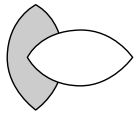


The Metropolitan Update



**Metropolitan
Industries, Inc.**

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A Message from the President

What's New At Metropolitan...a Lot!!!

It's been a while since our last newsletter and a lot of new things are occurring at Metropolitan Industries. In addition to the job and product profiles featured in this issue, we'd like to bring you up to date on all the expanding excitement around here.

We're Growing...Again !!!

In order to serve you better, Metropolitan is once again expanding our facilities in Romeoville. The pad is complete for another 50,000 sq. ft. addition scheduled to be completed by late summer. This expansion will house a new overhead crane system and pump testing laboratory, as well as additional manufacturing, service and warehouse space. Our expanded parking will include room for an additional 110 cars.

Turbine Pump Rebowling & Repair

Metropolitan has made a significant capital investment to provide major turbine pump overhauls. A dedicated lathe, computer controlled balancing machine, shaft straightening bench and a special turbine assembly bench in addition to increased inventory of bowls, impellers, shafts and accessories will now enable us to repair and return a typical turbine pump in 24 hours or less!! Call us for more details.

Continued back page

Ameritech Makes the Right Call Innovative Booster Package Tackles Hi-Rise Challenge

by Brendan J. Bates

When Ameritech needed to renovate one of their hi-rise office structures, the parameters of the project presented a unique challenge. The existing facility design consisted of a two-zone domestic water riser system incorporating two sets of triplex free-standing vertical multi-stage turbine booster pumps and controls. Each controlled two different pressure zones with the low-zone set-point at 130 PSI and the high zone set-point at 221 PSI. These systems were installed in an extremely tight mechanical room. Metropolitan was challenged to improve energy efficiency and ensure fail-safe operation while also delivering a system designed for maximum hydraulic flexibility. To accomplish this we also had to stay within an existing budget and... maintain the building's pressure throughout the installation!

Continued back page

Deicing at O'Hare

Metropolitan Contributes to the Renovated De-Icing System



**Newly renovated runway deicing fluid facility at
Chicago's O'Hare International airport.**

De-icing runways at Chicago's O'Hare International Airport is critical to airline scheduling across the country and proves to be a tactical challenge in operations.

Rausch Construction Company, Broadview, IL, recently undertook the major renovation of this system. The scope of the project required replacement of six 50,000 gallon underground storage tanks with four new 90,000 gallon above ground tanks. Included was an all new pumping system for filling and delivery of the de-icing fluid.

The unique characteristics in the viscosity and specific gravity of the de-icing fluid, in addition to the large quantities, made pump performance a major concern during the design phase of this project. Working closely with the specifying engineer, QST Environmental, Chicago, IL, enabled our staff to ensure that pump performance was within the specified tolerances.

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Go with the Flow

SCADA System Monitors Growing Suburban Water Pumping Station



Left to right: Jim Nietfeldt, Foreman; Thomas Albright, Director of Public Works; John Bachman, Water Superintendent; Chris King, Village Engineer.

The recent construction of a new water pumping station in the south Chicago suburb of Tinley Park will result in an ultimate capacity of 35 MGD. The system, designed by Robinson Engineering, South Holland, IL, consists of two 5 million gallon reservoirs and six (6) pumps. Phase 1 implementation resulted in installation of one reservoir and three (3) pumps, with the second reservoir and pumps to be added to accommodate future growth.

At the heart of the system is Metropolitan's SCADA (Supervisory Control and Data Acquisition) System. The Tinley Park SCADA allows operators to easily monitor and make changes to the pumping system. Information is available both locally via the Operator Interface, mounted on the motor control center and remotely through the Master Controller located in the operator's office.

At either location, pump status, discharge pressure, reservoir level, flow rates, system alarms and various

equipment failures can be monitored. The entire pumping station is also controlled with a Metropolitan PLC that monitors, anticipates and makes system changes in order to maintain a constant discharge pressure.

Metropolitan supplied the general contractor, Gaskill & Walton with pumping equipment that included: an altitude valve vault, master meter stations, three 200 HP, 4,000 gpm Aurora Pumps, a motor control center consisting of power distribution equipment and pump control logic, variable frequency drives and a 1000 KW diesel emergency generator capable of supplying back-up power for the entire facility.



Pump and piping gallery; expandable from three to six pumps.

Through advanced and thorough planning, the Tinley Park Pumping Station will efficiently provide the water supply to many southwest suburban communities for years to come.

You Know the Old Saying...“Down the Hatch”?



Hatch nets are available in every shape and size.

Not every Metropolitan innovation is high tech. Sometimes plain common sense leads us to a great idea that can be developed into a cost-effective solution to a problem shared by many. Introducing the HATCH-NET 121. This unique, lightweight net system greatly reduces the risk of fall-throughs. HATCH-NET 121 meets all current OSHA standards, comes completely assembled and attaches in minutes. It

retracts easily to allow authorized personnel access to pumps and equipment without restricting light or visibility for inspections. Contact us for complete product literature and more information.



Track system allows nets to slide to the side without disassembly.

Pump System Seminar a Success

Teaching Old Dogs Some New Tricks



We recently developed a seminar specifically to address the needs of the Miss-Rock and Kish-Rock organizations.

Comprised of professional operators of wastewater pumping stations, sewage treatment facilities and collection systems throughout northwest and western Illinois communities, the focus of the one day seminar was on how to identify potential pump system problems through preventative testing and before they caused an emergency situation.

