net)

# Townley's Hurricane Relief

During August and September of 2004, Florida was devastated by some of the worst hurricanes seen in over half a century. Hurricane Charley rolled through the state and less than two weeks later, Hurricane Frances pounded them again. Even Townley's home office in Candler, Florida felt the effects of Hurricane Frances.

Still riveting from Florida's hurricane crisis, Townley rose to the occasion and helped several ailing communities with food, clean-up, and clean water. Randy Arnett, Senior Vice President of Townley, led his Florida sales force to help those in trouble and companies back in business.

"It was bad," lamented Arnett. "Some of these people haven't had electricity and water in weeks."

Wachula, Florida saw the eye of Hurricane Charley pass through. CF Mining, located near the city, took a heavy hit as did the rest of the community. The mine itself was shut down for about five days and was without rail shipping. The community suffered even more than them, with trees smashing through homes and property.

"There was a depression over the entire city," said Tim Casey of CF Mining. Townley came in and fed CF Mining's employees and went out to help the rest of the Wachula community. Townley sales representative, Robbie Holt, went above and beyond helping



*The aftermath of Charley & Frances*

clean-up many homes hurt by the hurricanes.

"Townley was a tremendous help after the hurricane," said Casey. "It was an overwhelmingly nice thing for them to do."

Townley also visited South Fort Green Mine, South Fort Green Mini Washer, and Cargill South Fort Mead. With the help of Jimbo's Barbeque in Lakeland and local McDonald's, Townley served over 1,000 meals to these companies and communities.

From breakfast to lunch, Arnett, Holt, and Florida sales reps Charlie Gore and Bob Kendrick served biscuits, barbeque, chicken, sandwiches, and more. "Some of these people hadn't had a decent meal in over a week," according to Casey.

Clean-up continues at most of these places but the mood was lifted by some hot food and a helping hand from Arnett and his Florida sales force. ❖

# The New Townley.Net



If you haven't noticed, Townley.net is changing. The website's new design is user friendly with more information than before. Take a look at the list of new departments available:

- About Townley
- Technical Library
- Where's Townley Next?
- Products
- Townley Topics
- Jobs @ Townley

And with our easy request form, you can get our questions answered by a Townley rep ASAP! Surf on over to Townley.net!

## Is a Site Audit Right for You?

With the increased demand for improved operating efficiencies, many coal-fired power plants with FGD are experiencing staff reductions, unscheduled outages and excessive overtime. There seems to be no relief in sight.

In order to soften this situation, Townley initiated an auditing program for select FGD power plants in North America.

Designed to provide a comprehensive report on your equipment, Townley's cross-functional team, measure, inspect and inventory your pumps, valves and critical piping.

Skilled in process areas including: FGD, coal and limestone handling, recirculating water and sludge, our team members are well qualified to document this information.

When completed, Townley provides a summary of all components inventoried with a focus on observed safety items, projected equipment failure and preemptive maintenance.

Known in the mining and power industries as a company that provides solutions for abrasion and corrosion

**4 Townley Topics**

problems, Townley follows up at each account with quotations for critical inventoried items, such as: High quality wet-ends for centrifugal pumps, valves, rubber hose, expansions joints, lined pipe, hydrocyclones, chute relining and submersibles.

There is no out of pocket cost to you! We even provide lunch for your employees involved.

If this sounds appealing, join the other plants who have taken advantage of this service. To schedule your audit, call Marty Harris at (800) 342-9920. ❖





*The WRK working at Vectren.*

In 1990, Vectren, A.B. Brown Station in Mt. Vernon, Indiana, was experiencing unacceptable wear life with their, rubber lined, 350 Warman and 12X14 Galigher centrifugal pumps. After consulting with Townley technical representatives, Vectren agreed to install Townprene urethane wear parts. This change proved to extend the wear life considerably with a lower overall cost for the wet ends.

At the next rebuild (1992), Townley recommended using a high chrome (HC28) impeller and throat bushings along with Townprene liners. Once again by working together, the pump life was stretched even longer.

In 2003, Vectren upgraded their FGD scrubbers by adding a selective catalytic reduction unit. Concerned about degrading the urethane with the ammonia used in this catalytic process, Randy Simon, Vectren Manager, Technical Services and Mike Tenbarge, Vectren Maintenance Supervisor, went into a huddle with Townley again. With many years of experience in wet-end reengineering and casting, Townley was able to offer a complete metal pump

## *Working together yields continuous improvement at Vectren.*

assembly, called the WRK retrofit kit.

