

# Hydronic News

of Southern California and Hawaii

Volume 1, Issue 1

March 2005

## Project Highlights

### Children's Hospital Los Angeles Saban Research Building

**Project Location:** Los Angeles, CA  
**By Manny Masso**

Childrens Hospital, a leader in pediatric healthcare, has recently installed a state of the art cooling system for some lasers used in research. **Vic Mandrillo** (pictured below, right), with **Victor Plumbing Inc.** worked with **Mr. Steve Mullen** (pictured below, left), **Manager Facilities Operations** and others associated with the facility to come up with the following criteria: Isolate the loop from the hospital's chilled water loop and ensure the cooling system will be able to handle a wide range of flows – from 3 GPM for a single small laser up to 40 GPM for a combination of different size lasers operating at the same time. In addition, the lasers needed 50 PSIG of differential pressure in order for them to cool properly. With this information **Vic** turned to his Fluid Technology Resource – Dawson Co. and Manny Masso, Outside Sales Representative.



After reviewing the design criteria, they decided to install a B&G GPX plate and frame heat exchanger to isolate the cooling loop from the main chilled water loop. A pair of ITT Gould's "SSV" multi-stage pumps with one serving as a standby were chosen for the job. The pumps are controlled by B&G's Tech 500 controller and VFD and a standard Graham VLT-600 PWM variable speed drive. This allows the Tech panel to ramp up and slow down the pumps based on the differential pressure being measured using a Rosemont 0-70 PSI differential pressure transducer. In the event of a pump failure or drive failure, the Tech 500 will automatically switch over to the standby pump or drive. Also, the facility was able to connect the B&G Tech 500 controller to the buildings BAS using the RS-485 communication

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## Product Highlights

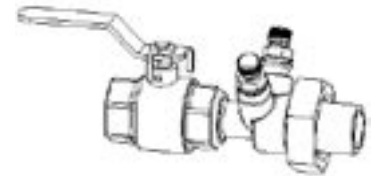
### ITT Bell & Gossett New Products for Balancing Product Line

Bell & Gossett is pleased to announce the addition of two products to the Balancing Products Line, and several additions to the variety of Coil Hook Up Kits.

The 2" and 2½" version of the Circuit Sentry™ automatic flow limiting valve are now available with flow ranges from 15 GPM to 150 GPM and a control range of 2-50 PSI. These valves are constructed with Female NPT pipe threads exiting the valve but can be adapted to sweat connections if required with a field-installed fitting. Inlets to the valves are available in 1 ¼" to 2" and may be ordered in Female Sweat, Female NPT and Male NPT tail pieces.



The Model "MV" Combination Ball Valve and Venturi flow-measuring valve represents Bell & Gossett's commitment to provide a complete range of products and hook up kits



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## Product Highlights

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to meet all job requirements. The "MV" is available in pipe sizes from 1/2" – 2". Exiting connections are sweat or female pipe thread. Union tailpieces are available in a variety of sizes and are offered in FNPT, MNPT and FSWT pipe connections. The Venturi includes two P/T ports for measurement and comes in several flow ranges, with general accuracy of ± 3%.



With the addition of these two new products Bell & Gossett again demonstrates their commitment to lead the market in Hydronic System Balancing and Control.

### ITT Bell & Gossett 70X Pressure Booster System

Using the latest in proven software technology, the 70X introduces the concept of combining a variable speed lead pump with one or two constant speed lag pumps. This allows for a highly efficient and very economical pressure boosting package. The 70X allows the operation of multiple pumps in parallel discharging into a common header that supplies a domestic water piping system. Systems that use on/off staging control often experience water hammer or pressure surges each time a pump is switched on or off. This can lead to potential problems with pipe bursts or over pressurization of valves, along with excessive wear and tear on the entire system. The 70X provides smooth control with its variable speed capability to extend the lifetime of your pumping system.



- Variable speed pumping saves energy
- Entire system factory assembled and tested
- Easy to install and start-up
- Small footprint saves valuable floor space

The energy and operating cost savings from applying variable speed pumps in pressure boosting applications is significant in most installations.

