



# aef/fyi

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Favorite Newsletter"

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TEAM AEF



HAPPY - BRAVE - NICE

Our 40th Year

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## THE PATH BACK

The re-opening of the PATH terminal at the World Trade Center site was a big step forward for New York, and TEAM AEF was part of it.

## AMAZINGLY CLEVER

How cool is it to be able to get a Totally Custom heat trace monitor and control system using Totally Standard PLCs? Very cool; read on.

## WHEN THINGS GO WRONG

You can tell a heckuva a lot about a company when things go wrong. Find out what happened when there was a faux-pas on a small snowmelting job in AEF Land.

## BERNADETTE'S BACK

She was not happy getting bumped from our last issue; but she is nothing if not gracious. Welcome back!

## PLUS...

-A true story with a Moral engineers should love.  
-Some exclusive fotos from our 40th Anniversary cruise.

# The PATH Back: Rebuilding NY

Rebuilding the World Trade Center PATH Station has been an extraordinary undertaking in every sense. TEAM AEF is proud to have played a role.

Prior to September 11, some 67,000 passengers per day utilized the PATH station at the World Trade Center. Determined to restore service to Downtown Manhattan as soon as possible, the Port Authority forged a strategy that allowed contractors to order materials and mobilize for construction even as engineers were completing design work on the station and the two-mile long tunnels running under the Hudson River.

From the very start of work in March 2002 the project has been more than just a construction job. PATH senior program manager Carla Bonacci voiced the sentiments of everyone involved: "There is really an emotional attachment to the site; it's very personal." The desire to re-open the station quickly and get the trains running again presented some very unique problems.

One of the contractors involved with heat tracing realized that due to the extreme fast-tracking he was going to need a lot of on-site assistance and installation layouts; not just boxes of heater cable followed by an invoice. He knew where he could get that kind of service, so he made a call and TEAM AEF went to work. (Go to page 2)



REBUILDING AT WTC SITE  
The new temporary PATH terminal is now serving over 50,000 riders every day.

# Coollest Heat Trace Monitor Ever?



Breakthrough PLC-Based  
Heater Circuit Management System  
Touchscreen Interface is intuitive, and simple.

Nelson's new CM-3 is here, and it may just be the coolest heat trace monitor and control system ever! Why? Because it provides complete monitoring and control of heat tracing circuits, using *standard* industrial automation products.

Yup, the same PLC's you already know and love (and already have in your plant) have learned a new trick. As part of Nelson's CM-3 they can now provide temperature and current monitoring for every heater circuit you've got, while also keeping operations personnel informed of temperature alarms, circuit faults and more through an intuitive touchscreen.

*It's a Beautiful Thing.* Now the very same PLC's your maintenance people are familiar with, and the data acquisition systems you already use, will be watching over every heater circuit in your plant 24/7, instantly alerting you to anything you should be instantly alerted about, via user defined alarm outputs. With the new CM-3 you get a *TOTALLY CUSTOM* monitor and control system that utilizes *TOTALLY STANDARD* PLC automation components. *Pure genius!* (Go to page 3)



# The Short Voyage of the Vasa



The VASA

August 10, 1628 was a beautiful summer day in Stockholm, Sweden; perfect for the thousands of spectators who had gathered around the harbor to view the maiden voyage of the royal warship *Vasa*.

King Gustavus II Adolphus *Vasa* wanted the ship bearing his family name to be most impressive ship ever launched, so she was decorated with more than 700 sculptures and ornaments, and bristling with 64 guns. It was said that the King ordered a second gun deck added to the ship when he heard that the Danes were building a ship with two gun decks: nothing would outshine the *Vasa*.

The *Vasa* had sailed less than a mile when a gust of wind made her heel over; water rushed in through the gunports, and in minutes the ship sank in 100 feet of water, with the loss of 50 lives. The pride of the Swedish Navy was gone, sunk in her own harbor by a gust of wind.

Naturally there was an investigation. The ship's designers, struggling to meet the King's demands, had tried to comply, and the *Vasa* became badly proportioned, and unstable. The Swedish Admiral had arranged a stability test, wherein thirty men ran from one side of the ship to the other, and back. After a few runs, the Admiral realized that if he continued the test, the *Vasa* would capsize right there and then. He canceled the test, but not the maiden voyage. The investigation, having reached so far up the food chain, was discontinued.