Cast from high chrome HC 34, this new change has given Vectren improved wear and corrosion resistance over the previous assembly. Additionally, with a simple four part assembly incorporating strategic lifting eyes, the cumbersome OEM split case shell is a thing of the past. Install teams have commented about the ease of installation, alignment and safety when working with this WRK pump. They also like the fact that these wet-end assemblies attach directly to the existing, stands, barrels and piping.

All six Warman pumps on both scrubbers have been converted and the two Galighers will be changed out at Thanksgiving. The excellent relationship endures.

Vectren, A.B. Brown is a FGD coal fired powerplant, generating approx 400 megawatts, formally known as Southern Indiana Gas and Electric.❖

*Note: Two Vectren emergency line crews were spotted in central Florida helping the hurricane plagued Tampa Electric and Florida Power & Light get customers back on line.*

# From *Classic* To **Contemporary**



Improving existing products in the field has been guided by the following Townley principles: *Simplicity, exact fit, improved performance, clear value and durability.*

Pumping of abrasive materials used in coal-fired power plants and mining applications can create havoc with installed OEM pumps, forcing a tedious, complicated pump rebuilding process. Often this can take up to two days per pump because of the high “custom” part count and difficult alignment issues. Maneuvering of these large assemblies without proper lifting eyes can be awkward and unsafe.

## ***The challenge***

Townley has taken on this challenge by re-engineering many of the typical slurry pumps like Warman, Ash, GIW and Thomas, used in mining and power today. We created a simple four part “wet end” assembly with self-aligning features and lifting eyes on each heavy component, while still retaining the OEM performance specs. Installation and operation of these have generated a high level of satisfaction with maintenance

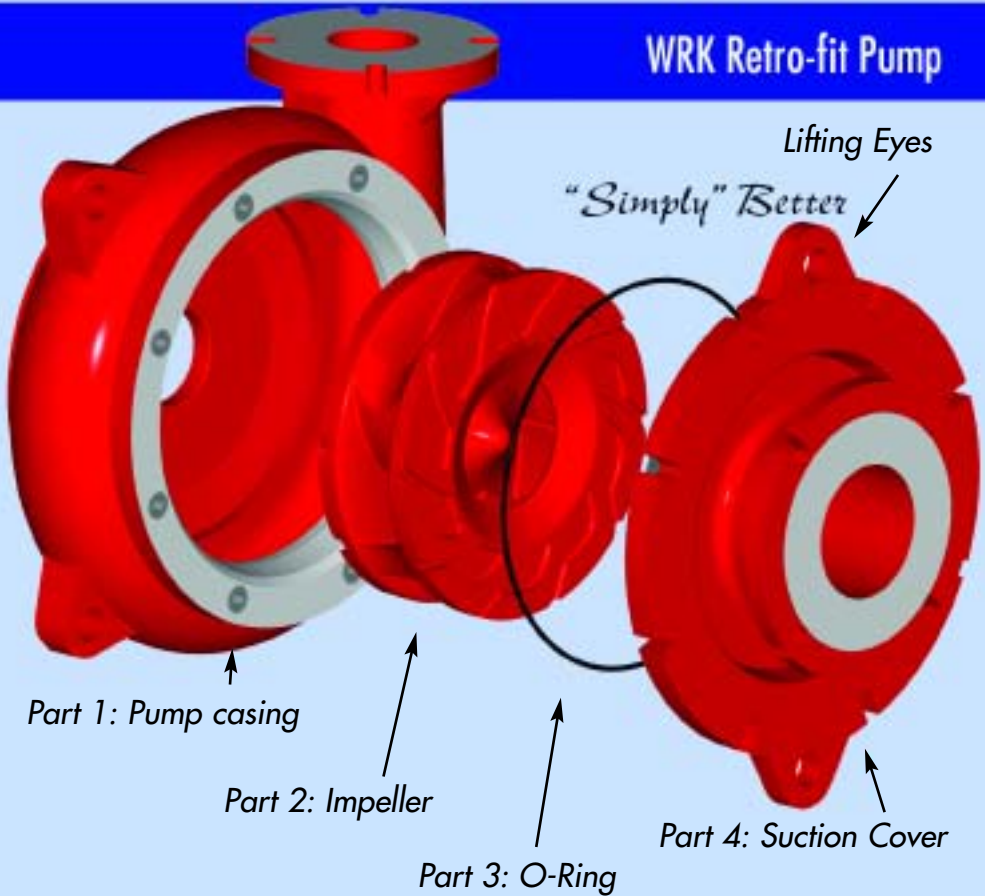
personnel. We call this new assembly the WRK retro-fit slurry pump.

