



Looks Like Another Great Year!

The year 2006 is shaping up to be another great one for Metropolitan Industries, Inc. Each sales department has many new projects in the manufacturing phase with many more going through the approval process.

MUNICIPAL SALES

The Municipal Sales department is very busy these days as they have two wastewater treatment plants going through the bidding process, one wastewater treatment plant



Inside Sales Engineer Emilee Jones performs some final checks before one of the largest booster systems ever manufactured by Metropolitan ships to Chicago's McCormick Center to serve the west end expansion currently taking place there. The system utilizes seven 50-HP end suction pumps capable of pumping 4200 gallons per minute at 243' total dynamic head.

currently under construction in Romeoville, 21 storm and sanitary lift stations currently in production with another 12 lift stations waiting for customer inspection and approval. Four large water-pumping stations are also under construction with one ion exchange radium removal plant, one iron removal plant and one pressure reducing valve station already completed. If the next six months were like the last six months, sales should be steady.

CHICAGO SALES

The Chicago Sales department, as usual, continues the tradition of selling our high-end custom booster systems. During the month of July, the department delivered

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Metropolitan Eyes 50

Wow! It is amazing how fast the time flies. It seems as though the year has just started and here we are in the fourth quarter already. As always, we want to thank all of you for your continued support of Metropolitan Industries throughout the years. Without your support we would not be who we are today so Thank You! I have decided to write this column to bring you up to date on some of the exciting things that are currently happening at Metropolitan Industries and some of the exciting things that we have in the works for the future.

Metropolitan Industries will reach a significant milestone next year; we will be celebrating our 50th anniversary. What a long way we have come from the basement of a home in Western Springs, Illinois. It has been an interesting ride to say the least. We are looking at planning a couple of special events to help celebrate our golden anniversary. We will keep you up to date as to what and when they will be.

Another milestone we are working on is our fifth expansion in Romeoville, Illinois. Our business continues to grow, and with that growth come growing pains, which in this case means we are running out of room again. In our current 100,000 square foot facility, we are running out of both people space and warehouse space. Therefore, to address this issue we are in the process of obtaining a twelve-acre parcel of land for our next expansion. Within the next two to three years, we will be erecting a new facility that will be around 150,000 square feet to help solve our current and future growing pains. This parcel of land will allow us to expand to somewhere in the 300,000 square foot range for our future needs. Although this project is still in it's infancy we are all already very excited about it.

I hope you like the new look of our newsletter, we have decided to go with the four color printing to give our newsletter a more professional look. As you can see by the headline, it has been another good year at Metropolitan Industries; we have many projects on the books, and are moving into many new areas of business. We will keep our fingers crossed on the economy and keep moving forward.

Again, thank you for your support.

John R. Kochan, Jr.
President

The Chicago Faucet Company Puts Products to the Test

By Joseph Sanchez

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Introduction

With the explosion in technology witnessed during the last decade, many companies are discovering new and inventive ways to test their products. Given the high costs of obtaining third party certification, companies want to know their products will pass strict testing standards before delivering their product to an accredited test lab. Failure to pass a certification test on the first attempt means paying again to resubmit the product and a loss of valuable time on a project. Companies realize that the high price invested up front in a test center will ultimately save them thousands of dollars. With a high-tech test lab, company engineers can exceed the testing requirements of domestic standards, as well as those produced by other countries, societies and engineers.

The Chicago Faucet Company (TCFC) located in Des Plaines, Ill. recently took a giant leap forward and upgraded their existing research and development capabilities with the installation of a modern testing facility unique in every way. This testing facility incorporates and harnesses technology found mainly in large-scale municipal applications using multiple pressure zones and applies it to an area measuring the size of a large living room. The result is a system that allows TCFC to test, precisely, multiple products concurrently, with each product requiring its own precise pressure.

Company History

TCFC opened its doors in 1901 on Chicago's west side. Founded by Albert C. Brown, the company is as much of a Chicago icon as any other famous Chicago business.



