ITT

PUMPLINES
Innovation ... Technology ... Leadership

A newsletter for users of pumps, controls, monitoring and maintenance services
Spring 2007

Medical Center Solves Hot Water Pressure Problem with ITT Pumps and Intelligent Control System

When faced with a booster pump system that could not keep pace with fluctuating demands for hot water, St. Joseph's Hospital and Medical Center turned to ITT for a solution that included a set of skid-mounted pumps with intelligent controls.

Located in the heart of Phoenix, Arizona, St. Joseph's Hospital and Medical Center is a 520-bed, not-for-profit hospital that provides a wide range of health, social, and support services with special advocacy for the poor and underserved. "St. Joe's" is a nationally recognized center for quality tertiary care, medical education, and research.

Founded in 1895 by the Sisters of Mercy, St. Joe's was the first hospital in the Phoenix area. It has come a long way since it opened with 24 private rooms – each opening up onto porches. With tens of thousands of annual admissions, emergency room visits, and outpatient/inpatient surgeries – not to mention the thousands of babies delivered each year – the water demands for St. Joe's is critical to medical center operations.

Specifically, St. Joe's was in need of a way to maintain the availability of hot water pressure in its growing complex of buildings. Like all health care facilities, the system needs to be operational 24 hours-a-day and downtime must be minimal. As the hospital was expanded over the years, the water service for new facilities simply tied into the existing lines supplied by two outdated sets of pumps – one each for cold water and hot water service.

With the increase in water service requirements, the medical center began to have problems with the hot water booster being able to keep up with the cold water booster in terms of water pressure. Depending on the varying needs during the day, the hot water system pressure fluctuated so much that it was causing damage on multiple showerheads and valves. In addition, maintenance on the existing pumps was becoming intolerable. According to Michael Marquez, a technical sales representative for Quadna, Inc., a Phoenix-based distributor for ITT and a fluid-handling solution provider, "They were having to do quite a bit of maintenance to the old pumps. The pumps have been rebuilt numerous times because they were constantly running overspeed and way off the curve. Additionally, the medical center maintenance people would sometimes have to be sent to the booster set to turn on another pump to maintain hot water pressure."

What's Inside

Feature

Medical Center Continued...

"Plug and Play" System Needed

What the medical center needed was a booster pump system that could keep up the pressure for the hot water no matter what the facility requirements were. Quadna's team of application specialists proposed a design – created specifically for the hospital – that would achieve these goals and serve as a drop-in replacement. The replacement system also needed to be functional quickly, as the medical center could not be without hot water for more than 4 hours.

To more effectively accommodate the hospital's fast-paced growth, Quadna selected ITT's Goulds Pumps brand SSV high-pressure, vertical multi-stage pumps combined with ITT's PumpSmart® PS200 control system. Quadna manufactured a custom-designed booster pump skid to house the three pumps and PumpSmart systems. The pumps, which are combined to optimize their capabilities, offer the medical center optimal high pressure, in the most mechanically-friendly, space-saving design.

The new system also met St. Joe's requirements to connect efficiently with the medical center's existing piping system as well as for elevator weight and the proper dimensions to pass through doorways. When the skid was installed in February 2007, the "plug and play" system became fully functional in a couple of hours, minimizing the amount of time the hospital went without hot water. Other exclusive characteristics of the pump system include a design to handle variable pressure drops. The pressure set point can be modified for future system requirements. PumpSmart also adjusts to changes in system conditions automatically.

ITT's PumpSmart System Provides Intelligent Control

Equipping each pump with the PumpSmart control system was done to meet the medical center's concerns for a system with low total life-cycle costs. PumpSmart is ITT's award-winning intelligent flow system that works with any pump. PumpSmart utilizes a smart variable frequency drive (VFD) controller and proprietary control software to provide advanced process control, enhanced reliability through failure prevention, reduced life cycle costs and significantly lower energy costs - up to 65%.

"PumpSmart will provide the hospital with great energy savings," says Marquez. "The medical center is on a strict budget. When you consider that they were running the old pumps at full speed, the savings provided by PumpSmart will be significant."

The workhorse of the PumpSmart family, the PS200 offers process control and pump protection in one easy-to-use package for virtually every industrial process. With pre-programmed applications such as pressure, flow, and level control, set-up is quick and easy. The PS200 is capable of coordinating efforts

between other PS200 controllers as well as existing constant speed pumps.

"I am a big fan of PumpSmart," notes Marquez. "I have sold them before to customers who have major problems. I look at PumpSmart as a great, cost-effective solution. This skid, equipped with ITT's PumpSmart system, will allow the customer to cut down on management and maintenance. The customer will not have to send maintenance people to the pumps to change the pressure – which is what they had to do previously. PumpSmart will also rotate the pumps out as needed, automatically.

In addition to PumpSmart, ITT offers additional monitoring and control solutions to lower total life cycle costs to pumps and other rotating equipment.

ITT's ProSmart systems provide continuous, predictive monitoring for all rotating equipment. With ProSmart, the focus of any predictive maintenance program can change from data collection to analysis and improvement activities. Additionally, ITT's Performance Services team can help you identify and quantify the opportunities for improvement that exist in your plant.

