

The background of the entire page is a photograph of an industrial facility, likely a refinery or an offshore oil platform, during sunset. The sun is low on the horizon, creating a bright orange and yellow glow that silhouettes the complex structures of pipes, towers, and cranes. The sky is a mix of orange and light blue, and the water in the foreground is calm, reflecting the light from the sun.

**WAUKESHA FOUNDRY**

# **PETROCHEMICAL PRODUCTS**

***INDUSTRY EXPERIENCE  
ENGINEERING EXPERTISE  
ADVANCED TECHNOLOGY***



## **EXPERIENCE AN INDUSTRY LEADER**

Waukesha Foundry has earned a reputation as an innovator in the production of high-quality cast components for the petrochemical industry. With almost a century of experience as our foundation, we embrace changing technology and put our extensive expertise to work for you. Having an intimate knowledge of the markets we serve is as important to us as it is to our customers. Our advanced technical teams know how to meet the petrochemical industry's needs for:

- ▶ Shorter lead times
- ▶ Large inventories of existing patterns that can be customized quickly
- ▶ Flexible scheduling to accommodate pre-approval drawings and partial shipments
- ▶ Low to high volumes
- ▶ Manufacturability/repeatability
- ▶ Fabrication integrity
- ▶ Wide selection of heat-resistant alloys
- ▶ Expertise with difficult-to-manufacture alloys

**AT WAUKESHA FOUNDRY, WE DON'T SHY AWAY FROM CHALLENGES...  
WE ACCEPT THEM HEAD ON.**



*Waukesha*  
*Est. 1912*

# ***OUR STRENGTH*** **IS OUR EXPERTISE**

Waukesha Foundry offers an extensive range of products designed specifically for the petrochemical industry. As the recognized brand leader, our WF-RepcO™ line is dependable, can stand up to harsh environments, and withstands high stress levels. Having a wide range of heat-resistant alloys allows us to accommodate customer requirements for specific chemical compositions. Our continually expanding WF-RepcO™ line includes:

## **WF-REPCO™ PLUG-STYLE RETURN BENDS**

Waukesha Foundry offers a full range of heavy back-wall and pressure fittings, and is the only manufacturer to produce Ohio, Key and Sivyer style plug headers.

**Mule Ear** – Our most universally used fitting for general refinery applications reduces any possible eccentric loading upon ear sections.

**Horse Shoe** – This rugged design offers proven dependability, safe handling of stress levels and low-maintenance costs.

**Internal or External Hex Nut** – The full 360° threaded top provides additional strength and is more suitable for use at higher temperatures or pressures than other fittings.

## **WF-REPCO™ U-BENDS AND ELBOWS**

Heavy back-wall thickness ensures longer life. Center-to-center or center-to-face dimensions offer flexibility and design freedom to accommodate special fittings.

## **WF-REPCO™ TUBE SUPPORTS, HANGERS AND BRACKETS**

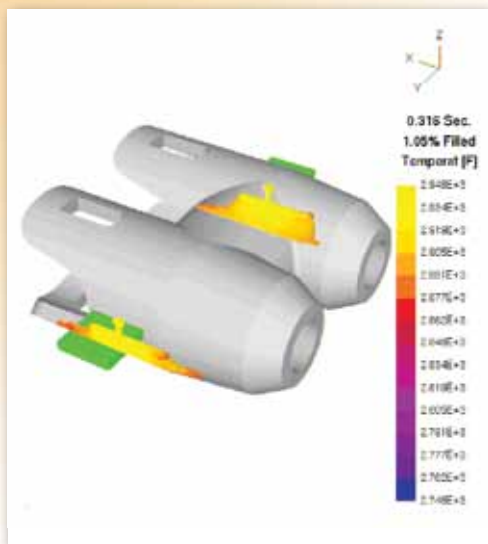
We have the ability to cast tube supports, hangers and brackets in any configuration to accommodate retrofits or new construction.

## **WF-REPCO™ DRILL BITS**

This offering expands our range of low-to-medium volume steel castings from drilling through refining applications. Waukesha Foundry's casting process provides a more near net shape, which requires less machining. Our quick turnaround, solidification analysis and rapid prototyping are distinct advantages.



# INNOVATORS IN PROCESS ENGINEERING



Waukesha Foundry sets the standard for process engineering. Our degreed manufacturing and metallurgical engineers are involved throughout the entire process. This team uses their expertise to analyze customer requirements to determine which molding and casting processes are right for your petrochemical application.

We interface with computer-aided design (CAD) systems, accepting fully surfaced or solid models. By using solidification modeling, we can identify problem areas *before* your castings are produced, which enables us to develop effective and efficient manufacturing processes, reduce lead times and ensure consistent quality.





## ***COMMITTED TO*** **SUPERIOR TECHNOLOGY**

Our commitment to technical advances sets us apart from the competition. Extensive manufacturing capabilities allow us to produce castings in over 200 different alloys, ranging from 1 to over 6,000 pounds. Waukesha Foundry leads the industry in process-controlled manufacturing, testing and machining.

**Patternless molding process** – We can expedite the production of cast components economically with this process, a necessity when an existing pattern isn't available. Our state-of-the-art robotic cells will convert your CAD data into machine paths and machine the geometries directly into sand mold blanks. This new technology eliminates the need for conventional pattern equipment and significantly reduces costs and lead times. It is ideal for both high-volume production runs and low-volume runs that require only one or two parts at a time.

**FoamCast molding process** – Using this process, Waukesha Foundry can cast thinner sections and internal features while reducing machine stock, resulting in a lighter-weight design with near net shape. FoamCast's advantages make it an excellent choice for rapid prototyping and low- or medium-volume production runs. It is also a good option for high-volume applications, which are not suited to other casting processes.

**In-house nondestructive testing (NDT)** – Our experienced staff of certified testing inspectors performs nondestructive examination and testing to ensure the integrity of your castings. Our capabilities include radiographic, magnetic particle and liquid penetrant inspection processes as well as pressure testing.

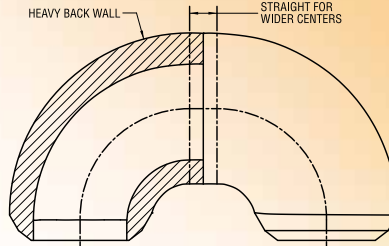
**In-house machining** – Waukesha Foundry's machining expertise is a tremendous value to our customers. Our combination of fine craftsmanship, high-tech processes and high-volume capabilities for machining fittings is unparalleled. With extensive in-house operations, we maintain the highest quality standards.



# **UNCOMPROMISING QUALITY STANDARDS**

Quality is a way of life at Waukesha Foundry. Using Six Sigma principles, our certified Black Belts drive continuous improvement. We build quality into every step of the process, which is exhibited by the certifications we hold:

- ▶ ISO 9001:2008
- ▶ ASME Section III NCA3800
- ▶ ASME IX Certified Welders
- ▶ MIL-I-45208
- ▶ MIL-STD-45662
- ▶ American Bureau of Shipping (ABS)



## **SEE WHAT WE CAN DO FOR YOU**

Customer satisfaction is important to us. We work closely with our customers to engineer the right process for their application. To find out what Waukesha Foundry can do for you, please call us or visit our website at:

[www.waukeshafoundry.com](http://www.waukeshafoundry.com)



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