### LAARS Pennant Pool Heater So. California Gas Co. CASH REBATE Program

Replace your old heater with a LAARS Pennant Pool Heater and take advantage of the Southern California Gas Company CASH REBATE PROGRAM!

Covers equipment installed from January 1, 2004 through December 31, 2005 – a two-year retroactive program!

**Equipment Size Range:** 500,000 – 2,000,000 BTU/hr  
**Minimum Thermal Efficiency:** 84%  
**Rebate Amount:** \$2.00 per 1,000 BTU input

Pennant CP models will qualify for the following rebates:

PNCP 0500	\$1,000
PNCP 0750	\$1,500
PNCP 1000	\$2,000
PNCP 1250	\$2,500
PNCP 1500	\$3,000
PNCP 1750	\$3,500
PNCP 2000	\$4,000



Commercial Pool Heater Requirements:  
Available for swimming pool heating and must replace pre-existing pool heater. The commercial pool and spa heater must be certified to meet the following requirements:

- 1) Heater must be equal to or greater than 84% thermal efficiency
- 2) Must have an "on/off" switch and have no pilot light, and
- 3) Size of equipment must be between 500 MBtuh and 2000 MBtuh

Visit the So. California Gas Co. website for complete information on the rebate program and for the rebate worksheet form:

[http://www.socalgas.com/business/cash\\_for\\_you/er\\_express\\_rebates.shtml](http://www.socalgas.com/business/cash_for_you/er_express_rebates.shtml)

### CEMLINE REP OF THE YEAR Dawson Co. named Cemline's 2004 REP OF THE YEAR!

For both Dawson Co. and Cemline, 2004 was a banner year! As a result of our partnered efforts, sales far exceeded all goals and expectations.

**Dick Barnett, Western Regional Sales Manager**, recognized our mutual achievement in a letter to Dawson Co. dated 12/27/04, stating,

*"Thank you for all your efforts this year in making this a banner year for Cemline products. Dawson Company had a fantastic year with Cemline and is the Cemline "Representative of the Year".*

### CEMLINE ON-LINE SIZING PROGRAM

Cemline is proud to announce the release of the Cemline Sizing Program available on the web at [www.cemline.com](http://www.cemline.com). Featuring product selection, sizing, specifications & drawings.

*Specifier screens with intuitive user interfaces aid in quick product selection.*

*Product photos assure that the correct product is selected each time.*

*A guided plant tour gives the user a first hand look at our manufacturing process.*

*Graphical user interfaces (GUIs) help the user navigate quickly through the program.*



This program is also available in an interactive CD-ROM which will allow the user to easily size and specify all of Cemline's product lines.

Cemline CD-ROM Product Specifier Version 1.2 features:

- Powerful Specifying Tool
- Easily Size All Cemline Products
- Download CAD Drawings
- Plant Tour Video
- Isometric Piping Diagrams
- Informational Sections
- Print Out Specifications and Drawings
- Agent Locator

New for Cemline Product Specifier Version 1.2

- New section for sizing CWB's (Chilled Water Buffer Tanks)
- New section for sizing SEB's (Boiler efficiency Buffer Tanks)
- New section for sizing vertical flash tanks
- Optimized selection of SEH, SSH, SWH water heaters

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## Product Highlights

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- Drawings to reflect the new SEH design
- Upgraded and simplified selection and specification of USG (Unfired Steam Generators)
- Inclusion of the 2001-SSCM solid state control module for USG's

For more information regarding the CD-Rom, visit Cemline on the web at <http://www.cemline.com/cd-rom.asp>.

## HYDROMATIC SUBMERSIBLE PUMP

You can depend on Hydromatic pumps to provide years of reliable service. Currently, there are thousands of units operating trouble-free throughout the world.



As one of the oldest submersible pump manufacturers in the world, Hydromatic Pump offers you field-proven pumps and systems for all your requirements. Hydromatic provides a 5 year warranty with proper start-up report, the most comprehensive in the industry. We also supply complete technical support, and ongoing engineering assistance for the life of the pump.

**Dependable Operation:** The Hydromatic pump's oil-filled motor keeps the windings cool, eliminates moisture, and permanently lubricates the bearings, to provide reliable pumping service.