With the PumpSmart-equipped pumps providing low total life cycle costs, St. Joe's can now face a future of expansion plans and the varying demands of patient care without worrying about providing adequate water service.

ITT's Goulds Pumps brand is a world leader in the manufacture of pump systems and accessories for industrial applications including chemical processing, pulp and paper, power generation, oil refining, gas processing, mining and mineral processing and general industry.

For more information on ITT's Monitoring and Control solutions: **www.ittmc.com**

Feature

The Customer is the Center of Our Universe

ITT IP Introduces Strategic Star

Last year's employee survey results showed that management needed to improve communications of our strategic direction. The Industrial Process Management Team listened to this feedback and developed the "Strategic Star," a visual representation of our five strategic imperatives. The strategic star will be displayed globally to all employees at all locations, and will initially be produced in Spanish, Mandarin Chinese and English. The five strategic imperatives start with the customer. The customer is the center of our universe. Meeting and exceeding customer expectations is our purpose. Our customers demand consistently high quality, on-time delivery, and the best overall value – just like we do when we make purchases.

- **Growth:** We have strong market share in North America but globally, we have a tremendous opportunity for growth. We need to position our business to meet the needs of global customers. Additionally, the same old pump, valve, and service business model "isn't going to cut it" in the future. We will focus our resources on developing differentiated products and services that provide our global customers substantial value.
- **Safety:** Safety on the job and designing it into our products, is a serious issue in IP and is the responsibility of all employees. We owe it to our coworkers and customers to provide a safe working environment. Whether we work in a factory, office, or in the field, please be proactive in your areas and address any safety issues.
- **Productivity:** Customers want products and services in a timely fashion at competitive prices. The more we improve our cycle times with lean processes and the more flexible we can be to various customer needs, will result in greater customer satisfaction. Additionally, continuous improvement in our processes will drive reduced costs. We must reduce our product costs every year in order to continue to compete.
- **Leadership:** Core to our culture. We need to develop leaders at all levels – all inclusively. We also need to increase the diversity in our organization. It is difficult to serve the global market without a global organization. It is said, "When all think alike, no one thinks very much." Diversity in our teams will drive robust conversations, creative solutions and improved decisions.
- **Innovation:** Key to long term success. A business' ability to innovate, both internally and externally, is the largest factor of long term success. Jeff Immelt, CEO of General Electric, said it like this: "The only source of profit, the only reason to invest in companies in the future is their ability to innovate and differentiate."

By focusing on the customer and excelling at the above five areas (Growth, Safety, Productivity, Leadership and Innovation) we will continue to lead our industry. Every one of us can influence our performance in all of these areas. However, we must do it together. There is a saying that "The whole is greater than the sum of its parts." This is especially true with our broad, cross functional organization. Sure, we can incrementally improve independently, but only through working together with a common vision will we achieve premier results.

ITT

Tech Talk

"Flow Economy" Determining True Pump System Efficiency

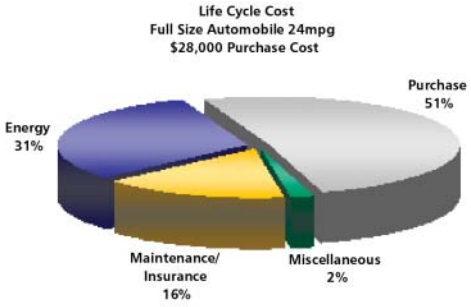
Daniel Kernan
Product Manager, PumpSmart
Controls Solutions, ITT Corporation

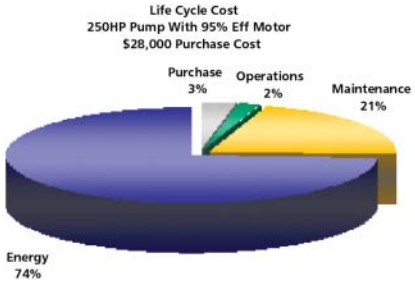
Imagine a source that accounts for nearly 20% of the world's energy demand yet has little regulation on how that energy is used. It is a surprising fact to many people that pumps consume so much of the world's energy, but if you were to think about everyday life in some fashion, a pump likely had a role in making it possible. From turning on the faucet in the morning, from the gas in your car, from the silicon chip in your cell phone to the shirt you are wearing. Consider that an average automobile consumes approximately 40,000 gallons of water to manufacturer. Pumps move every gallon. As populations and world economies grow, the demand for clean water, oil, bio-fuels, manufactured goods, and consumer goods will increase. And more and more pumps will be called on to help produce and deliver these goods.

A properly sized and operated pump can be one of the most efficient means of performing useful work. Consider that an average sized pump will operate near 75% efficiency. Compare that to a combustible engine which operates at only 20% efficiency. In relative terms a pump can be a very efficient piece of machinery. It is easy to lose sight of the enormous potential for energy savings that exists by optimizing pump systems. The problem is that a pump is very sensitive to how it is operated. And, it is the pumping system that has the greatest influence on pump energy use. For the most part, pumps are controlled in the same manner they where 50 years ago. New technologies have been slow to be adopted in industry. With the rising cost of energy, only recently has there been a renewed focus on reducing energy cost of pumps.