**Moral: A bad design is a bad design, no matter what the King or anybody else says.**

## Backwords

### Another Anniversary

Here at aef/fyi we have gotten so wrapped up in our 40th Anniversary that we completely missed a very important 10th Anniversary at Central Moloney. How could a company that's been building transformers since 1949 celebrate a 10th Anniversary in 2004? Well, here's how. For the fine folks at CM, January 28, 1994 was Independence Day; that's when senior management, key employees, and several rep organizations teamed up to buy Central Moloney from its corporate owners. Since that time they've had the freedom to make the decisions that help them help their customers --- the electric utility industry.

Decisions get made right there, by the Transformer People who own and run the company. When they need welding robots, they get welding robots; when they need new winding machines, they get new winding machines. No presentations to Corporate Bean Counters, no waiting and hoping that Corporate thinks their winding machines are more important than what's on all the other corporate divisions' Wish Lists. (Jealous, aren't you?) If you think a set-up like this would help take better care of their customers, you'd be right; that's the whole point! Congratulations, guys!

### Elephant Info

An elephant's skin weighs about a ton. It's trunk is about five feet long, can lift six hundred pounds, and holds about 1-1/2 gallons of water for squirting purposes. A wild African elephant spends 16 hours a day eating, taking in as much as 770 pounds a day, washed down by 40 gallons of water.



### TRANSFORMERS Central Moloney

Single Phase Transformers: Pole Type, Padmounted, Vault, and Stepdown  
Three Phase Padmounted Transformers  
Components: Bushings-Switches-Accessories  
NEW! JSRP Job Site Ready Padmounts!

### R.E. Uptegraff Manufacturing

Liquid Filled Transformers to 20mva  
Subsurface, Load Center, Station Type  
Rectifier Applications, Zig Zag Grounding  
Phase Changing and Phase Shifting  
Traction Power, Current Limiting Rectifiers  
Rebuilding and Rewinding Services

### HEATER CABLE & CONTROLS

#### Nelson Electric Heater Products

MI Cable for Pipe Tracing & Snowmelting  
Self-Regulating Cable for Pipe Tracing  
Hot Water Maintenance Cable  
Self-Regulating Cable for Roof & Gutter De-Icing  
Thermostats & Controls  
CM-1 Cable Monitoring Systems  
CM-2 Heat Trace Management System  
NEW! CM-3 PLC Based Circuit Management System

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### - AEF 40th CELEBRATION -



TEAM AEF marked their 40th Anniversary with a dinner cruise around Manhattan. Above: Chairman Tony and wife Lucy. Below: AEF Computer Maven Charlie Yang and wife Jenny. Prior to this we had no idea that Charlie could dance.







## Bernadette

The AEF Sales Answer Cow

DEAR BERNADETTE:

Doesn't anybody know what they're doing anymore? We're working on a job using heater cable to heat hot water, and the manufacturer sells us these 'Click Kits' that're supposed to close and automatically cut through the cable jacket and make a termination, supposed to be a big labor savings for me. Well, they were pretty darn expensive, but so are my field labor costs, so I figure I'll try 'em.

Anyway I'm in the trailer and two of my best guys come in with a bunch of these things, all of 'em broken, and they tell me they don't know, maybe it's just them, but they can't get those darn kits to work. Turns out these boxes are pretty flimsy things, and if the temperature's below fifty, which it was, the cable jacket is so hard the plastic breaks when you try to close the box. We wound up having to warm everything up with a blowtorch so we could make the splices, so this big labor-saving thing winds up costing me extra (plenty extra!) on field labor.

One more big favor from these guys and I swear I'm going into Alpaca farming. Tell me there's a better way, please! L.W.

DEAR L.W.:

There is a better way. Using self-regulating heater cable to provide hot water at the tap is definitely an idea whose time has come, but it makes a BIG difference which manufacturer you choose to work with (as you learned the hard way). Nelson's Hot Water Maintenance Cable is the way to go. It's the ONLY hot water cable endorsed by those Mavens of Heat at TEAM AEF. The right product, at the right price, with the on-the-jobsite expertise of TEAM AEF--- that's what will save you labor costs AND material costs. Gomer Pyle used to say 'Fool me once, shame on you; Fool me twice, shame on me!' Next time call AEF; I am personally a little dubious on this whole Alpaca thing.