Topics covered included basic testing procedures within the control panel, voltage and amperage readings and how accurate record keeping can predict and avoid potential breakdowns. Class members received some hands-on training in the Metropolitan classroom on pump component inspection, testing motor stators for open or grounded windings, proper seal maintenance and inspection of impellers and rings for excessive or premature wear.



Operators learning to recognize the differences between air damage and cavitation damage to impellers

An extensive Q&A session was conducted with many of the attendees sharing experiences with their peers. Our feedback was that this was a day well spent. If you could benefit from a specialized seminar, contact Metropolitan to discuss how one can be arranged that meets your needs.

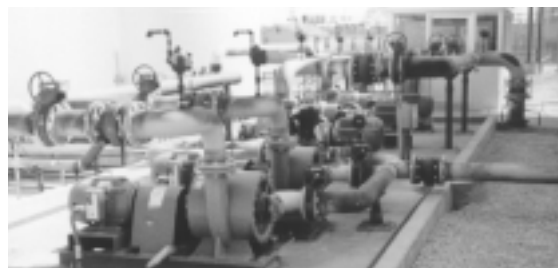
Deicing at O'Hare *Continued from page 1*

In conjunction with the project's mechanical contractor, Northwestern Industrial Piping, Inc., Niles, IL, Metropolitan provided a pump and instrumentation package including tank fill and product dispenser pumps, flow meters, level sensors and pressure sensors.

Designed to store the complete 360,000 gallons of fluid at one time, this capacity enables the airport to be prepared in the event of a major storm. The unique design includes automatic valves that direct the fluid to each of the four storage tanks. Through another system of piping and valves the de-icing fluid is circulated from one tank to another. Product re-circulation ensures the fluid's components remain in sus-

pension, even if stored for prolonged periods. The tank fill pumps double as the re-circulation pumps.

During inclement weather condi-



At the heart of the system are five double suction tank fill and product dispenser pumps.

tions, the stored fluid is pumped from the storage tanks to specially designed trucks that dispense product directly on the runways. Up to four trucks can be filled simultaneously at a centralized fill island.

The Metropolitan-installed instrumentation package included two flow meters, one for the tank fill and one for the product dispenser line, enabling operators to track both the batch and total flows of fluid in and out of storage. Each storage tank features continuous level monitoring and is equipped with a backup ultrasonic point level switch. System pressure is monitored at various points in the piping using gauge pressure transmitters. With level and pressure signals transmitted to a system control panel, efficient display, inventory management and report functions are accomplished that keep this vital airport service at optimum operation.

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President's Message

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Advanced Control Technologies

We have launched our own national brand of alarms and pumping controls. These will be marketed through a network of authorized Metropolitan representatives and distributors, in addition to OEMs. The new control design incorporates advanced technologies, yet will be priced quite competitively. Watch for our new catalog due out soon.

National Sales

We have added our own line of commercial pumping equipment and controls to our product mix. With our submersible pumps, self priming pumps, pre-fabricated lift stations, water pressure booster systems, HVAC systems and accessories, Metropolitan continues to be your "single-source" supplier.

We want to thank all of our customers for their continuing support and confidence in our business that enables us to grow. We will direct our resources to provide you the quality products, technical expertise and dedicated service that warrants your on-going business.

Sincerely,



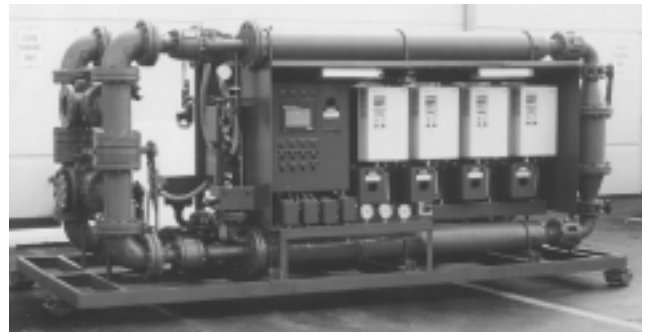
John Kochan, Jr.

Ameritech Makes the Right Call

Continued from page 1

Working hand-in-hand with the consulting engineering firm of Gamze, Korobkin & Calloger, Inc., Metropolitan developed one of the most innovative packaged booster system designs ever manufactured. All design criteria were addressed within this single packaged assembly.

The basis of the design is our innovative Metro-Varipac System-2100. By incorporating four 40 HP submersible pumps, four energy-efficient variable frequency drives, a Metro-Tech dual set-point logic controller and an ingenious piping configuration, the system effectively addressed the energy and physical space requirements of the installation.



Fail-safe single system handles two pressure zones simultaneously.

The unique innovation of this design is that it enables operation of any one of four pumps to provide domestic water to either one of the two pressure zones. Zone pressure set-points of either 130 or 221 PSI are achieved automatically while consuming only the minimum amount of kilowatts required for delivery. The most important benefit is that this system flexibility is attained without utilizing energy wasting zone pressure reducing valves.

The challenge of installing this system into the extremely tight mechanical room was accomplished by being able to split the 5'-6" x 14'-6" pre-piped and pre-wired system in half, to enable the contractor, National Power & Heat, to maneuver through a 30" door!

The system was installed during regular hours, with the final tie-in and switch-over accomplished on a weekend. That Monday morning Ameritech was up and running with an innovative new system that will last long into the next millennium.