A simple way to put pumps in perspective is to compare a pump with an automobile. There are actually many parallels that both pumps and automobiles share. First look at the focus on fuel efficiency, alternative fuels and hybrid cars. There is a simple understanding of where the energy goes in a car, the gas tank. The problem with pumps is there seems to be a lack of knowledge of how pumps use energy and how much of the energy is performing useful work.

Consider the life cycle costs of both an automobile and pump with an initial purchase price of $28,000. When purchasing an automobile, fuel economy is a key factor in the decision-making process, and it is justifiable as it makes up nearly one-third of the cost of ownership. Energy can account for as much as 75% of the total cost of ownership of a pump, and here lies a tremendous potential. Market demand and government regulations are driving new technologies and innovation in the automobile industry, but this will take years to produce results. On the other hand, the pump industry already has the technology in place to see immediate results by shifting the focus away from the pump and to the entire pump system.





Pumps are a $30 billion market. There is a multitude of organizations (i.e Hydraulic Institute, Europumps, etc.) that set forth guidelines for pumps but these are set in place from a manufacturing and mechanical design perspective. The operation of pumps and how the pumps consume energy is the ultimate responsibility of the pump system designer and the operator of that system.

The place to start is to understand what a pump does. A pump is a machine that converts mechanical energy into pressure energy. The pressure energy is imparted into a fluid which in turns creates flow by the movement of high pressure to low pressure. A pump is often evaluated on how efficiently it imparts a given pressure to a specific amount of fluid. At first the reaction to lowering pump energy consumption would be to mandate minimum pump efficiencies to the pump manufacturers.

The problem with this is that pump design and efficiencies have not changed much over the last 50 years. There have been some minor improvements in pump efficiency over the years with various coatings

Tech Talk

"Flow Economy" Continued...

technologies, smoother machined surfaces and computer-aided design, but this has really only provided small single digit gains. Barring any technological breakthrough in pump design, pump efficiencies are already maximized.

The bigger question is what does pump efficiency really determine about the pump system? Pump efficiency often is taken to even greater detail and evaluated using the wire-to-water efficiency which includes all losses such as the motor and pump losses. While this does provide a slightly more detailed picture, it gives little indication of how much useful work is being performed by the pump.

For example, an automobile is not evaluated by efficiency, it is evaluated by fuel economy. Fuel economy is a very useful metric because it defines how much useful work (miles) is generated per unit of energy (gallon of gasoline). If an automobile were evaluated by efficiency, then imagine operating an automobile at 55 mph all the time because that is the most efficient speed in which to operate the engine. To slow down, rather than release the accelerometer of the car, the brake is applied instead until the car slows down to the desired speed while still maintaining the most efficient motor rpm. While the engine may be operating at the most efficient rpm, the fuel economy of the car will be immediately impacted from wasted energy being dissipated by the automobiles brakes. This would obviously be a very inefficient manner to operate a vehicle and have a very negative impact on the fuel economy of the automobile.

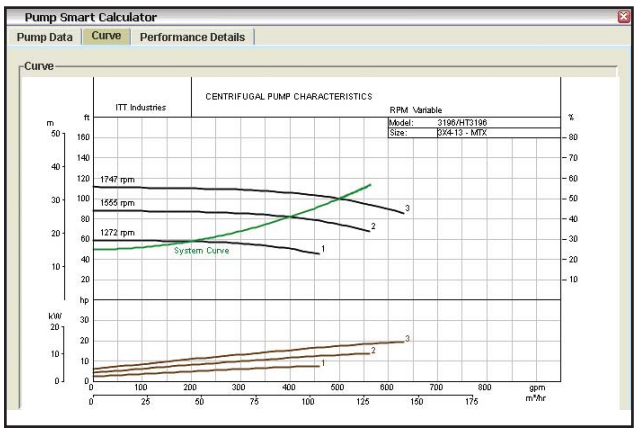
Yet the majority of pumps are operated in this very same manner. A typical pump runs at a fixed maximum speed with a valve throttled on the pump discharge to regulate the output of the pump. Even if the pump is throttled back to its most efficient point, it could actually be doing very little useful work as the majority of the energy is being dissipated into the pump system in the form of heat, noise, and vibration. One of the largest downfalls to pump operation is the lack of visibility into how much useful work the pump is actually performing. There are methods in the industry to evaluate pump efficiency, but as the automobile industry has shown, efficiency is not the important factor.

If we take the same logic as the automobile industry and apply it to pumps, you can now easily define how efficient the pump system is beyond the pump flanges. Similar to fuel economy for a pump system, a simple Flow Economy Ratio can be defined as pump flow / pump power. This ratio defines for every 1 kilowatt (kW) of work being performed the pump is able to move so many gallons per minute (gpm).

$$\text{FlowEconomy} = \frac{\text{flow}}{\text{power}} = \frac{\text{gpm}}{\text{kW}}$$

With this ratio it is now possible to evaluate the efficiency of the entire pump system. Not only is this metric useful in evaluating a pump system, but it can also quickly gauge if the pump system efficiency has changed. This provides the operator of a pump system the information required to quickly make decisions in the best interest of both the process and the pump.

In the following example both wire-to-water efficiency and flow economy are used to evaluate a simple pump system. The evaluation compares a fixed speed pump system using a control valve verses a variable speed pump system using a variable speed drive. The system is using a centrifugal pump with varying flow rates.



