



135 Years of Tradition, History & Quality Manufacturing RD Prototypes Pass Testing



After a year of product re-design and dozens of refinements, we are please to announce the beginning of testing of the first two sizes of the RD product line. Granted, this is a small step considering there are nearly 35 models in the product line, but nevertheless, it is a milestone.

The RD product line features a tangential discharge connection for increased pump efficiency and system piping flexibility. This new casing design allows the user to rotate the discharge con-

nection to allow the pump increased flexibility in connection to system piping. With this casing rotation capability also comes a vent and drain location in the proper location. There will always be a vent at the 12 o'clock and a drain at the 6 o'clock position regardless of casing orientation.

The casings are also casted out of higher tensile ductile iron standard. This will allow for a wide variety of pressures as well as better wear characteristics for extended life.

All impellers in sizes greater than a 1 inch discharge feature investment casted 304 stainless steel impellers. This is a serious upgrade in metallurgy as well as in hydraulics due to smoother water passageways. The

smaller sizes feature injection molded thermoplastic impellers for very smooth water passageways with increased pump efficiency.

More work is needed to complete the product line and additional sizes should flow through the system at a much faster pace. This new RD product line will be available in a flex-coupled (RDF) and a close-coupled (RDC) variant.

As the line makes it's way through engineering future updates will be made available.



www.american-marsh.com

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At American-Marsh, we are proud of the loyalty of our customers. Many have been with us for more than a century. We thank you for your interest in our products and invite you to join our long list of satisfied customers.

Project Focus 100 GPM Fuel Pumps, TACOM, Warren, MI



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American-Marsh Pumps has been very fortunate to have a very good relationship with our Armed Forces. We have taken pride in producing a variety of products for our troops throughout the world today.

We have manufactured water and fuel variants for TACOM for nearly 10 years now. In that time we have supplied thousands of pumps to areas throughout the world. Our latest order, nearly \$700,000, was an emergency purchase for material in the fight against those who would cause harm against the United States. This order consisted of 182 100 GPM fuel pumps. As a "zero visibility" vendor to TACOM we meet and exceed their requirements

wherever and whenever possible. We will make every effort possible to beat the dates in our contract with TACOM based on the importance of this product in the field.

The latest update with regards to our TACOM relationship includes a new solicitation for Water and Fuel pumps over a future five year period. Our fingers are crossed and we are very hopeful to be selected again.

PIPELINE is a quarterly publication for our distributors and representatives. Its mission is to provide useful product information and company communication. We welcome your comments and suggestions.

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Water Systems Group

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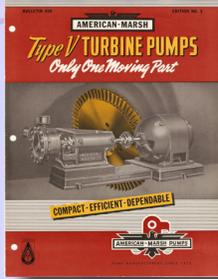


From the Archive - VF Regenerative Turbines

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One of the most challenging hydraulic coverages to overcome are those that have very little flow and very high pressure.

American-Marsh University, Shane Wright B.S.M.E.

The planet Earth is under pressure, 14.696 psia at sea level to be exact. This pressure affects how a pump is sized, if the pumping fluid is stable, when cavitation will begin, and/or more simply will the pump function correctly in the field.

Vapor pressure is defined as the pressure the surrounding atmosphere must be below for the liquid to change state. The vapor pressure of 212°F water at sea level is 14.72 psi. This is above the atmospheric pressure of 14.696 psi. At

Centrifugal pumps with a classical volute exhibit extreme shaft deflection and excessive vibration at these very low flows. To address this area of hydraulic coverage, American-Marsh developed the Series 450, Regenerative Turbine product line.

This type of product, developed in the late 1930's at American-Marsh

this point water begins to boil and changes to a gas. The boiling point of the water is at the temperature where the water's vapor pressure is the same as the atmospheric pressure. 60°F water at sea level has a vapor pressure of 0.2563 psi. Just like water, the vapor pressure of all liquids increases with temperature.

Vapor pressure is important because it plays a large role in calculating NPSHa. The NPSHa of a system can be calculated by the

Pumps, was principally designed to go after this unique hydraulic, specifically used in the small boiler feed industry. These types of pumps were used on small boiler feed applications in office buildings, schools and laundry mat applications.

The regenerative turbine is technically a positive displacement pump. This type of design allowed

formula below:
$$NPSH_a = P_p + P_z - P_f - P_{vp}$$

P_p is the pressure on the surface of the liquid. P_z is the pressure due to the static elevation of the liquid above the center line of the pump. P_f is the pressure due to the friction loss in the suction piping and P_{vp} is the vapor pressure of the liquid. As you can see in the formula, liquids with high vapor pressure will mean systems with low NPSHa.

When a system has a low NPSHa or if the NPSHa

American-Marsh Pumps to focus on this unique market and round out the multi-stage split case product line offered in the same time period.



drops below the NPSHr for the pump, cavitation will begin in the pump. This can cause impeller and casing damage, increased vibration (causing seal and bearing failure) and eventual pump destruction. Therefore, when selecting a pump for a system, keep in mind the vapor pressure characteristics of the liquid and the change in vapor pressure due to temperature. Lastly, remember that the temperature of a liquid as it moves through a pump can change as well.