## ***Engineering***

Our engineering group under the leadership of Urs Blattmann, a hydraulic engineer of note, closely examined the specs and pumps ready for rebuild and began the program of redesign.

Using solid engineering experience, auto-CAD tools and applying our principles, listed above, we created a superior design.

## WRK Retro-fit Pump



**4-part Easy Assembly.** Attachable to most existing pump motor drives with strategically located lifting eyes for easy and safe placement of pump components during installation.

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### **Pattern making**

This design was forwarded to our pattern making shop. These precision patterns, with all the appropriate porting parameters, are used to create the specialized sand cast molds.

### **Alloy Composition**

Design of pumps for power applications where abrasive limestone slurries with fluctuating acidity and high chloride / fluoride

levels are common, we employ HC34 high chrome iron for the cast parts. In mining, where pumping of aggregate is required, we can use other metal choices such as HC28. For more corrosive environments, we can provide a variety of duplex stainless steel alloys such as CD4mCuN.

### **Quality Control**

Formulating the appropriate metal

to match the application is controlled by our foundry lab and engineering personnel. Using our "state of the art" Thermo-electron *ARL Quantis* Optical Emission Spectrometer, we ensure the alloy composition will be exact each and every time. Sample plugs are retained for tracking and quality purposes.

## ***Metal Pouring***

Using solid state induction furnaces with a 20,000 lb melting capacity, our foundry pour team transfers the metal to the molds where all parameters are monitored and recorded to ensure consistent results. After proper cooling, disassembly from the mold, inspection of the casting and heat treating, the castings are ready for the next step.

## ***Machining***

In our new machine shop, all precise finishing such as boring, threading and facing of the castings are accomplished with our CNC vertical mills. We turn casings as large as 144" in diameter on a regular basis. Townley has developed specialized CBN and ceramic tooling in order to machine exact tolerances on castings with a hardness as high as 700 Brinell, setting us apart from other manufacturers. By machining after hardening, we ensure retention of all critical dimensions.

## ***Assembly and installation***

Dimensions of all castings are measured and recorded at every stage of the manufacturing process to ensure exact fit when received by the customer's maintenance department. Townley

representatives have assisted customers on first time installations to demonstrate the ease of rigging with the lifting eyes and alignment features, usually completing the installation in under four (4) hours.

## ***Is this for you?***

If your OEM rebuild experience is tedious and you want a user friendly change, call our sales department for a reference list of users and a technical review of your situation. ❖



## **Complimentary Products**

- Expansion Joints
- Gaskets
- Spool pipe
- Rubber hose
- Knife gate valves
- Ball valves
- Check valves
- Actuation devices
- Impellers
- Nozzles
- Hydrocyclones
- Butterfly Valves



Over  
**5000**  
Installed!

**Call us about our  
core rebate plan.**

From 3" to 36" port size,  
our ANSI class 150 80-TP  
valves are the work horse  
for abrasive and corrosive  
solution management.

### **Unique Features**

- Self-flushing port
- Fully supported blade
- Bonded-in Towniprene liners
- Bi-directional flow
- Precision water jet cut gate
- 4 bolt minimum packing gland
- Full actuation package available



**TOWNLEY**

Engineering & Manufacturing Co., Inc.

Member of

**VMA**

# Townley Product Line



## Pumps

The premiere supplier for non-OEM replacement parts for solids handling pumps. Our parts will fit GIW, Warman, and over 30 other manufacturers. We also provide complete turn-key pump assemblies, including submersible, horizontal, and centrifugal.



## Valves

We manufacture a wide variety of valves for corrosive and abrasive material handling applications. Butterfly, ball valves, knife gate, check, and pinch valves are available with any positioner method you prefer.



## Hydrocyclones

Classification, sizing, and dewatering of solids is readily accomplished when specifying our cyclones. With years of application knowledge and experience, we can provide the right units for you. Simplicity, durability, and ease of maintenance is our goal.



## Rubber Products

From expansion joints to flexible hose, we can manufacture 4" to 96" diameter and up to 50 feet long. Durability is the word with handling of abrasive slurries.



## Lined Pipe & Fittings

Abrasive and corrosive environments are home to our lined pipe products. We also can mold Towniprene® urethane pipe and components for special applications.