The following analysis was performed with the ITT PumpSmart Calculator Program.

Fixed Speed Pump with Control Valve

Flows	Time	Operating Hours	Flow (gpm)	Head (ft)	Speed (rpm)	Power (HP)	Pump Eff	Motor Eff	VSD Eff	Wire to Water Eff	Total Power (KW)	Flow Economy (gpm/kW)	kW hrs
Qmin	30%	2628	200.0	113.6	1750	11.4	50.8	93.5	-	47.5	9.1	22.0	23,845
Qnormal	60%	5256	400.0	109.5	1750	16.0	68.9	94.5	-	65.1	12.6	31.7	66,342
Qmax	10%	876	500.0	100.0	1750	18.1	72.5	94.8	-	68.7	14.2	35.1	12,473
Weighted Average		8760	350	109.8	1750	14.8	63.8	94.2	-	60.2	11.7	29.1	102,660

Tech Talk

"Flow Economy" Continued...

Variable Speed Pump with VSD

Flows	Time	Operating Hours	Flow (gpm)	Head (ft)	Speed (rpm)	Power (HP)	Pump Eff	Motor Eff	VSD Eff	Wire to Water Eff	Total Power (KW)	Flow Economy (gpm/kW)	kW hrs
Qmin	30%	2628	200	57.9	1272	4.9	60.1	93.7	97.6	54.9	4.0	50.3	10,450
Qnormal	60%	5256	400	81.9	1555	11.6	71.4	94.9	97.7	66.2	9.3	43.0	48,881
Qmax	10%	876	500	100.0	1750	17.4	72.6	95.0	97.7	67.4	14.0	35.8	12,250
Weighted Average		8760	350	76.5	1490	10.1	68.1	94.6	97.7	62.9	8.2	44.5	71,581

By evaluating this system purely on wire-to-water efficiency you can see that the variable speed pump system has a slightly higher efficiency then the fixed speed system 62.9% vs 60.2%. By this comparison method the variable speed pump systems shows only a 1.7% gain in efficiency which at first evaluation may not be enough to justify adding the VSD. However, using wire-to-water efficiency as a comparison does not provide the true pump system efficiency. By calculating the flow economy of these two systems you can see that the variable speed pump system yields almost a 53% improvement in the flow economy ratio (44.5 vs. 29.2) which translates into a 30% savings in kw hrs.

In this example the wire-to-water efficiency did not show a significant difference between the two pump systems. This is because efficiency does not provide a useful gauge of how much of the total energy is providing useful work. By evaluating pump systems with the flow economy ratio, the pump system can be evaluated by defining how much work can be performed for every unit of energy expended.

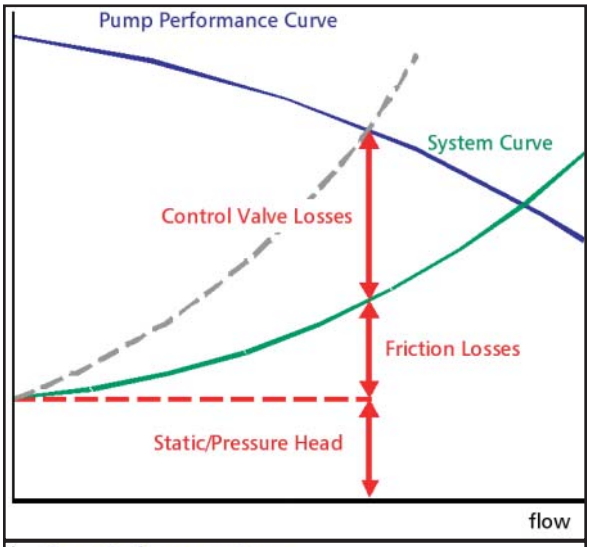
There are many factors that determine how efficient a pump system operates, but for maximum efficiency the entire pump system must be considered. With the rising cost of energy, evaluating pumps between the flanges is no longer an economically sound approach.

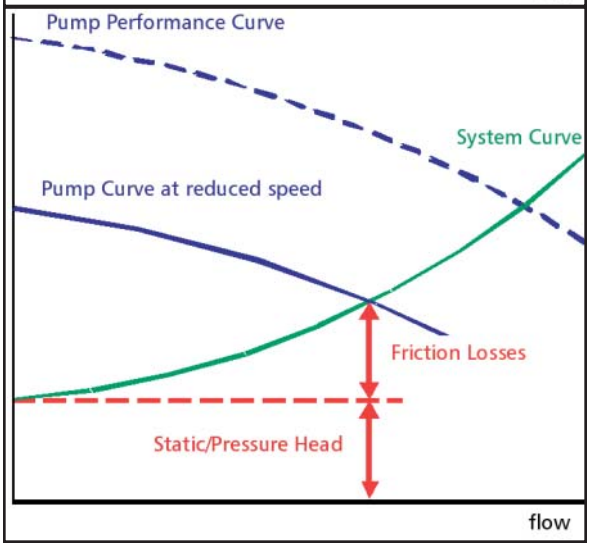
Back up information

Pump Operation Overview

By looking at the hydraulics of this system, the pump operates where the pump performance curve and system curve intersect. Since the pump is limited to a fixed speed without any regulation, the pump would produce excess flow and run out on the pump curve. To regulate the pump, the most common approach is to add a valve to the discharge of the pump. By throttling the valve, the additional frictional losses are created which steepens the system curve until it intersects the pump curve at the desired flow.