Chicago Faucet's Product Compliance and Testing Coordinator Larry Himmelblau demonstrates the test lab's touch screen controller that allows engineers to vary pressures to a particular zone, trend a particular period of time, monitor pressures and flows, clear and monitor alarms and see the entire system status with a touch of a button.

THE PUMPING WORLD'S ONE STOP SHOP

In 2002, The Geberit Group, a company headquartered in Jona, Switzerland, acquired Chicago Faucets. They now employ over 500 people in North America with operations located in Des Plaines, Ill., Milwaukee, Elyria, OH. and Michigan City, Ind. The company is a leader in supplying plumbing fittings for the commercial, laboratory, food service, safety and residential markets.

Out-Dated Test Lab

Before computers dominated most aspects of day-to-day business operations, TCFC, like most companies, worked with technology available to them at the moment. In the world of testing plumbing fittings, equal distribution of water and precise pressurization to all fittings is essential in a modern facility.

When originally installed a decade ago, the TCFC's test lab was innovative but time saw its usefulness decline. TCFC's previous test lab was unable to achieve the precision needed to test new technologies being developed for today's market. This led to the consideration of a modern facility.

Chicago Faucet hired Tim Smith CPD, of Metro Design located in Schaumburg, Ill., to design a new plumbing system for the lab. According to Smith, the existing system used two multi-stage vertical turbine pumps controlled by old inverter technology or first-generation variable control.

"This system was not functional for them because of its inability to control pressures," Smith said.

Design Process

Smith worked closely with TCFC's engineers including Larry Himmelblau who is responsible for TCFC's product compliance and manages the new R&D test lab. After extensive meetings together, they decided on a research/test center with the following capabilities.

- Ability to maintain constant pressure at +/-2 PSI.
- Ability to match performance of certification test labs including Canadian Standards Association (CSA), International Association of Plumbing and Mechanical Officials (IAPMO), and the American Society of Plumbing Engineers (ASPE).
- Integrate touch screen operations that incorporate the latest monitoring and trending technology similar to Supervisory, Control and Data Acquisition systems found in most municipalities.

Himmelblau wanted to be able to conduct 24/7 life cycle testing of flush valves, shower valves, spray valves and sink fittings. His vision of the testing center also consisted of an aluminum framed racking system that easily allowed mounting of products either temporarily or permanently.

"One of my concerns was the ability to stay flexible. The use of an



A Metropolitan Varipac System 2000 booster system, responsible for supplying separate pressures of hot and cold water during testing of various plumbing fixtures such as flush valves, shower valves, spray valves and sink fittings.

aluminum racking system achieved this by allowing us to test multiple products and expand as needed," Himmelblau said.

Smith chose pump equipment supplier and integrator Metropolitan Industries, Inc., located in Romeoville, Ill., to help design, supply, install and integrate the pumping and control equipment due to their experience overseeing large municipal and commercial applications and their knowledge of variable speed drive systems.

"Given the similarities of this application to municipal systems using multiple pressure zones, Metropolitan's municipal experience coupled with their variable speed drive expertise was an asset," Smith said.

Together, Smith and Metropolitan Sales Engineer Mike Ponx designed a unique system similar to many large-scale municipal applications that utilize multiple pressure zones to maintain constant pressures while meeting every need of TCFC's engineers.

Constant Pressure "The Key"

In order to properly develop new products and impose the same testing criteria as CSA, IAPMO, ASPE and ASSE, engineers needed the test lab to maintain constant pressure at +/- 2PSI or better using multiple pressure zones. This posed a design challenge because of the sheer difference of gallons per minute and pressures each separate zone demanded. In some cases, a particular zone could see fluctuations as much as 75GPM in a few seconds.

"Himmelblau wanted the ability to life cycle test multiple fixtures at one time so constant pressure fittings was a must," said Smith.