First, the oil bath keeps the motor and bearings cool by dissipating heat and maintaining the correct operating temperature. The oil transfers heat generated in the motor windings to the housing where it is dissipated by the surrounding wet well media.

Second, the oil bath locks out airborne moisture contamination which destroys motors and bearings. Air carries moisture that condenses with temperature changes and causes premature motor and bearing failure. Third, the oil bath permanently lubricates the bearings which minimizes heat and flushes contaminant away from bearing races.

Heat and contaminant cause grease breakdown. This breakdown leads to premature failure of grease-packed bearings supplied by other manufacturers.



# ON-LINE

SAVE A TREE! REGISTER TO RECEIVE YOUR  
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**VIA EMAIL**

JUST GO TO OUR WEBSITE,  
[WWW.DAWSONCO.COM](http://WWW.DAWSONCO.COM),  
SELECT THE CALIFORNIA/HAWAII SITE  
CLICK ON



## Project Highlights

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standard on the unit, allowing the Facilities Staff to communicate with and monitor the controller from a remote location.

In addition, Dawson Company provided all the air control components and pump trim for this project. So no matter how complicated your application, remember to contact your Fluid Technology Resource at Dawson Co.

## UCSD

### Pharmaceutical Science Building

**Project Location:** La Jolla, CA

**By John Sieger**

UCSD La Jolla, a national leader in the Bioscience arena, is expanding again. The Pharmaceutical Science Building is currently under construction and will soon expand the Biotech capabilities of UCSD.

University Mechanical was selected to build this state of the art facility. Project Manager, Pat Paulson, with the help of Project Engineer, Dee Carlson and Piping Foreman, Scott Phillips, along with the rest of the project team, has kept the job on track and on time.

Bell & Gossett pumps, heat exchangers, air separators, and expansion tanks, along with Domestic condensate units, and Cemline Clean Steam Generators were the choice of the mechanical engineer, BR+A. Proudly supplied by Dawson Company, and installed by University Mechanical; the equipment will soon be ready to start-up. A Dawson Co. service tech and the University Mechanical commissioning team at Spira-Loc will be on site to insure optimal performance from the equipment.

## Kaiser-Permanente Expands to Ontario

**Project Location:** Ontario, CA

**By David Hernandez**

Yes, those were Bell & Gossett condenser water pumps you saw while driving on the 60 Fwy through Ontario. Not only did you see Bell & Gossett pumps, but you also saw a new 80-bed outpatient surgery center, a 4-story MOB, and 1,200 square-foot central plant. All are part of a 28-acre health care campus constructed by Kaiser-Permanente that will also include a future 224-bed patient care hospital and a 2-story parking structure.

Chris Radke of TMAD Engineers Ontario led the MPE design team working closely with Gerald "Scotty" Scott, Chief Engineer and Head of Facility Services for the new Kaiser-Permanente facility. Dawson Company also had the pleasure of working with two of its top mechanical contractors on this project. Nehal Kapadia was the Project Manager for Control Air Conditioning, which served as the mechanical contractor for the central plant and MOB, and Jim Jeffrey was the Project Manager for University Marelich Mechanical, which served as the mechanical contractor for the surgery center.

This project was a perfect example of Dawson Company's ability to provide the complete package. The 1,400 ton Primary/Secondary chilled water system utilized two 25 HP primary, two 150 HP secondary chilled water and two 50 HP condenser water B&G HSC pumps and the required air control components. The 300 HP steam boilers supply steam to a B&G steam to water heat transfer package, which includes a B&G Tech 500 combination pump controller/VFD.

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# Technical Matters

## Seismic Restraint Design Are You Using Flawed Equations?

Edited By Deborah Thomas

The following information was obtained from Perpetuation of Flawed Equations Regarding Spring in Seismic Restraint Design, August 2004, which was provided by Tim Benkert, Sales Engineer with California Dynamics Corporation.

