



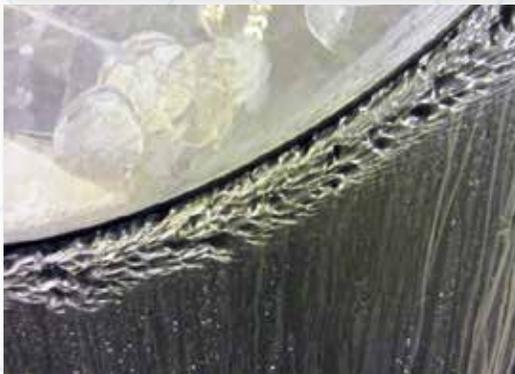
**WRK-FGD**  
Innovative Solutions for Solids Handling Pumps

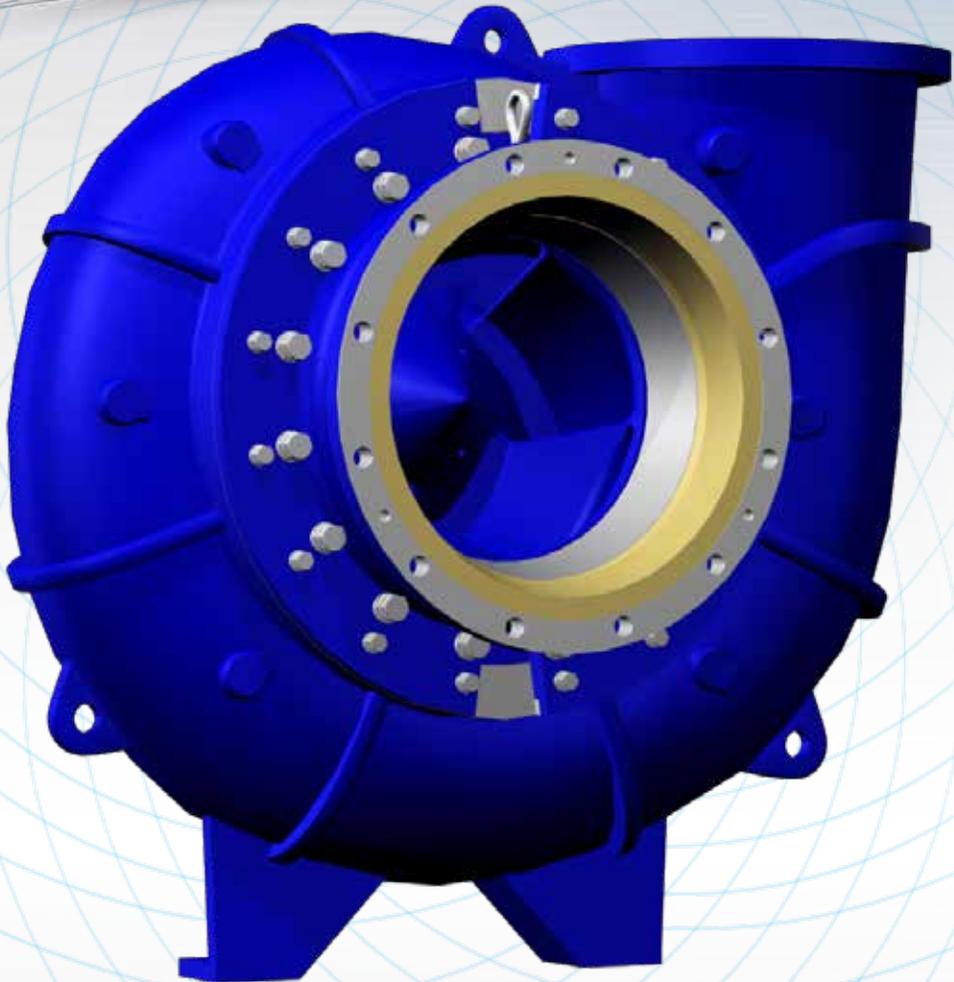
**TOWNLEY**

Engineering & Manufacturing Co., Inc.