DEAR BERNADETTE:

We've got a project coming up with snowmelting on it. It's laid out for a hydronic system, but I think M.I. is a better way to go. What do you think? H.L.

DEAR H.L.:

I'm with you all the way on this. Hydronic systems were used by the ancient Romans, but that was only because the ancient Romans didn't have electricity! When you figure in the costs and maintenance of all those valves and pumps and thermostats, and all the wasted energy running it on 'stand-by', hydronic systems just don't make \$ense. As one wag put it, "Hydronics is History". Rather droll, no?

One other major point to consider: the stuff running through hydronic systems is very toxic; any leakage anywhere and you've not only got a snow problem, you've got environmental and possibly legal problems as well. M.I. is what you want.

Got a Problem? Write to Bernadette for help. You can e-mail her at [Bernadette@aeftsales.com](mailto:Bernadette@aeftsales.com)

*People who enjoy meetings should not be in charge of anything.*  
Thomas Sowell

*The more upset a person is with other people, and with circumstances, and the more satisfied he is with himself, the further he is from wisdom.*

Leo Tolstoy

*Miserere, miserome; pero, brindo la vita.*

Andrea Bocelli

*It is not wise to lie in bed at night asking yourself questions you can't answer.*

Charlie Brown

*The feller that agrees with everything you say is either a fool or he is getting ready to skin you.*

Kin Hubbard

*Pretending that you believe a liar is also a lie.*

Arthur Schnitzler

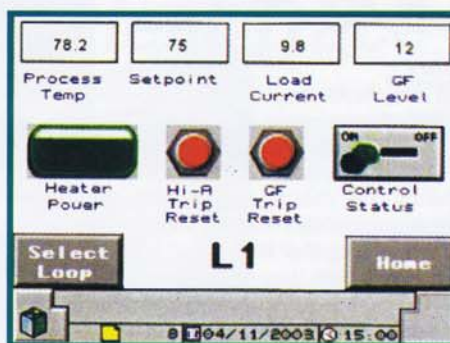
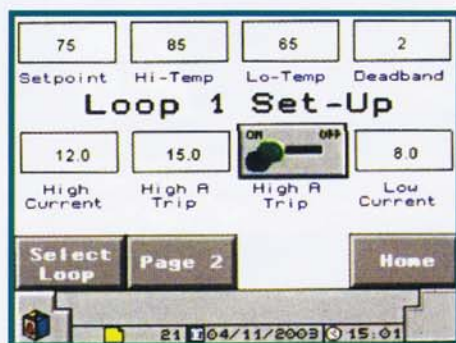
*When trouble arises and things look bad, there is always one individual who perceives a solution and is willing to take command. Very often, that individual is crazy.*

Dave Barry

*Reality is frequently inaccurate.*

*Hitchhiker's Guide to the Galaxy*

## CM-3: Makin' Life Simple . . .



*If you can work an ATM, you can monitor every heater circuit in your plant. Use the touchscreen at left to set up (or change) the parameters; the touchscreen at right gives you real-time status, and lets you reset ground fault settings, right now! The CM-3 provides ground fault protection, so you get ground fault protection using standard breakers!*

**As Easy As It's Ever Gonna Get.** It's never been this easy to give your facility the completely monitored heat tracing system you know you need, and frankly it's hard to see how it could ever get easier, so what are you waiting for? Did you forget last winter *already*?

To find out how the new CM-3 can make improve your quality of life, save you money, and help you lose those extra pounds effortlessly, get ahold of TEAM AEF today; in fact, RIGHT NOW! This way, when they cut your maintenance budget again, you'll already be a step ahead.