An alternative method is to adjust the speed on the pump using some form of speed regulator such as a variable speed drive (VSD). This method allows the pump to be slowed down until it intersects the system curve at the desired flow rate. This eliminates the excess pressure that is generated in a fixed speed system. This excess pressure performs no useful work and is dissipated into the pump system which directly impacts the operating cost and reliability of the pump system.





New Products

Goulds Introduces the 3500XD With X-Ducer

Mike Day
Product Manager

ITT Goulds Pumps has been involved in the design of medium consistency products for the Pulp & Paper Industry since the mid-1980's. In 1986, the first Model 3500 medium consistency pump was installed in the Pacific Northwest. It is still running! Since the first unit was installed, there have been numerous design improvements, each improving various aspects of the pump performance. We are now introducing the 5th generation of medium consistency pumps from Goulds Pumps. This is the Model 3500XD performance upgrade!

A program was initiated to find a way to increase pump efficiency and improve other performance aspects of the Model 3500. Numerous design approaches were considered, tested, and evaluated. The one which resulted in the best performance was derived from Goulds Pumps experience in designing flight type inducers for process pumps. Flight inducers for process pumps are often used to improve NPSH characteristics and are also a solution used to improve air handling characteristics of centrifugal pumps. The Model 3500XD design uses the flight type constant pitch configuration except that it is hollow. The 3500XD with this design was found to improve efficiency significantly, increase TDH generation for the same impeller diameter, and require lower suction head for operation at elevated temperatures.

During the test and evaluation program one unanticipated result was the capability for the X-Ducer design to operate without a vacuum pump up to at least 10% pulp consistency. This allows applications in this consistency range to vent directly through the degas line to drain without installing a vacuum pump. While not originally anticipated, it is partially explained by the performance conventional flight inducers exhibit when handling high air content pulp streams. This is an excellent example of Goulds Pumps extending known technologies into new areas of application.

The 3500XD performance can also improve existing medium consistency pumping services. Some of the examples of system upgrades for existing installations are outlined below. New unit installations also benefit from the enhanced Model 3500XD performance and these are identified as well.

System Upgrades for Existing Units

- Power reduction for existing unit based on higher efficiency of the XD performance upgrade
- Increased TDH with the same power and motor size. This may allow higher pressure to be maintained in the system, allowing for better pump control on systems which have gradually increased capacity over the life of the unit
- Increase in consistency or production rate with existing unit with little or no power increase
- Elimination of the vacuum pump on services which go up to 10% pulp consistency
- Retains the simplicity of the pump design which focuses on using standard, familiar pump assembly and re-assembly techniques without special considerations for unique internal clearance requirements

New Products

3500XD With X-Ducer Continued...

- Easy field conversion to the XD performance upgrade design. Majority of the key components remain the same – casing, suction sideplate and seal chamber remain the same as do all external envelope dimensions.

New Unit Advantages

- Improved, efficient design with opportunities for reduced motor sizes
- When the pulp consistency is 10% or less, a vacuum pump – either internal or external – is not required for operation
- With the capability to operate using lower suction head requirements, shorter standpipes can be used that result in lower overall total cost installation
- Design is well suited to variable speed operation. When coupled with the ITT PumpSmart V5.0 drive system, features allow protection of the unit during operation. Some of these features are:
    - Torque protection against low flow – this is low level or empty standpipe operation for a medium consistency pump
    - High and low speed limits to protect against motor overload at high speed and to insure adequate degas system operation at low speed
    - Maximum amp limit to protect the drive and motor
    - By utilizing a variety of simple control methods, a control valve is incorporated to insure suitable degas system operation at low speeds, yet maintain efficient operation during normal operating periods
- In addition to the performance upgrade for existing size Model 3500 units, this upgrade also includes a new, larger pump size which extends coverage to 2200 – 2400 TPD. The new pump size is similar to two existing sizes which generate pump head up to 650 feet (200 m) which is necessary for use as a single pump feeding a two-stage O2 Delignification system.

With the performance upgrade of the Model 3500XD, another example of the technology advancement which Goulds Pumps brings to the Pulp & Paper Industry is now available. Coupled with the Model 3501 Optimix™ medium consistency mixer for mixing oxygen and chlorine dioxide in bleach plants, improvements in efficiencies and operations can be better than ever.

Reference articles:

1. *Pumplines Spring 2005:* Merging Two Technologies – Medium Consistency Pumping and PumpSmart Control
2. *Pumplines Winter 2003:* New Mixer Reduces Energy Costs and Chemical Consumption at Pulp Facility

Applications of Distinction

Controlling Process Upsets are Key to Ethanol Plant Efficiency

Chris McGrath
Regional Sales Manager

Ethanol has reached new heights in popularity as an alternative energy source. Ethanol is ethyl alcohol and can be burned as fuel in commercial engines. Today gasoline in most US states contains 10% ethanol. Some vehicles have engines that can accommodate 85% ethanol which is known as E85. E85 is not yet widely distributed but there are a growing number of fueling stations that carry it in the Midwest. The ethanol industry started in the Midwest since, in the USA, it is primarily a corn based product. However, ethanol is now being made throughout the US, with other feed-stocks also being used in its manufacture.

