

PRATT[®]

a **MUELLER** brand

AFTERMARKET SALES CAPABILITIES

Engineering Creative Solutions for Fluid Systems Since 1901



MUELLER

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AFTERMARKET SALES & SERVICES OVERVIEW

CALL THE VALVE EXPERTS

Whenever you need replacement valve parts or a major valve refurbishment, call the valve experts. We understand valves and what it takes to refurbish them. When repairs or replacement parts are required, the best protection you can buy for your valves is the advice of a professional product representative to help you make informed decisions about your valves and the services of a factory authorized serviceman to perform the work.

VALVE REFURBISHMENT

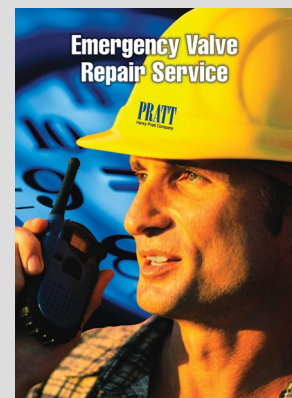
We can rebuild most existing AWWA butterfly valves and C507 ball valves and make them function as brand new. We stand behind our work by providing a new valve warranty with every valve refurbishment. Replacement parts are available for both past and present designs for every Pratt® valve. We pride ourselves on working well under pressure to meet our customers' deadlines, especially in critical plant outage situations.

DEDICATED REPAIR FACILITY

With over 35 years of experience, the Pratt Hammond Plant specializes in the refurbishment of both Industrial, Nuclear and AWWA valves. We can even refurbish our competitors' valves!

Our Complete Range of Repair Services Include:

- Valve repair capabilities 3" to 168"
- Valve types include AWWA, butterfly, gate, globe, control, safety relief, rectangular and nuclear
- Refurbish competitors' valves
- Field Service Technicians
- In-line field service with fully equipped mobile unit
- In-line safety relief valve testing
- Testing for water, steam and air applications
- Certified welding to A.S.M.E. specifications



NUCLEAR CAPABILITIES

YEARS OF NUCLEAR POWER INDUSTRY EXPERIENCE

Over 45 years ago we began providing butterfly valves to the nuclear power industry. In that time we have provided over 20,000 valves to 94 of the 104 operating nuclear power plants in the United States; 85% of all butterfly valves installed. Almost all of the Pratt® valves furnished since 1960 are still in service today, having little or no maintenance over the years.

NUCLEAR VALVE SERVICES

Whether you require spare parts, replacement valves, or just sound advice, we are ready to respond. Our in-house Nuclear Aftermarket Department and outside sales force provide superior service nationwide.

Nuclear refurbishment and upgrade services are available for:

- Resilient Seated Butterfly Valves
- Ball Valves
- Gate Valves
- Safety Relief Valves
- Control Valves
- Actuators



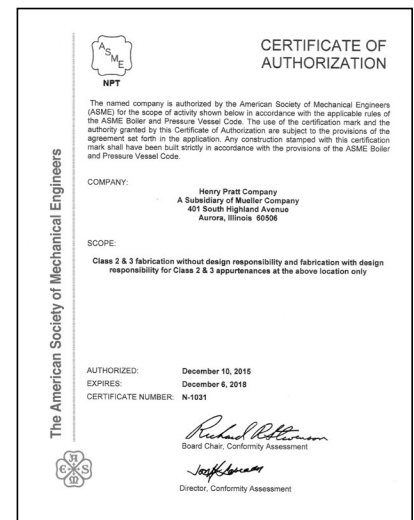
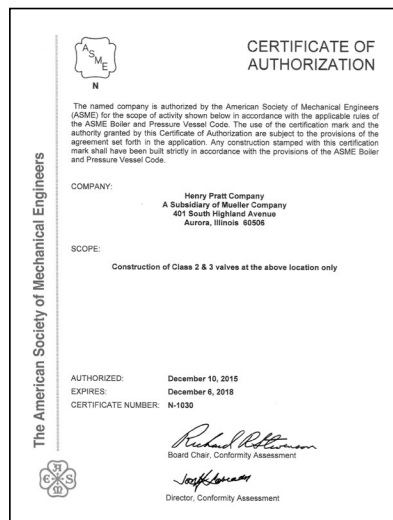
A REBURFISHED 14" WEDGE