There was insufficient time to correct the 1995 ASHRAE Applications Handbook after flaws in the External Spring Mount calculations were recognized. Consequently, the CALCULATIONS paragraph was added to page 50.1. This paragraph reads as follows:

*"The calculations presented in this chapter assume that the equipment support is an integrated resilient support and restraint device. When the two functions of resilient support and motion restraint are separate or act separately, additional spring loads may need to be added to the anchor load calculation for the restraint device. Internal loads within integrated devices are not addressed in this chapter. Such devices must be designed to withstand the full anchorage loads plus any internal spring loads."*

Unfortunately, the flawed equations have not yet been corrected in ASHRAE publications. Engineers must be cautioned, therefore, that Seismic Calculations of spring isolated equipment relying on these flawed equations is likely to result in improper design of seismic protection and the anchorage of the seismic protection which will place the seismic safety of the equipment in jeopardy.

The flaws in the equations are easily seen by setting earthquake forces  $F_p$  and  $F_{pv}$  in the equations equal to zero.  $T$  and  $C$  should be zero under that rest condition in equilibrium. They are not. In fact, seismic calculation in which  $T$  and  $C$  are not equal but opposite may be flawed.

All equations apply for spring isolated equipment in which the weight of the equipment deflects the supporting springs downward a distance known as the static deflection. Normally the equipment is in equilibrium with the total residual spring force up equal to the weight down.

### During An Earthquake

The instantaneous spring force up, when the travel up of the equipment is stopped by the restraints, is less than the force up  $W_p$  to support the equipment, Force reduction ratio is: the distance of travel up divided by the static deflection of the springs. For usual travel up and static deflections, the reduction is small and it is conservative in evaluating  $T$  to consider  $-W_p$  down to be cancelled by the Spring Force Up.

Example Of Flawed Versus Corrected Equation:

#### FLAWED:

$T = (-W_p + F_{pv})/4 + F_p \times H_{cg} \times ((\cos \theta_{max}/b) = (\sin \theta_{max}/a))/2$   
"maximum tension on isolator Equation (37) (See 2003 ASHRAE Application Handbook Page 54.15, Example 2)

Equation (37) is seriously flawed by not including the Spring Force Up that should be considered to cancel the Portion of weight  $W_p$  down unless it is known to be otherwise. Flawed (37) understates tension force  $T$  to the restraint (incorrectly referred to as isolator). Understated tension force to the restraint also leads to flawed tension forces to anchor bolts for restraints.

#### CORRECTED:

$T = (F_{pv})/4 + F_p \times H_{cg} \times ((\cos \theta_{max}/b) = (\sin \theta_{max}/a))/2$

### Anchor Bolts

Because tension forces to restraints are the basis for determining tension forces to anchor bolts, flawed restraint calculations result in flawed anchor bolt calculations that understate tension to the bolt. Improper undersized bolts are likely to be installed, jeopardizing the seismic safety of anchor bolts and equipment.

Others relying on calculations that ignored the Spring Force Up were misled into improper restraint designs. Many of these installations toppled during the Northridge earthquake.

## Positive Displacement Pumps versus Centrifugal Pumps . . . Back to the Basics

By Mark Gahman

This short treatment will cover the differences between Displacement Pumps (or Rotary Pumps) and Centrifugal Pumps. We will do this by covering basic pump principles and comparing the two. I hope to provide a reference for your future consideration. So without further delay, here we go.

First, let us look at the basic definitions of the two pumps.

A Positive Displacement Pump (also called gear pump, rotary pump) is one which displaces a measurable amount of liquid with each pump shaft rotation. Lobes, gears, vanes and screws operate congruently reducing a liquid geometrically from a larger volume at the intake port to a smaller volume in the chamber thus forcing liquid out of the pump's discharge port via mechanical means – basic geometry.

A Centrifugal Pump relies on a much different principle. It uses Kinetic Energy rather than this mechanical method. In this type of pump, fluid enters the eye of a rotating impeller and gains energy as it is flung off the outer edges of the impeller. Literally a pressure differential is created and water displaces from high pressure to low pressure.

Now, let us look at some differences between the two types of pumps and in the process review some basic pump principles. We will cover the following pump principles: Viscosity, Flow Capacities, Self-Priming, and Discharge Pressures

**Viscosity:** The internal friction or stickiness of a fluid or material is measured in Stokes (St) or centistokes (cst). In this setting then, Displacement Pumps can achieve maximum viscosities of up to 1,320,000 (cst) where as a Centrifugal Pump has a maximum viscosity of around 550 (cst). Gear pumps (Displacement Pumps) clearly can handle very viscous materials and one other important point is this, they actually increase in flow linearly as viscosity increases. Because a Gear Pump works on the principle of gears, chambers and geometric volumes, viscous materials fill in gaps in the chamber and help seal the chamber to push fluid through the volute chamber and out the discharge.