## Towniprene Specials

Townley makes a variety of other products to fit the power, mining, dredging, and chemical industries like gaskets, flotation and agitation, pulleys, spray nozzles, and even chute and hopper liners.



## Type 80-BA, Knife Gate Valve

Designed for the harshest environments of mining and coal-fired power plants, this rugged valve features: a ductile iron valve body, 410-stainless induction hardened gate, 650 Brinell high-chrome wear inserts, and bonded Towniprene® urethane lined body for absolute sealing.



## MSP Submersible Pump

From bottom ash to water run-off ponds, the MSP is perfect for the job. With optional agitators, special seals and screens, these tough pumps can handle the harshest environments.



## Super Flex

From dredging sea coral to transporting abrasive materials and sludge to reclaim yards, this is a super tough hose. Lengths to 50 feet, 400PSI, reinforced for toughness and thermal expansion movement. Quick turnaround with custom flanges.



## Scrubber Spray Nozzles

FGD replacement spray nozzles. Limestone slurry residues are easily unclogged with a sharp whack. Try that with a ceramic nozzle! These durable molded nozzles are an economic effective solution to an industry problem.



## FGD Hydrocyclone

Designed specifically to replace leaking, complex cyclones for classifying limestone. These simple units will not leak or vibrate apart and separate at the mesh size you specify.



## Ball Mill Chute Redesign

Extra thick durable rubber lining in combination with our high hardness cast alloy white iron for extended wear life. We do custom fabrication to enhance wear properties with specialty linings and match exact fit of your set-up.

## Location Spotlight



The nerve center of Townley Company sits in Candler, Florida - only a few miles from where the original homegrown shop that Jake Townley started in 1963. Since then, Townley's home office has grown into a facility that houses over 300,000 square feet of industrial shops and offices. We also have complete polymer and metallurgical laboratories. This definitely isn't the small garage Townley started in.

In Candler alone, Townley houses a foundry, urethane casting shop, industrial rubber hose shop, pattern shops, machine shops, TIP headquarters, heat treating facility, metal fabrication shop, and Townley's central business building. If you decide to tour our facilities, you will get to see our different shops in action along with the renowned Townley hospitality.

Don't forget about the other Townley locations as listed below. Our goal at Townley is to have central locations to best serve our customers. ❖

**Bessemer, Alabama**

(205) 425-9300

**Eloy, Arizona**

(520) 466-9223

**Eldorado, Illinois**

(618) 273-9341

**New Summerfield, Texas**

(903) 726-3503

**Beckley, West Virginia**

(304) 252-7084

# Fax Us Your Comments or Requests!

Want to get more information on a Townley product or service? Fill out this page and fax it to us at **(352) 687-1862**. You can also go to [www.townley.net](http://www.townley.net) and go to our Quotes or Contact page to receive a response as soon as possible.

Name: \_\_\_\_\_ Company: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Industry: \_\_\_\_\_ Job Title: \_\_\_\_\_

Which products would you like more information on?

- Pumps       Valves       Lined Pipe       Rubber Hose       Hydrocyclones       Pulleys
- Flotation & Agitation       Gaskets, Spacers, & Wedges       Towniprene®       Other

Please list any additional comments or requests here: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What Townley products would you like to see featured in future issues? \_\_\_\_\_

What was your favorite part of this Townley Topics? \_\_\_\_\_

Any additional comments? \_\_\_\_\_

Cut along the line

# TOWNLEY

Engineering & Manufacturing Co., Inc.

## Pumps

Centrifugal Pumps

Submersible Pumps

Replacement Pump Parts

made to fit these OEM's:

- Warman
- Ash
- GIW
- Hazleton
- Galigher
- Morris
- Goulds
- Denver
- Wemco
- Thomas
- Allis Chalmers
- Ingersoll-Rand
- Worthington

## Hydrocyclones

General Purpose

Hi-Performance

FGD

## Valves

Knife Gate Valves

Butterfly Valves

Ball Valves

Pinch Valves

Plug Valves

Check Valves

Actuators

## Rubber Products

Material Handling Hose

Suction and Discharge Hose

Expansion Joints

Rubber Fittings

Rubber Linings

Pulley Lagging

## Lined Pipe & Fittings

Towniprene Lined Pipe

Gaskets, Spacers, Wedges

Suction Nozzles

## Towniprene Specials

Wheels

Flotation & Agitation

Spray Nozzles

Belt Scrapers

Chute, Launder, &  
Hopper Linings

Serving:



Mining  
& Minerals



Power



Dredging



Chemical

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