QUALITY ASSURANCE PROGRAM

Quality Assurance is one of the most significant factors in choosing a product for nuclear service. Our program to assure the quality of the products we produce is the result of decades of industry know-how and a commitment to serving our customers. Our Quality Assurance Program covers a myriad of operations from inception to implementation, in strict conformance to the criteria of NA 4000 and the ASME Boiler and Pressure Code, Section III, Division 1, Class 2 and 3, number 10 10CFR 50 appendix B, and number 10 10CFR21 reporting.

N-STAMP CERTIFICATION

We hold Certificates of Authorization from the ASME to manufacture valves bearing the N Symbol for Class 2 and 3 Nuclear Valves and parts bearing the NPT Symbol for Class 2 and 3 Nuclear Valve Parts. The company exceeds all requirements for building nuclear valves in strict accordance with Section III of the ASME Boiler and Pressure Vessel Code. We maintain the N, NPT and VR stamp.



FEATURING PRATT® HAMMOND PLANT

The Hammond, Indiana plant is dedicated to the refurbishment of valves and valve components ranging in size from 3" thru 168". Our manufacturing capabilities include heavy steel fabrication, medium to heavy machining, a stress relief furnace, testing, and overhead cranes. This plant has further enhanced our capability to repair and manufacture numerous types of valves.

CNC machining centers and CNC lathes insure precision accuracy of machining on all valves and components manufactured. Our top notch quality and service is instilled into our skilled craftsman and certified welders which clearly differentiates us from other conventional fabrication facilities.

Our Hammond plant prides themselves on timely shipments without compromising quality product. No challenge is too big since creative solutions to existing refurbishment or retrofit applications is our expertise. Customization and timely production to meet our customers' deadlines are our specialties.



PRATT HAMMOND PLANT



AERIAL OF PLANT

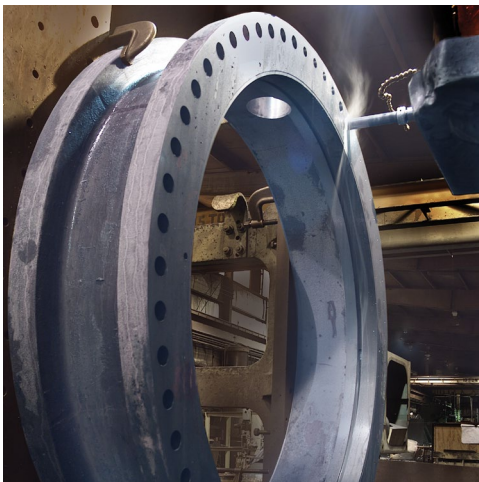
HAMMOND PLANT'S EXPANSIVE MACHINING CAPABILITIES



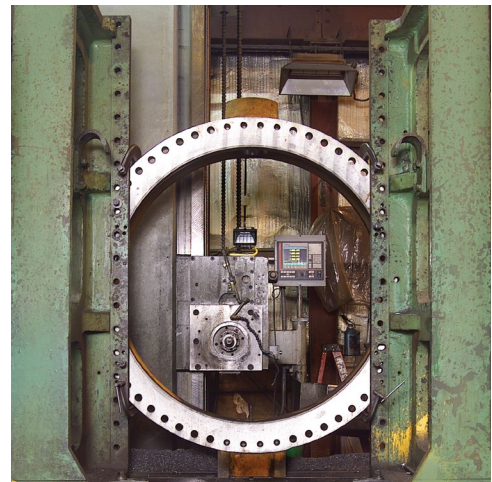
High precision machining and tight tolerances strengthens the integrity of the seating surfaces to ensure a drip tight seal. The 36" cone valves shown are in the final stages of machining.