As the demand for ethanol has grown, over 100 new plants have been built to increase its availability. Many of these plants use a dry milling process to produce between 40 and 100 million gallons of ethanol per year. These plants have been built on fast timelines. As a result the design engineers could not take the time to evaluate pumping system improvements through the use of IBG "smart products" like

Applications of Distinction

Controlling Process Continued...

PumpSmart® controls and ProSmart™ predictive condition monitoring. This has created an opportunity for our sales force to demonstrate to these new facilities the value of ITT, its pumping system knowledge, and our monitoring and controls products and services.

Recently the IBG distributor in Iowa and Nebraska, the Central States Group, was able to make a difference in the operation of a key service at a 50 million gallon per year plant in western Nebraska. The application was for a PumpSmart PS200 (7.5 HP) which controlled a 3196 1.5x3-10 for mixing and transferring water and urea. The original system was set up with an off/on switch and a reset button located at the tank and pump site. This would require the operator to manually shut off the pump when the mixture was transferred out of the tank. This resulted in seal failures since the pump would cavitate and run dry at times.

The process starts with the operator filling a 350 gallon tank with water and starting the pump which simply recirculates the water in the tank. The PumpSmart unit utilizes Smartflow™ to maintain a 100 GPM flow rate. Because the pump takes suction from the bottom of the tank and returns the flow to the top of the tank, a small change in speed would result in a substantial flow change, so by slowing the PID loop the PumpSmart unit locked into a very stable flow rate. At this point the operator dumps bags of urea in the tank and lets it mix until it dissolves. The operator then opens the valve to transfer the mixture to a process tank. The PumpSmart speeds up to maintain the 100 GPM flow rate as the head increases. The operator is now able to pump the tank down without running dry because of the torque based dry run protection of the PumpSmart unit. Instead of running dry, the PumpSmart shuts off the pump when the water and urea mixture has been transferred. The PumpSmart unit is located in a control room and since it requires a manual reset after the PumpSmart shuts down on the dry run alarm, the customer wired a remote reset button at the pump and tank location so the operator would just have to hit the reset button and restart the pump for the next batch.

The customer is extremely pleased with the operation of the system.

2007 Industrial Advertising Program

John Beca
Director – Communications

ITT Industrial Process is advertising its product brands with a solid presence in the best trade publications available. Full page color ads will give us a dominant, upfront placement in each issue selected. Our investment will also result in value added support such as editorials, new product releases, e-blasts, market / competitive research, and web promotions. We are building off last year's award-winning media efforts to maintain our awesome brand awareness in key global market segments.

Our targeted audience includes buying functions within the markets listed below along with the magazines which will carry our advertisements.

Chemical Processing - *Chemical Engineering, Processing*

HPI – *Hydrocarbon Processing, Arab Oil & Gas, Pumps India, Hydrocarbon Asia*

Ethanol – *Ethanol Producer, Biodiesel*

Industrial Maintenance & Operations – *Plant Engineering, Maintenance Technology, New Equipment Digest*

Power – *Power Engineering*

Mining & Mineral processing – *Engineering & Mining Journal*

Foundry Services – *Engineering Casting Solutions*

Parts – *Pumps & Systems*

The publications selected have audited circulation strength, solid readership, editorial quality, and proven lead generation results.

Visit our website for our complete advertising schedule and to view the advertisements which will be running.

Personnel Moves

IBG Names Steblein VP and GM, Sales and Service Americas

David Steblein joins the ITT Industrial Process Management team in the capacity of Vice President and General Manager, Sales and Service – Americas. Dave will report directly to the President, Ken Napolitano, and will have full responsibility for Sales activities for both the Pump and Valve businesses in the Americas. In addition, Dave will have profit and loss responsibility for Latin America Region, PRO Services, and the Monitoring and Controls business.

Dave brings extensive knowledge of the global industrial process markets across a wide range of engineered products and services. Most recently he held the position of General Manager for Lightnin Mixers in Rochester, NY, a Division of SPX Corporation, prior to which he served as Vice President of Sales & Service – Americas. Before that, Dave spent seven years with Emerson Electric, the majority of which was as Vice President of Sales, Marketing and Service for Xomox Corporation, a global leader in industrial valves. Dave left Goulds Pumps, Inc. in December 1994 from the position of Director USA Sales after having progressed through various Sales and Operations positions since joining the company in June of 1979.

Dave has a Bachelor of Technology in Civil Engineering from RIT. He will continue to reside in Pittsford, NY.

Flinton Elevated to Strategic Planning / Business Development Post

Dave Flinton has been promoted to the position of IBG Manager, Strategic Planning and Business Development. In his new capacity, Dave will continue to report to John Manna, VP Global Marketing.

Dave's responsibilities include identifying and developing new market opportunities and strategies to penetrate those market segments globally. With his vast experiences across our wide spectrum of products and markets, Dave will be a valuable addition to the IBG team defining our company's strategic direction. In addition, Dave will help coordinate business case development on our new product developments.