A Metropolitan Varipac System 2000 booster system is responsible for supplying separate pressures of hot and cold water during testing of various plumbing fixtures such as flush valves, shower valves, spray valves and sink fittings. The system utilizes four vertical, multi-staged, stainless steel turbine pumps. Two 3-HP and two 5-HP variable speed drives control the frequency of flows with capability up to 44GPM of hot water and up to 88GPM of cold water.

The large fluctuation in pressures posed a challenge in creating a buffer zone to maintain consistent pressure. The key to supplying consistent pressure to multiple zones was the installation of a pre-charged, bladder tank in each of the five zones. Each tank consists of 2/3 air and 1/3 water, which controls any water hammer and adds volume to the zones. This solution is similar to water tower technology used by municipalities because it provides a storage supply of water that helps to smooth out flow surges. A fitting may require a large volume of flow but only for a few seconds.

System Control

A unique computer program similar to a Supervisory, Control and Data Acquisition system used for controlling and monitoring municipal pump systems operates TCFC's test lab. TCFC engineers wanted a customized program with the ability to monitor, trend, remotely control and operate the lab with a touch of a finger. Metropolitan Computer Programmer Mike Scoleri worked closely with Himmelblau and other TCFC engineers in order to gauge and provide what they wanted.

The key to integrating the control program was combining both the five pressure-regulating valves (with a future sixth) and 4 variable frequency drives in order to maintain proper pressure as required per zone. Scoleri used the drives to maintain a constant header pressure so that the valves had an easier job of maintaining

pressure to the fixtures. This extends the life of the system by preventing sudden changes in pressures.

The electronic zone, pilot operated, pressure regulating valves open and close according to pressure requirements. They operate simultaneously and independently of one another to provide vastly different flows and pressures. Each valve has the task of adjusting and maintaining pressure in its own zone.

A favorite feature of TCFC engineers is the color, touch screen control panel that controls the entire system with a tap of a finger.

From the touch screen, engineers can vary pressure to a particular zone, trend a particular period of time, monitor pressures and flows, clear and monitor alarms and see the entire system status. Utilizing color graphics and charts, an engineer can quickly assess how testing is proceeding.

"It is very easy to control the pressures in five different zones within the three test areas using the control panel," said Himmelblau.

Testing results from the data acquisition system are available on the company's server for access either on site or from a remote location. An employee has access by logging onto the network using a username and password. Access to information can be restricted depending on the employee by implementing security features incorporated in the software.

TCFC's test lab has been in operation for almost a year. During that time period, engineers were able to test more products at one time than ever before due to the consistent header pressure, multiple adjustable zone pressure, availability of both hot and cold water and a state-of-the-art computer control program with touch screen control. The ability to pass testing standards on the first submittal has saved the company thousands of dollars and the 24/7 life cycle testing allows TCFC to put out a quality certified product that upholds the traditions of the company.



Chicago Faucet Engineer Ryan Schlangen attaches a pressure transducer to a shower valve in order to monitor results using their data acquisition system.

Control Microsystems Honors Metro with Award

Control Microsystems, Inc. (CMI) recognized Metropolitan Industries for their professional representation and service in 2005 and presented Control Division Manager Rich Potter and Electrical Department Sales Engineer Dan Howorth an award during their bi-annual sales conference held in Orlando on March 29.

In 2005 Metropolitan demonstrated expert technical know-how, excellent account management skills and outstanding customer support, which best represented Control Microsystems commitment to quality, leadership, teamwork and service, according to CMI's Vice President of Marketing Steve Goodman.

"We are selective in terms of deciding who will represent our products and hold them to high standards. Metropolitan exceeded those standards and earned this award by their performance," Goodman said.