## the Problem

More than 40 years ago when the first wet scrubbers were brought on-line here in the USA, they were installed with rubber lined pumps. The constant flexing, temperature exposure and abrasive wear of these liners causes the rubber to break down. When pieces of rubber break away and enter the slurry they often plug up the header in the absorber tower, the efficiency of the scrubber module deteriorates to the point that the system may have to be taken off line. The headers then have to be physically disassembled, cleaned out of any of the rubber debris, reassembled and brought back on line. This is very time consuming process and depending on the design of the module can be a very costly affair for the utility.

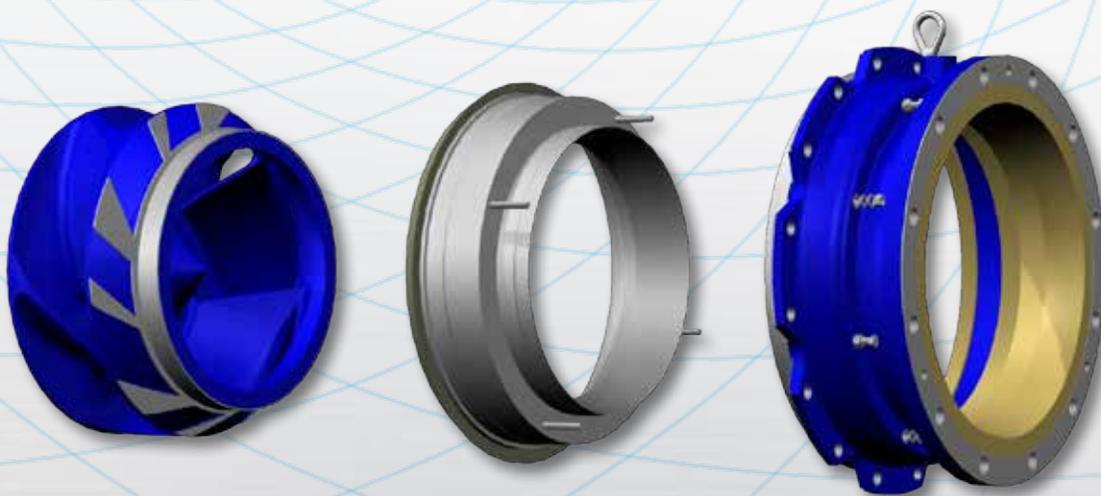




## the Solution

Our Solution begins with our WRK 700-1000 product line. These modular impeller and adjustable suction liner conversions have proven themselves across North America.

Working closely with our power plant customers and listening to their needs we created an all alloy complete wet-end replacement cast in our proven alloys HC34 a high chromium alloy white iron or G4R a modified duplex stainless steel for more corrosive environments. By taking the knowledge of over 50 years in the wear parts business and the success of the WRK 700-1000 systems installed in FGD operations we were able to come up with a complete solution, the WRK-FGD.



**WRK-FGD**

**TOWNLEY**

Engineering & Manufacturing Co., Inc.



## Design

Our WRK series impeller and adjustable suction liner retrofit design has proven to be very effective in providing optimal performance and efficiency. It was the next logical step to design a all alloy pump casing to compliment the success of our WRK series. In conjunction with our customers we did valuable research on the available infrastructure and the installation requirements for these very large units. Based on this information

our engineers designed a one piece high chrome volute design that would provide a drop in fit without any required construction or major infrastructure changes.



# Materials

Townley's alloy HC34 has reduced carbon content, as compared to standard ASTM A532 Class III-A alloys and has increased chromium content to produce an alloy well matched to the abrasion and corrosion levels found in most FGD systems. In the past 20 years alloy HC34 has found widespread use throughout absorber recycle pumps across America. Upon a recent inspection we have found that rather than the customary 1/8 to 1/4 inch of wear after 6-8 months that our customer has experienced previously, we have only accumulated a net wear of approximately 40 thousandths of an inch over a 3 year period. It is apparent that the longevity of the design has been proven, that the up time can be dramatically increased with our design and the net overall cost to the utility is dramatically less.