Dave joined ITT in 1997 as an Application Engineer in our Cincinnati-based, A-C Pump group. After the acquisition of Goulds Pumps by ITT, Dave joined the consolidated Marketing Group in Seneca Falls as an Assistant Product Manager. He has held several positions of increased responsibility including Double Suction Product Manager, Water & Wastewater Industry Marketing Manager and, most recently, SFO Product Marketing Manager.

Dave holds a Bachelor's Degree in Mechanical Engineering from Worcester Polytechnic Institute and an MBA from the Simon School at the University of Rochester.

Kusenkov to Manage Russian Sales

In line with IBG's continuous sales channel development objectives, Nikolay Kuzenkov has been appointed to the position of Area Sales Manager of Russia and Caspian Sea Countries. This is IBG's first direct office in Eastern Europe.

Nikolay holds a B.Sc. in Mechanical Engineering, specialized in Hydraulics and Hydraulic Machines from the Bauman Moscow State Technical University.

Nikolay has more than 6 years experience in Pump Sales, Marketing and Market Development. His previous responsibilities include Manager of Strategic Planning of Talnah (Russian Pump Manufacturer), Manager of Industrial & Dosing Pumps Segment of Grundfos in Russia and most recently Segment Manager – Industry of ITT Flygt in Russia.

Nikolay will be reporting to George Apostolellis and will be located in Moscow, with ITT Flygt Russia.

Nikolay's knowledge of the local market and selling skills provide a strong background for our efforts to grow the pumps and valves business in Russia and the Caspian Sea Area.

Spotlight: Women in Marketing

In this issue of *PumpLines*, we are spotlighting some of our women in marketing management.

Lisa Fitzgerald
Business Development / Mergers & Acquisitions, Headquarters in Seneca Falls, NY USA

Lisa joined Goulds Pumps as a marketing analyst in January, 1995 and supported the integration of market data when acquired by ITT. She followed this with a position as the IPG sales analyst. Subsequently, Lisa joined the ITT "wave 1" black belts and continues to support VBSS as opportunities arise. Recently named to the business development/mergers and acquisitions role, Lisa looks forward to the new experience. She spent the last several years as the IBG Strategic Planning Manager.

Lisa earned a Masters with Marketing & Operations majors from Rochester Institute of Technology and an undergrad degree from Northwood University, Midland, Michigan.

Lisa works with our teams to identify and market products needed in the industrial marketplace. In planning and marketing she is focusing on deeper market segmentation to better understand market needs and alternatives to successfully provide those solutions.

Mystic Himmel
Product Manager
Pure-Flo Products - Lancaster, PA USA

Mystic began working at ITT last year as Product Manager for the Pure-Flo line of switch packages. She received a Bachelor of Science in Electro-Mechanical Engineering from Penn State University.

Mystic is involved with new products and recently conducted training for a group of Pure-Flo distributors. Mystic is looking forward to meeting with more distributors and customers over the next several weeks to conduct further training and VOC (voice of the customer) on the new product.

Fanny Wang Jingyi
Marketing, Shanghai Sales Office, Shanghai, China

Fanny majored in Electronic Commerce and graduated from University of Shanghai for Science and Technology in July 2006. She started her career with ITT in the administrative department. That experience helped her to become familiar with the company. Fanny was recently transferred to the Marketing Department. As the rookie in an experienced department she looks forward to learning from her veteran colleagues.

Her current responsibilities include brand message development and promotion and developing effective support materials for sales. She also collects competitive information. Fanny will also assist in exhibitions and seminars.

Lisa Fitzgerald

Mystic Himmel

Fanny Wang Jingyi

Teresa Parsons

Riham Rizkalla

Heather Sandoe

Teresa Parsons
Business Development Manager ITT Monitoring & Control, Seneca Falls, NY USA

Teresa joined Goulds in 1994 after receiving a BS in Engineering and Management from Clarkson University. She spent her first two years in a Management Training program working in Supply Chain, Manufacturing Planning and Product Engineering before spending the next five years as a Product Engineer for ANSI products primarily focused on the non-metallic and mag-drive ANSI products. In 2001, she transitioned into Marketing as first a Sr. Application Engineer, and then an Assistant Product Manager. In 2002, Teresa became the Product Manager for non-metallic and Mag Drive ANSI products. In 2005, she returned to Reserach and Development as a Business Development Manager. She is currently part of the Monitoring and Control group working on ProSmart.

Teresa's daily contribution is related to bringing products to market that add value to our customers, which includes the development of product bulletins, IOMs, Web site material, and training material.

Riham Rizkalla
HR & Marketing Coordinator, EMEA Region, Cairo, Egypt

Riham graduated from "Notre Dame De La Delivrande" French School 1991. She obtained her Bachelor degree from the French section of Linguistics faculty, Ain Shams University, in Egypt. She previously worked for Le Meridien Hotel as a Guest Relations Executive where she acquired experience related to customer satisfaction. She then moved to Schucco International Co. for Aluminum as Sales & Marketing Coordinator. Riham joined ITT Goulds Pumps in July, 1999 as Administrative Assistant. She was promoted to Marketing Coordinator by end of 2002 and recently assumed the additional role of Human Resources Coordinator for IBG EMEA region.