With a Centrifugal Pump, as viscosity increases, flow will decrease. It will loose flow capabilities almost linearly. Because we want fluid to fling off the impeller's edge and create a high pressure to displace lower pressure water, viscous fluids (or think of it as very clingy material properties) will decrease the flow through the pump chamber and very, very viscous materials will actually begin to shear in the pump chamber by the impeller. Thus in comparison, (look at those numbers again) a Centrifugal Pump can handle very low viscous fluid compared to a Gear Pump (Displacement Pump).

For most HVAC applications, the viscosities are within the capabilities of manufacturers of Centrifugal Pumps even when we get into glycol

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## Technical Matters

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mixtures. Extremely high viscosities can be seen in industrial and commercial process applications: an example would be moving liquid chocolate between one process point to the next process point.

**Flow Capacities:** In terms of capacities, Centrifugal Pumps can achieve maximum flow capacities over 100,000 gpm, but it is rare to see a Positive Displacement Pump with a flow over 1000 gpm. Some Displacement Pumps can achieve the 3300 gpm range, but this is not the norm.

Clearly I am talking about standard catalogue items, you can always have a custom Positive Displacement Pump built to grand dimensions to meet whatever flow capacity is required. In fact, I was even told of a Centrifugal Pump built with a 6 foot diameter impeller (normal size impellers are 6" to 12" range). The motor was so huge they had to call the electric company prior to turning on the motor, so again the point is, I am speaking in general terms of most catalogue items.

While Centrifugal Pumps can move more liquid, they need an internal or external flush system to increase seal life. Also, at high impeller speeds, shaft deflection occurs and wear and tear occur on the ball bearings. This is why double suction centrifugal pumps are routinely specified at very high velocities. This balances out the loads on the impeller shafts thus combating the shaft deflection issue.

In Positive Displacement Pumps because of their slower speeds, their seals do not need a flush system and there is less wear and tear on shafts in the form of deflections. However, these pumps due require a lot of maintenance due to their gears and when compared to a Centrifugal Pumps which have been known to go 20 years or more with little to no maintenance issues, there is clearly a difference.

Another difference in regards to flow, Displacement Pumps maintain a near constant flow with a measurable quantity of liquid discharging out its discharge port, so exact metering can be achieved. As Centrifugal Pumps adjust to fluctuating pressure conditions, we can only guess very closely, but not exactly what quantity of liquid is discharged.

In most industrial operations where exact formulas of this liquid or that liquid are needed, a Displacement Pump is exactly the best choice. An example would be 50 gallons of milk, mixed with 30 gallons of chocolate and so many pounds of sugar etcetera. In most HVAC applications, this degree of preciseness is not needed. There are cases in HVAC applications where small Displacement Pumps are used to dump acid or chemicals into a system on a timed schedule, but the main system pumps moving the hot or cold water around the building are still Centrifugal Pumps.

**Self-Priming:** Hands down one of the key differences between the two pumps is the fact that Displacement Pumps are self-priming. Meaning, they can fill the pump cavity with liquid without an external means. The Centrifugal Pump must use some external means or have the source of water located above the pump. In the case where source water is lower, a foot valve is employed with a leak proof hose. Some Centrifugal Pumps have a tank and diffuser to prime the tank or a self-priming mechanism, but these are the exceptions.

It is important to note that both pumps are subject to basic suction limitations or physics. Things like vapor pressure, friction losses in the source line, operating elevation (atmospheric pressure), and static elevation of the liquid must be considered. These considerations are a whole book in and of themselves.

**Discharge Pressures:** Displacement Pumps have discharge pressures of 175 psi to 3000 psi with 250 psi being the norm. Centrifugal Pumps have an average discharge pressure of 175 psi with 300 psi being about the upper limit to their capabilities. Clearly, Gear Pumps can handle extremely high pressures. An example of where this becomes important is in fire protection applications which require high discharge pressures. Gear Pumps are excellent and can clearly meet this demand. In HVAC applications though, normal pressures are in the 175 psi to 250 psi range. This is within the centrifugal pump's capabilities.