Upcoming Events

Training Schools & Trade Shows

Training schools and trade shows allow American-Marsh Pumps some of the most efficient means of educating our distributors. To allow for intensive distributor training, American-Marsh offers a training school every six to eight weeks. These training schools cover product features and benefits, competition, market

overview, catalog familiarity, AMPNET and *Water Works* software operation.

Sales Training School Schedule

● Newly Updated

September 14-15, 2011
November 16-17, 2011

To cover specific markets and allow end user interaction with our products, American-Marsh Pumps participates in several market specific trade shows. These trade shows cover the agricultural, commercial, municipal, industrial, mining and government markets.

Trade Show Schedule

South Atlantic Jubilee
July 31 - August 1, 2011
Myrtle Beach, SC, USA

WEFTEC 2011
October 17 - October 19, 2011
Los Angeles, CA, USA

Chem Show 2011
November 1 - November 3, 2011
New York, NY, USA

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Product Line Highlights

Series 480 - CR Vertical Turbine Product Line

Perhaps the flagship product line for American-Marsh Pumps, the Series 480 Vertical Turbines cover many different markets. Within the standard product line we have a subset of product specially designed for the deepset municipal and mining industries. The CR vertical turbine models feature:

- Fully casted, heavy wall bowl assemblies with ample corrosion and abrasion thick-

- nesses.
- Larger shaft diameters for additional staging and higher horsepower applications.
- Larger bearings with a 4 to 1 length to diameter ratio as compared to 2 to 1 in the rest of the product line.
- Abrasion web protection on the top of the suction case and each of the bowl assemblies

to reduce the effects of abrasion from pumping fluids with solids present.

- Available hydraulic coverages from 8 inch through 14 inch bowl sizes.

The CR product line is a heavy duty product subset of the vertical turbine product line that lets American-Marsh Pumps go after projects that

other pump manufacturers simply do not have product coverage for. This CR product line is another example of the diversity of the American-Marsh product line.



480 Series CR-VT Product Line

Crown Coach Update

The Crown Coach project has been nearly two years in the making. We are in the final phases of completion and literally will unveil the finished product within the month of August, 2011.

The next issue of **PIPELINE** will focus on a lot of the interior finishes, the cabinetry and media re-

sources. The 1954 Crown Coach is in a condition not seen literally in 50 years. It is unrecognizable based on when it was purchased two years ago. We are hopeful that it is in a condition to showcase our products and services.

All systems in the Coach have been upgraded. These include the powertrain, air

conditioning, generator, electrical and plumbing. Anyone can buy an RV but no one in our industry has a Coach with this much history and heritage.

Be sure to check back for the next issue where a special section will be devoted to the Coach project, from beginning to end.



On The Web History Revisited

<http://www.american-marsh.com/history/history.htm>

A couple of years ago in this section we covered the History portion of the website. We are spending some more time to go into a little more detail in this area due to little visibility or familiarity from the field.

of the website that detail nearly every pump ever produced by American-Marsh. It is one of the most diverse pump history sections available from a centrifugal and positive displacement manufacturer.

engineering knowledge and know how that nearly 140 years earns. This history is the basis for every product we currently manufacture. It is also a foundation for future product lines that

we continue to develop.

Take some time to look over this section of our website. It might just shock you into believing just how serious we are about our products today!!

This portion of the website is a wealth of information and a great snapshot into the past of American-Marsh Pumps. There are literally hundreds of brochures in this portion

You may ask yourself, why do I really care what was manufactured by American-Marsh Pumps 50 or 100 years ago? The answer to that question is that it portrays the wealth of en-



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American-Marsh Pumps, one of the oldest pump lines in America, are pump products steeped in heritage. Since 1873, the American-Marsh line of pumps have withstood the test of time. Over the last 135 years, over 100 varieties of pumps have been designed and built. From steam pumps to centrifugal pumps, American-Marsh pumps have been built to meet the ever changing requirements of society. Over the last century, through continuous product development, more American-Marsh models have been retired than most other pump manufacturers have ever produced. Hundreds of thousands of pumps have been built, all designed with long life in mind, allowing many of them to last over 50 years in service.

Today, look to us for the complete offering of American-Marsh Pumps, consisting of 18 product lines to serve your every need. Whether your need

is a self-priming diaphragm pump, a stainless steel vertical sump pump, or anything in between, American-Marsh Pumps will provide you with a durable, hi-quality solution.

Build a world class quality product, and back it with knowledgeable customer service staff just as experienced and proven as our pumps.

Take a specialized product, and provide a simple process to obtain the information and delivery you require. Our heritage of quality pumps goes back to 1873 and continues today, emphasizing durability in the design and construc-

tion of every pump we make. American Marsh Pumps, an American tradition since 1873.

Our entire product family reflects years of customer input, product upgrades, redesign and new product development...all focused on meeting and exceeding our customers expectations. For over 135 years, the American-Marsh Pump designs have proven their durability by withstanding the test of time. Our commitment to customer service and satisfaction will ensure that the American-Marsh Pumps Product line will be around for the next 135 years.



The original American-Marsh facility located in Battle Creek, Michigan, USA (Photo taken around 1950).

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