The mill shown has the capability of boring and facing valve bodies up to 133" in diameter. Bodies are premachined to give the seats an even surface thereby reducing weld times and post weld machining.



The CNC G&L machining center allows for automatic boring and drilling of the flange face. During set up the location and drilling pattern is programmed to ensure accurate and efficient machining of the flange holes. Shown here is a 72" butterfly valve in the process of being machined.





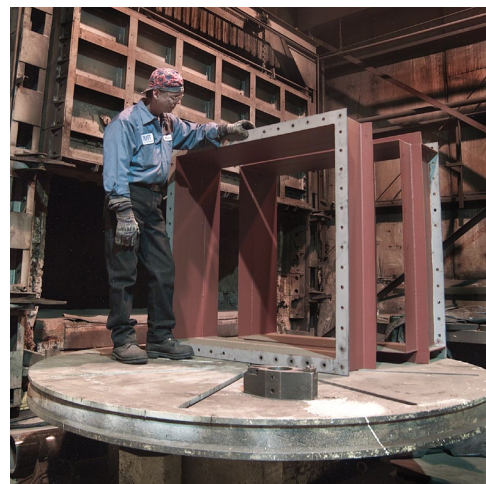
The CNC union machining center requires minimal set up time to machine components of valves. Most conventional machines require more than one set up therefore requiring more labor and longer lead times. Shown is a 36" cone valve where one set up has allowed for swift completion of machining the bores, mating surfaces of the cover, and bolt holes.



Our G&L Post Mill is capable of performing multiple operations for large valve bodies. This photo shows a body being face milled to the proper dimension from center. Next the bores for the shafting will be completed. A seasoned journeyman is shown inspecting the operations to ensure all steps are completed with accuracy.



Journeyman millwrights shown above position a machined valve body for assembly with one of our many overhead cranes.



When required the stress relieving oven enhances our capabilities and fully complies with ASME fabrication requirements. The stress relief oven accurately controls heat treatment and records the data so that quality weld procedures can be performed.

CASE HISTORIES

GOING THE EXTRA MILE TO MEET THE CUSTOMER'S DEADLINE

A nuclear generating plant in the midst of a re-fueling outage phoned a Pratt® employee at home one Saturday morning to ask for help with a problem they were experiencing with a 16" butterfly valve. This valve was a vital component to getting the customer's plant up and running within their plant outage requirements. The customer would lose in excess of \$1 million dollars a day in revenue if a new valve exactly replacing the existing one could not be delivered in 3 days!

The valve was in a salt water application and therefore required nonstandard materials. This presented us with a great challenge considering the various processes we needed to go through, such as assessing stock levels, procuring components, machining and sandblasting components, rubber lining the body, assembling, painting, and testing the valve all within the customer's deadline of 3 days.

Our philosophy is to go the extra mile to meet our customer's deadline. On Sunday, manufacturing personnel were called in to work, the plant was opened, and production began. By end of the day, the valve had a new seat and was ready for rubber lining. On Monday, the valve was rubber lined, assembled, painted and tested. By 11:30 p.m. Monday evening, a new valve was in transit back to our customer.

GRACE UNDER PRESSURE

A nuclear facility operates under tight outage requirements when executing valve repair work. We are aggressively committed to a 10 day turnaround on a project that required 6-72" and 6-78" rubber lined butterfly valves to be repaired. Even when existing valve components are refurbished in these diameters, this is an aggressive turnaround commitment. After receiving and inspecting the valves from the customer, all of the 72" bodies could not be repaired.

Now the pressure was on. New bodies needed to be procured before production could begin, and the castings were not in stock at the foundry. We requested the foundry to pour the 72" bodies on the weekend so the customer's deadline would not be compromised.

Our plant went to all extremes to ensure all components were received, machined, assembled, painted and tested in a record time of 9 days. We not only met the customer's deadline, we improved it by one day!



FINISHED 72" VALVE BODY



HIGH PRESSURE STEAM CLEANING
OF THE VALVE BODY.