*No matter what side of an argument you're on, you always find some people on your side that you wish were on the other side.*

*Jascha Heifetz*

*Don't let anyone tell you that the purpose of an apple tree is to grow apples. Not in May, it isn't. In May the trees proclaim that their reason for being is to achieve a special glory of blossoms.*

*Hal Borland*

*Take a lesson from the lilies of the field, how they are growing; they do not toil, nor do they spin; but I say to you that not even Solomon in all his glory was arrayed as one of these.*

*Matthew 6:28-29*

*We don't read the Bible and we don't know what's in it. We are paying for it.*

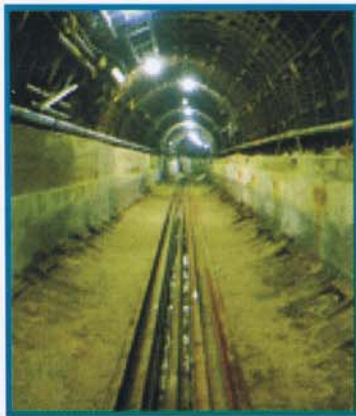
*George Gallup*

*No matter how your heart is grieving, if you keep on believing, the dream that you dream can come true.*

*Cinderella*

*The typical Nintendo game involves controlling a little man who runs around the screen trying to stay alive while numerous powerful and inexplicably hostile forces try to kill him. In other words, it's exactly like real life.*

*Dave Barry*



One of the tubes under the Hudson.

## The PATH Back . . .

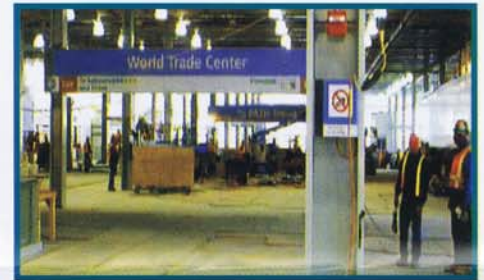
The first priorities were the areas adjacent to the track, since once the trains began to run again access would be very limited. Since time would be tight and deliveries would be critical, the first thing AEF did was to bring enormous amounts of the cable and controls that would be needed into our warehouse, so material would be there the second it was needed. (Eventually the project would require over 36,000 feet of cable, all shipped from the AEF Warehouse.)

The next thing was for TEAM AEF to start walking the track areas as fire standpipe, sprinkler lines, and hot and cold water lines were installed. Measuring pipes and revising designs based on as-built conditions, laying out circuits and calculating loads, and releasing material to the jobsite as needed was vital in completing all the trackside work in time for the first train to run on November 23, 2003.

With that first deadline met, things should have eased up a bit for the balance of the heat tracing work, but the extreme weather in January and February kept the pressure up. Every shipment from our warehouse in those months was overnighted, so the material needed on site was always there.

Work on the station is now just about complete, and 280 trains a day are carrying 50,000 riders back into lower Manhattan.

The resources of TEAM AEF were pushed to the limit on this job. A lot of time was logged on the jobsite by our salesmen, measuring, designing, and coordinating with the installers. There was a lot to do and not much time to do it in, and many critical decisions had to be made on the spot. The warehouse crew had to ship large amounts of material, often on very short notice, to make sure there was no time lost waiting. But this was a project to remember, and we were proud to play our part.



Entrance to PATH at World Trade Center.

## When Things Go Wrong

*A lot of the time you can tell a lot more about a company by how they act when things go wrong than when things go smoothly. Here's something that could have been a HUGE problem that tells you a lot about Nelson Heat Trace.*



TEAM AEF recently got a small order for an M.I. cable snowmelting job. One of the cables required a special 35 foot cold section, rather than the standard 7 foot. The order shipped on time, no problem.

**Wednesday April 7, 12:42 PM.** TEAM AEF gets an urgent call from the contractor on the job. Although the cable tag indicated that it had a 35 foot cold section, the cold section was actually only 7 foot. Worse yet, the contractor had discovered the problem only after he had already started to install it. Worsen yet, the cable was to be embedded in a concrete floor, and the pour was scheduled for the next day! *Yikes!*

An urgent call to Nelson informs them of the situation. The response? A promise to fly a factory tech to New York the next day, hand carrying the needed cold section with him, to make the splice at the job-site.

**Thursday April 8, 10.45 AM.** AEF wheelman Wes Rayburn waits at La Guardia, motor running, for ace tech Randy Rosenbaum to arrive with the cable. He whisks them to the job-site in Manhattan, where the repair was completed at 11:45 AM. Quoth the contractor: *"That's the best response I have ever seen, especially since this is a small job. I've never worked with a company like this before!"*

Is that the way your heater cable guys respond to a problem? If not, why not? Don't settle for anything less than Legendary Service. Make sure your heater guys are TEAM AEF and Nelson.

**A lot of people talk about service. We deliver.**