In closing, as far as initial cost of equipment and not overall life cycle costs, Positive Displacement Pumps tend to be more costly than Centrifugal Pumps. Take the same conditions and size and price a Displacement Pump against a Centrifugal Pump. You will see for yourself that this is true. However, as we have seen, both types of pumps have their pluses and minuses when you consider issues like Viscosity, Capacities, Self-Priming, and Discharge Pressures. It is up to you to consider all these factors against your application and design.

### References:

- \*1998 Article "Rotary & Centrifugal Pumps" Viking Pump, Inc
- \*B & G Bulletin No. TE-PD-162 Revision 1 "Pump Data Book"
- \*B & G Bulletin No. THE-1166 Revision 1 "Principles of Centrifugal Pump Construction"
- \*Definition Section, "Viscosity" Transtronics ([www.xtronics.com](http://www.xtronics.com))
- \*Article by Tom Reser, PM Engineer, 9/03/2003 "Positive Displacement Vs Centrifugal Fire Pumps"

## Laars Heating Systems Engineering and Service Seminar

BY Jim Cavaness

On January 18th, Dawson Company sponsored a **Laars Heating Systems Engineering and Service** seminar. In attendance were 25 local Las Vegas engineering firms, contractors, service companies and maintenance staff from the hotels and casinos. It was stated by **Tony Ganzon of SH Nevada** and a number of other participants that very few if any manufactures or manufacture's representatives in the area offer this type of opportunity to keep informed of industry trends.

The engineering portion of the seminar was presented by **John Warner, Director of Sales** and **Bill Root, VP Sales & Marketing** for **Laars Heating Systems**. They covered the features and benefits of the new Pennant and Rheos products. The technical and service portion of the seminar was presented by **Mike Elmore, Western Regional Service Manager** for **Laars Heating Systems**. The new Pennant and Rheos were covered, as well as the atmospheric Mighty Therm products.

## CALENDAR OF EVENTS THIS YEAR

### B&G's LITTLE RED SCHOOL HOUSE

#### Spring Schedule:

Modern Hydronics: Advanced	April 4-6
Design & Application Seminar	April 18-20; June 6-8
Large Chilled Water Systems Design	April 25-27
Service & Maintenance Seminar	May 2-4

WEBSITE: [SCHOOLHOUSE.ITTIND.COM](http://SCHOOLHOUSE.ITTIND.COM)

### Dawson Co. sponsors LITTLE RED SCHOOL HOUSE WEST

Mark Hegberg, LRSH Instructor, will be teaching

#### MODERN HYDRONIC SYSTEM BALANCING

Geared towards Engineers & Contractors

PLACE: SAN DIEGO, CA	PLACE: LOS ANGELES, CA
DATE: MAY 17, 2005	DATE: MAY 19, 2005

WEBSITE: [WWW.DAWSONCO.CO](http://WWW.DAWSONCO.CO)

## Project Highlights

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The package (pictured below) was preassembled at the factory and includes pumps, heat exchanger, steam control valve, steam traps and the necessary air control components. In addition an ITT Domestic condensate return unit was provided for condensate return to the boilers. At the surgery center, Dawson Company provided a Cemline unfired steam generator for the operating room clean steam humidification system.



## ASHRAE TRI-COUNTY



**BY Matt Freer**

We would like to thank **Phil Argersinger** of **Flex-Hose** (pictured here with Joe Sanders, from Western Tower and Controls) for his extremely well presented technical presentation at **Tri-County ASHRAE**. Critical piping expansion and contraction in hydronic systems is usually the focus of this type of presentation. However, Phil was able to also discuss **Seismic piping practices** as well as the **typical technology to absorb movements from thermal changes**. Many of the attendees of the meeting felt that seismic piping is not always addressed in today's architectural world. Considering the current plate tectonics of California, you would think this would already be in practice today; however, no guidelines have been set. So it is up to us to make the building's safe for the people who inhabit them. We hope to have Phil back out in the territory again soon. He does extremely well in presenting his product! **Thanks Phil!**

## Inside Dawson Company

### ADDRESSING THE ISSUES

**By Ric Serafin,  
President and C.E.O.**

Last quarter my partner, Frank Dunn, wrote an article introducing the Dawson Co. Fluid Core and the Golnnovate system we use to work out our plans and initiatives. The Fluid Core is not "just another golf ball" – the Purpose, Vision and Values they helped to develop now define the way we think and act at Dawson Co.