CREATIVE SOLUTION TO A DIFFICULT SITUATION

SITUATION

A water treatment plant had 8 existing filter boxes in which the filter influent and drain valves were of a unique construction. Water is conveyed to, and drained from the filter boxes during the backwash process, via rectangular shaped concrete conduits. The valves were originally designed to provide tight shutoff. Due to leakage of the valves, an unacceptable amount of pre-treated water passes backwards through the drain valves during the filtering operation. Over time, the amount of water leaking through the drain valves could create substantial economic impact on the operation of the filter plant.

The valves were mounted to uniquely shaped cast iron wall thimble cast into a concrete wall of the influent and drain conduits during the original construction of the water plant. Direct replacements of these uniquely shaped valves were not commercially available and the original manufacturer was no longer in business.



WATER TREATMENT PLANT APPLICATION

APPLICATION

The application would require us to modify our standard product lines to suit the replacement of sixteen 24" by 36" obround shaped valves originally manufactured by a valve company who was no longer in business. The application would require a "melding" of key design aspects from two of our existing product lines, in order to properly replace the 16" existing butterfly valves.



PRIOR TO REPLACEMENT 24" BY 36" OBROUND VALVE

After visiting the site, it was apparent that replacement valves would be required to match the existing wall thimble. An additional requirement to re-use the valve shaft floor penetrations above the valves was required to minimize the work required for the installing contractor. By fusing together two of our product designs, we were able to meet requirements such as equal or better flow capability, zero leakage, a fully replaceable rubber seat, and reasonable cost to the end user.

TIMELY ENGINEERING AND DELIVERY

These plant improvements, along with others, were incorporated into a contract that was ultimately awarded in the winter of 2001 for which we received an order for the replacement valves from the mechanical subcontractor.

The project schedule required an accelerated design, material procurement, and production. Measurements of the existing valves and installation were needed for design purposes. After submitting drawings, approval was received in mid April 2002. Within 10 weeks, the valves were designed, produced and shipped to the jobsite in July 2002, ahead of our original quoted lead time to the contractor.

CUSTOMER SATISFACTION

Pratt® engineers creatively designed a solution to the customer's problem. We were able to offer a specially created product that performed all the necessary functions required, at a tremendous cost savings over other options which would have required the removal and replacement of the cast in place obround thimbles.

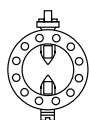
NOTES

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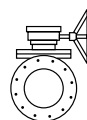
PRATT® Product Guide



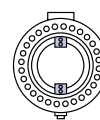
MODEL 2FII



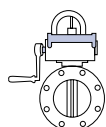
MONOFLANGE MKII



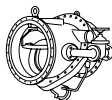
PLUG VALVES



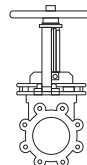
TRITON® XR70



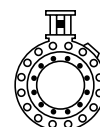
**INDICATING BUTTERFLY
VALVES UL & FM APPROVED**



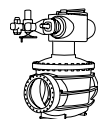
**TILTING DISC
CHECK VALVES**



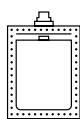
KNIFE GATE VALVES



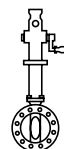
**N-STAMP NUCLEAR
BUTTERFLY VALVES**



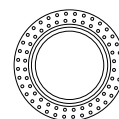
CONE VALVES



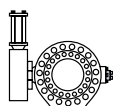
RECTANGULAR



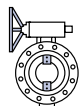
**PIVA POST INDICATING VALVES
ASSEMBLY UL & FM APPROVED**



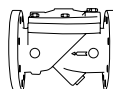
SLEEVE VALVES



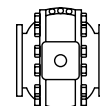
**RUBBER SEATED
BALL VALVES**



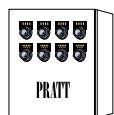
TRITON® 250



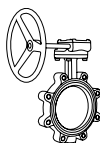
CHECK VALVES



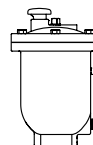
**METAL SEATED
BALL VALVE**



CONTROL SYSTEMS



INDUSTRIAL VALVES



AIR VALVES

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