CMI is a global leader in the development, manufacture and supply of hardware and software for infrastructure automation, remote monitoring and control, and SCADA (Supervisory Control and Data Acquisition). The company has six sales and support offices throughout North America and one in Australia. System



From left: Control Division Manager Rich Potter and Electrical Sales Engineer Dan Howorth receive an award from Control Microsystems's Eastern Regional Sales Manager Alan Hudson during a presentation held this summer.

integrators and end users in the oil & gas production automation applications, municipal water/wastewater systems and electrical power applications use CMI's products.

Metropolitan Industries, Inc. is the east coast's second largest distributor of CMI's SCADAPak programmable logic controllers used in SCADA applications in many municipal projects. SCADA is a process of monitoring, supervising and controlling vital municipal pumping stations and treatment facilities from remote locations.

Representation by Metropolitan of CMI products began in 1991 and sales have grown every year since then. Future growth is expected due to CMI's innovative genius in the world of communication, networking and high-speed data.

Another Great Year! Continued from front page

the largest domestic water booster system manufactured in recent memory for installation in Chicago's McCormick Place Convention Center. The system will serve the west-end expansion that is currently taking place there. The monster-sized, skid-mounted system utilizes seven, 50-HP end suction pumps capable of pumping 4200 gallons per minute at 243' total dynamic head. The suction header measured a staggering 20" with the discharge header measuring 16".

NATIONAL SALES

The National Sales department continues to sell our popular prefabricated housed booster systems all over the country. Currently, two of the large systems are in production with one of the two slated to pump water to a governmental anti-terrorism training complex located in Mercury, Nevada and another ready to pump water for one of the largest sanitary districts in the country, Los Angeles County. Thanks to a strong distributor force located around the country, sales of our double close coupled, self-priming pump systems have nearly doubled. The self-priming pump system is

Metropolitan's alternative solution to eliminating those messy column pump systems.

WHOLESALE DEPARTMENT

The Wholesale department launched a new product line this summer known as the PumpGuard and PumpGuard Plus. They are residential pump controllers that detect faulty pump switches and override them to ensure operation of homeowner's pumps. Other features include the ability for the controllers to call a homeowner's cell phone, landline and/or pager with the use of an optional phone dialer. The difference between the PumpGuard and the PumpGuard Plus is that the Plus will alternate two pumps and the PumpGuard operates one pump.



Another housed booster system recently manufactured by Metropolitan Industries, Inc. and sold by Metropolitan Distributor, The Ohio Pump Company, is ready to pump water for Tamarack Golf Course in Osanburg Township, Ohio.

**Metropolitan
Industries, Inc.**

37 Forestwood Drive
Romeoville, IL 60446

Two New Products to Protect Against Residential Flooding

PumpGuard Plus



**Automated
Duplex Pump
Controller
and Alarm
System**

Patent No. 5,449,274
U.L. Listed

PumpGuard



**Eliminates the
threat of
flooding due
to a bad pump
switch**

Patent Pending
U.L. Listed

The Guardian of Dry Basements ...and Your Peace of Mind

The PumpGuard Plus™ is a state-of-the-art high water alarm and pump alternator. You will never worry about a bad pump again because the PumpGuard Plus alternates between the two pumps, each cycle, ensuring proper operation and wear. If a pump should fail, the PumpGuard Plus's override/alarm switch sounds the alarm, alerting you to the problem and then automatically activates the next pump in sequence, keeping your basement dry! Combine your PumpGuard with an optional dialer for remote alert and an optional battery back up system for the ultimate in flood protection!

A pump alone cannot protect your basement ...every pump needs a PumpGuard!

The PumpGuard™ is the most innovative pump protection system ever made due to its ability to eliminate the threat of flooding due to a bad pump switch. The PumpGuard features an alarm override circuit and switch that will not only sound an alarm but override your primary pump switch and run your pump if the switch fails. It is designed specifically for use with fully-automatic 115V sump or sewage pumps utilizing a two-cord piggyback switch system. Combine your PumpGuard with an optional dialer for remote alert and an optional battery back up system for the ultimate in flood protection!