As part of our strategic planning, the Fluid Core identified three areas we termed "Critical Issues" that we are currently focusing on for strengthening and improvement. Namely:

- 1) **Communication**
- 2) **Customer Service**
- 3) **Inventory**

As part of our continuing effort to address these critical issues, we recently created two new positions in our company and promoted two of our employees to fill these positions.


Our first new position is Wholesale Division Manager. Jerry Reynolds, who has been with Dawson Co. for 4½ years as a Wholesale Division Sales Representative, was selected to fill this position. Jerry earned the distinct honor of Salesman of the Year for 2004 by his dedicated service, outstanding accomplishments, and a relentless commitment to "Close The Deal". Jerry's main focus will be to address the needs of our dedicated wholesalers and to manage our wholesale sales force. In doing so, he will directly and positively impact our efforts in Communication and Customer Service.

The second position we created is Customer Service Manager. Gilbert Melendrez was selected to fill this position. Gilbert has been with Inside Sales for 3½ years and brings 15½ years experience in the pump industry to the table. Gilbert will directly and positively impact all three of our Critical Issues as he focuses on order processing from inception to shipment and manages our Inside Sales department.

It doesn't end there. Dawson Co. continues to strive for excellence in all areas of business. I am currently working on a project for Automatic Customer Notification of shipment dates and purchase order acknowledgments. By continuing to improve our internal and external Communications, we are able to provide more excellent Customer Service.

Presently we are maintaining 20,000 square feet of warehouse space full of inventory to support our customers. In an effort to improve inventory availability to our customers, Frank Dunn is heading up an ADHOC team that focuses on our Inventory Mix and Management.

This quarter's Core Value focus is Quality – and that's what we at Dawson Co. are committed to providing you, our customers. I want to treat you the way I want to be treated as a customer – with respect. All our efforts are geared toward serving you and providing "Superior Solutions, Performance, and Value. Always."



This Quarter's Core Value  
**QUALITY**  
"A high degree of excellence."

## Basic Hydronics & Steam Design Seminar

On February 17th and 18th, Dawson Co. hosted the Basic Hydronics & System Design seminars in Los Angeles and San Diego. The topics covered in the seminar consisted of **centrifugal pump fundamentals, reading pump curves, hydronic system design, System Syzer, chilled water applications, VFD** and **primary secondary systems**. Our guest speaker was **Roy C. E. Ahlgren, Director of ITT Fluid Handling's Training and Education Department**. With 20 years of experience in the industry, Mr. Ahlgren is the past chairman of ASHRAE Technical Committee TC6.1 Hydronic and Steam Equipment and Systems. Mr. Ahlgren teaches at the ITT Fluid Handling's "Little Red School House" in Morton Grove, IL and is active in the Chicago Chapter of ASHRAE. His articles are frequently published in several trade journals and magazines.

The seminar in Los Angeles took place on February 17th at the Southern California Edison CTAC Facility in Irwindale. They remodeled the classroom, finishing just in time for our class. We were the first to use the room and it turned out beautifully. The San Diego class took place on February 18th at the Scottish Rite Center where Mr. Ahlgren covered the same topics. Our attendees were a diverse crowd ranging from Mechanical to Plumbing Engineers, Contractors and Facilities Engineers. Overall our response to the seminar was very positive.

We have more seminars scheduled for this year, beginning with **Modern Hydronic System Balancing**, where our speaker will be **Mr. Mark Hegberg, Product Line Manager for ITT Fluid Handling** & teacher at the Little Red School House (see **Calendar of Events** on Page 5 or visit [www.dawsonco.com](http://www.dawsonco.com) for details). Other specific topics such as System Balancing, Large Chilled Water Systems and Steam System Design and Troubleshooting will be on the agenda. We are targeting August and November for future seminars.



