# piping systems inc.

COMMERCIAL/INDUSTRIAL/INSTITUTIONAL MECHANICAL CONTRACTORS

SPRING 2007



## Let Us Service Your Pump Needs

Piping Systems, Inc. is pleased to announce an added value for our customers with the formation of a new Pump Service Division. We are now equipped to handle installation, maintenance, service and repair. Chris Neronha has joined PSI and is manager of the pump division. Chris comes to us with more than 17 years experience in installations, systems design applications and pump repairs. His expertise encompasses pump selection and service and repair on all types of pumps, including chemical, effluent, hydronic and fire pumps ranging in size from fractional to over 1,100 horsepower. Chris specializes in system troubleshooting and offers installation and programming of pump-specific variable frequency drives and shaft laser alignment.

We are available to size and select the most energy efficient and proper pump type for the most demanding and harshest applications. As always, we are available for 24-hour service. Service can be obtained by calling us at 508-644-2221 and telling the operator that the call concerns a pump emergency. Give us a try; we'll think you'll be pleased.

# Piping Systems, Inc. Earns Renewal of ASME/National Board Certification

Piping Systems, Inc. is proud to hold the National Board "R" stamp, as well as the ASME "S" and "U" stamps. (ASME is the American Society for Mechanical Engineers.)

ecently, Piping Systems, Inc. was granted a Certificate of Recognition for having continuously held National Board Certification of Authorization for 25 years. And, once again, Piping Systems, Inc. has passed the stringent quality control review required to renew the three-year certifications of the National Board "R" stamp, as well as the ASME "S" and "U" stamps.

PSI has been authorized to repair boilers and pressure vessels under the "R" stamp for more than 25 years. By undergoing an extensive review process by the National Board, in conjunction with our authorized inspection agency, The Hartford Steam Boiler Inspection and Insurance Co., Piping Systems, Inc. has the capability to offer additional services as requested by our customers.

- Section I Code Symbol Stamp The "S" symbol stamp may be used for all types of power boilers and external power piping assembly activities.
- Section VIII Code Symbol Stamp The "U" symbol stamp is for complete pressure vessels and pressure vessel parts built to Section VIII Division I requirements.
- National Board of Boiler & Pressure Vessel Inspectors Symbol Stamp The "R" symbol stamp may be used for repairs and alterations to power boilers and pressure vessels.
  ASME has established procedures to authorize qualified organizations to perform vari-

ous activities in accordance with the requirements of the ASME Boiler and Pressure Vessel Code. It is the aim of the society to provide recognition of organizations so authorized. Organizations that are authorized to use Code Symbols for marking items or constructions that have been constructed and inspected in compliance with the ASME Boiler and Pressure Vessel Code are issued Certificates of Authorization.

How does this affect your business? In today's marketplace, quality and timeliness are paramount. We here at PSI are extremely aware of the pressures on our customers to provide goods and services at reasonable cost and of the highest quality. Our efforts to achieve authorization by the National Board and ASME has allowed all our departments to streamline and focus on the details. Our fabrication shop and field technicians are required to improve their welding skills and achieve certification based on nationally

accepted standards. This translates to higher quality welding and pipefitting skills—and a higher quality job performed for you, our customer.



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# The Number One Problem In A Steam System: Water Hammer

here is only one time to correct water hammer—IMMEDIATELY! Water hammer is never normal; it is abnormal. Water hammer is not only a system issue, it is primarily a safety issue. Understanding the nature and severity of water hammer in a steam and condensate system will allow facilities to avoid its destructive forces. This greater understanding should also help with introduction of preventive measures into system designs, steam system startups, maintenance and installations, which help provide maximum safety for personnel, reduce maintenance costs and reduce system downtime.

Water hammer, in its most severe form, can injure or even cause fatalities to plant personnel. Unfortunately, 82% of the steam systems in North America are experiencing some type of water hammer. Many mistakenly believe that water hammer is unavoidable and a natural part of steam and condensate systems. This is entirely false. If the system is properly designed and correctly operated, water hammer in any form will not occur. There are high pressure steam systems operating without water hammer and having long operational life from the steam components.

### Where does water hammer occur?

Water hammer can occur in any steam or condensate line. Its effects can be even more pronounced in heterogeneous or condensate bi-phase systems. Condensate bi-phase systems contain two states: the liquid (condensate) and a vapor (flash or generated steam). The bi-phase condition exists in a steam system where condensate coexists with generated or flash steam. Typical examples include heat exchangers, tracer lines, steam mains, condensate return lines and, sometimes, pump discharge lines.

A common example is water hammer occurring during the start-up or energizing of a steam main. If the steam line is energized too quickly and the condensate created during the startup is not being properly removed, water hammer will be the result.

—reprinted from the PSE, Inc. newsletter

# **Training Tips**

This article recently appeared in Travelers Insurance's State of Safety January 2007 issue under the title "More Effective Construction Training." We thought we might share some the following tips, which can be applied to any type of training. Why Training Fails

Training fails for one reason—the recipients of the training see no personal value in the information being presented. Without that personal value, there is no self-motivation to implement or practice the content of the training. Failure to communicate personal value occurs when:

- Trainees don't see the point or the value of the training. Too much training is conducted without a clear purpose or agenda. When training is presented without a clear objective on how it will benefit the trainee, the perception is that the training is a waste of their time.
- Trainees perceive that the training is mandated by a third party. When management conducts training because it is, for instance, an OSHA requirement, a client requirement, or resulting from some sort of external influence, and this is the message communicated to the trainees, their perception will be that management is only providing the training because they are being forced by a third party. The trainees can interpret this as their management not considering the training to be important.

Visit us online today at www.piping-systems-inc.com



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ADDRESS SERVICE REQUESTED