Riham has very diverse duties including Web site content, market intelligence collection info, market research, processing sales leads, communicating to sales staff, running reports and analysis, etc. She also assists with preparation of Strategic and Sales Plans.

Heather Sandoe
Marketing Communications Manager, Pure-Flo, Lancaster, PA USA

Heather has been with ITT for five years and started as the Administrative Coordinator in Marketing Communications for the valve group. She received a BS from Lancaster Bible College and an MBA from Cardean University. Before ITT, Heather held various positions in sales, general administration, and media relations.

On a day-to-day basis, Heather provides support for the Pure-Flo sales and marketing team by creating tools such as brochures, presentations, newsletters, press releases and photos. She also manages the Web site, trade shows, advertisements and leads for the group.

Sarwat Siddique
ProSmart Product Manager,
ITT Monitoring & Control
Seneca Falls, NY USA

Sarwat joined the ITT M&C team in 2006 as an Application Specialist having transferred from ITT Space Systems Division in Rochester, NY where she worked for six years. While at Space Systems, Sarwat was an Integrated Product Team leader for custom solutions used in imaging systems. Sarwat has quickly advanced within IBG to product manager of the important new technology, ProSmart™ predictive condition monitoring.

Sarwat has been instrumental in the deployment of the new M&C business system as well as product launch activities related to ProSmart. Sarwat holds a Bachelor of Science in Electrical Engineering from the City College of NY and a Masters degree in Product Development from the Rochester Institute of Technology.

Darleen Strassle
Supervisor, Marketing
Communications Production
Seneca Falls, NY USA

Darleen joined Goulds Pumps in October 1989 as coordinator of advertising production, involved in scheduling all communications projects. She followed that assignment, becoming the supervisor of the desktop publishing area. Prior to joining Goulds Pumps she worked 13 years for the Kmart Corporation as advertising coordinator.

Darleen is currently completing her degree work at Syracuse University.

Darleen supports all products by working with product management to develop literature and other sales support materials that are required.

Amy Taney
Senior Market Analyst
Seneca Falls, New York, USA

Amy joined ITT Goulds Pumps in 1995 as a Customer Service Rep in the Distributor Cell and is currently working as the Senior Market Analyst and Co-Champion of the Inclusion and Diversity Initiative. Amy has held the position of Value Based Six Sigma Black Belt for Seneca Falls Operations. In her role as VBSS Black Belt, Amy worked on projects related to improving cash flow specifically in the areas of scheduling, inventory, and accounts receivable.

Amy earned her B.A. degree in Public Relations and Business from the State University of New York at Oswego.

Amy provides Management analysis and reports for Pumps and Valves, Selling Channels, Regions, Markets and key Customer segments of our business.

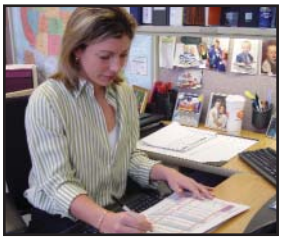
Eng Wah Teow
Marketing & Business Development
Coordinator, Asia Pacific, Regional
HQ, Singapore

Eng Wah joined ITT in 1994 as an Application Engineer, and is now serving as a coordinator for Business Development & Marketing for Asia Pacific. She is a graduate of Curtain University in Marketing & Management. Eng Wah was certified a Value Based Six Sigma (VBSS) Green Belt in 2006 with University of Michigan College of Engineering.

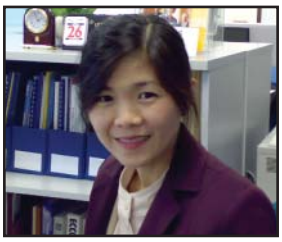
Eng Wah assists with the coordination and management of all aspects of marketing planning, promotion, public relations, and marketing research in support of her sales and marketing colleagues and the goals of the organization. In addition, she provides administration and support for all marketing communications activity.

Sarwat Siddique

Darleen Strassle



Amy Taney



Eng Wah Teow

Laurie E. Youngs

Jenny Yu

Laurie E. Youngs
Product Specialist – Small Double Suction and Multi-Stage Products
Seneca Falls Operations, NY USA

Laurie graduated from Clarkson University with a Bachelor's of Science degree in Interdisciplinary Engineering & Management. Before recently transferring to IP, she was employed with ITT Defense, Advanced Engineering & Sciences in Rome, NY for 3 years. There she started as an assistant Project manager and was transitioned into Business Development a few months later. Laurie served as the process manager, helping establish and implement business development policies and procedures for the business unit. In addition to this work, she also supported proposal development for government procurements.

As a Product Specialist, Laurie interacts daily with our distributors and sales people, providing technical support and price quotes on pumps and parts, answering any questions, providing supporting documentation and any other assistance they may need.

Jenny Yu
Marketing Communication Officer
Shanghai Sales Office, Shanghai, China

Jenny earned her Degree in Science & News Technology from Shanghai University. She joined ITT 5 years ago after spending 5 years with a german manufacturer. Jenny participated in the ITT Value Based Six Sigma (VBSS) Black Belt Certification in 2006 with the University of Michigan College of Engineering.

Jenny spends her busy day developing and producing product literature, mailers and promotional tools. In addition, she organizes and manages the industrial group's China tradeshows, customer seminars and related activities.

Send your comments or suggestions to:

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