Roy Ahlgren teaches a group of about 30 students at the Scottish Rite Masonic Center in San Diego



Approximately 60 students attended the Los Angeles Seminar, which was held at the Southern California Edison CTAC Facility



Both the Los Angeles and San Diego students were treated to a continental breakfast prior to the training.



Students at both sites were also treated to a gourmet style box lunch. Good food and good conversation made the seminar even more successful!

## PHCC-GLAA TRADE SHOW

On February 26th Dawson Company was proud to participate in the 30th annual **Southern California PHCC** Industry trade show. The **Plumbing-Heating-Cooling-Contractors Association of Greater Los Angeles** sponsors the show for the contractors, business owners and vendors who all share the common goal of promoting the professionalism of the Plumbing-Heating-Cooling Industry. **PHCC** was founded in 1883 and is the oldest trade association in the construction industry.

There were 100 booths with vendors displaying the latest and greatest products for the PHCC contractors as well as free educational seminars. Dawson Company was proud to display many new products from such prestigious Manufactures as **Bell & Gossett, Laars Heating Systems, Hydromatic Pump, Hoffman Specialty, Slant Finn, and Davey Pump.**

On hand from Dawson Co. to discuss the displayed products, were David Dawson, B. Allen Schneider, Matt Freer, and Jerry Reynolds. We are extremely appreciative of the support provided by **Julian Good, Regional Manager for Davey Pump** and **Kevin Trent, Regional Sales Manager for Laars Heating Systems** who were also on hand to provide their expertise to the attendees whose numbers were estimated to be around 7,000.



### CONTACT INFO:

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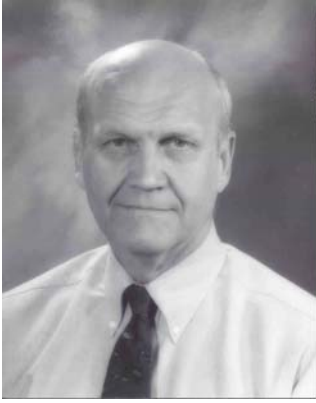
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## **Speakers Bio**

Mark Hegberg

Mark Hegberg has been an instructor in hydronic system design at the ITT Bell & Gossett "Little Red Schoolhouse", an institution that has trained well over fifty thousand practitioners in the HVAC field for 50 years. Mr. Hegberg has over twenty five years of experience in the HVAC field in the areas of Direct Digital Control systems applications and testing and Hydronic Systems Design. He has worked in the areas of field applications and testing, marketing and consulting on controls, hydronics, energy efficiency and related systems engineering. Mr. Hegberg is the past chair of ASHRAE TC 9.7 Testing & Balancing, and the current Chair of TC 6.1 Hydronic & Steam Design. He has served on numerous standards projects, as well as the ASHRAE Standards committee, and is a member of several ASHRAE technical committees, and the Board of Directors. Mr. Hegberg currently is the Manager of Balancing Products for ITT Bell & Gossett.



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Roy C.E. Ahlgren, Director of ITT Fluid Handling's Training & Education Department, is a graduate of the U.S. Naval Academy with a degree in Naval Science, and the Illinois Institute of Technology, with a Master's Degree in Management.

During his career as a Naval Officer, he was responsible for the operation and maintenance of a wide variety of shipboard engineering systems. He was a member of the first Engineer Officer's course for conventional steam plants held at the Naval Reactor Facility in Idaho Falls, and he directed the complete engineering systems overhaul of a guided missile cruiser.

He was designated by the Navy as a Training Specialist, and served as Executive Officer of the Recruit Training Command, "boot camp", at Great Lakes and the NROTC unit at Northwestern University.

Mr. Ahlgren has taught seminars in steam and water systems at ITT Bell & Gossett's famous "Little Red Schoolhouse" in Morton Grove, Illinois since 1985. He has also developed a number of shorter seminars on various aspects of steam and hydronic systems, which he presents around the country on behalf of ITT Fluid Handling Representatives. He is the author of several booklets and articles on fluid handling topics.

He is a past Chairman of the ASHRAE Technical Committee on Hydronic and Steam Systems and Equipment, is active in the Chicago Chapter of ASPE, and the Chicago Area Runner's Association.