*"... we have only accumulated a net wear of approximately 40 thousandths of an inch over a 3 year period."*

Urs Blattman, Townley Technical Director



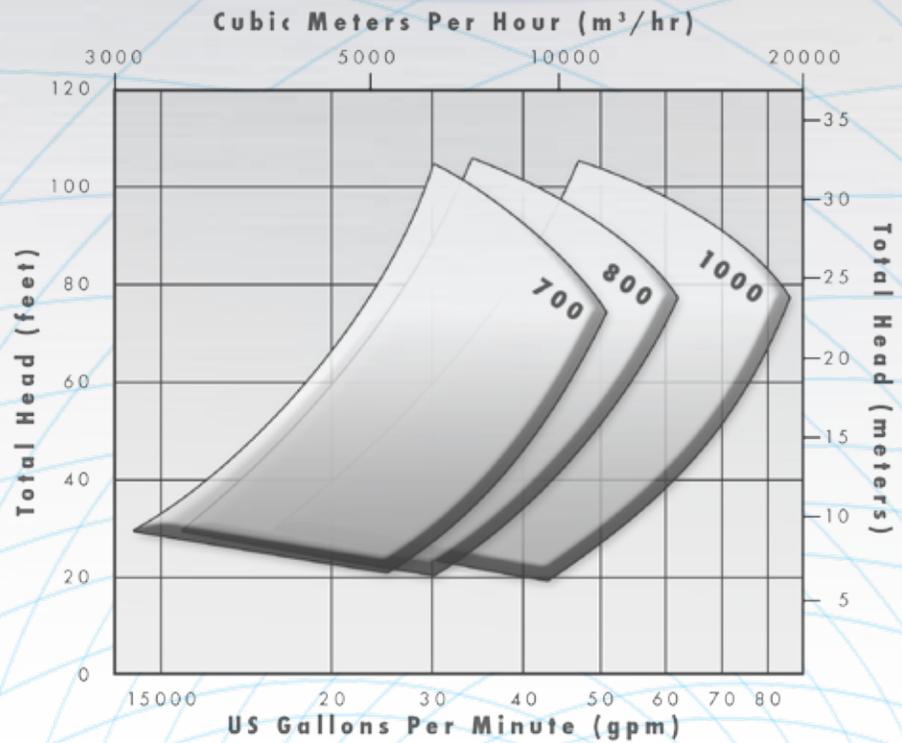
**TOWNLEY**

Engineering & Manufacturing Co., Inc.

# Specifications

## Features

- **Capacities**  
to 80,000 gpm  
to 18,180 m<sup>3</sup>/hr
- **Heads**  
to 105 ft to 32 m
- **Pressures**  
to 125 psi  
to 860 kPaBenefits



- **Size range (discharge)**  
28" to 40"  
700 mm to 1000 mm



## Delivery

We are able to provide quick delivery by controlling the complete manufacturing process including design, casting, machining, assembly, and final testing. Our white iron foundry is capable of pouring complex castings that exceed 40 thousand pounds. We have units in stock and are ready to ship.

### Ease of Installation:

Because of the simple one piece design, the complete retro fit kit installation from start to finish we are looking at approximately 4-6 hours of actual installation time. Where as our competitors design in some instances may take 1-2 complete days to complete.



## Service

“We’ve developed the solution, we have it available, produced and manufactured right in our foundry in Candler, FL, here in the USA. An American made solution that’s going to provide the coal fired power industry with low cost scrubber pump operation for many decades to come. We’re excited about our opportunity to help you and hope that you will take a serious look at what we’ve developed to help you reduce your cost.”

Toro Townley, CEO  
Townley Engineering &  
Manufacturing Co., Inc.



# TOWNLEY

Engineering & Manufacturing Co., Inc.

*Trust in the LORD with all thine heart; and lean not unto thine own understanding. In all thy ways acknowledge him, and he shall direct thy paths. - Proverbs 3:5, 6*

*“An American made solution that’s going to provide the coal fired power industry with low cost scrubber pump operation for many decades to come.”*

Toro Townley, CEO  
Townley Engineering &  
Manufacturing Co., Inc.

**TOWNLEY**

Engineering & Manufacturing Co., Inc.

Mail: P.O. Box 221 • Candler, FL 32111 • 10551 SE 110th St. Rd.

Phone: (800)342-9920 • Fax: (352) 687-1862

[www.townley.net](http://www.townley.net)

Made in the USA

