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**A.E.F. SALES ENGINEERING COMPANY** Mamaroneck, NY Toll-Free (877) 803-9035 Fax (877) 803-9129

# aef/fyi

FALL  
2001

"America's  
Favorite Newsletter"

September 2001



HAPPY - BRAVE - NICE

Our 37th Year

## CONTENTS:

### **SUPERCABLEFRAJILIS TICEXPIALADOCIOUS!!!**

Even though the sound of it is something quite atrocious, you should read this article so you can be precocious, SuperCable Frajilisiticexpialadocious!!!

### **THERE WE GO AGAIN**

We put a whole pile of heater cable and accessories in stock at Galactic Headquarters, mostly to help our customers, but also cause it annoys the chowderheads at Harvard.

### **CHAIRMAN TONY'S EXCELLENT ADVENTURE**

Tony Fasolino's first trip to Italy. An fyi exclusive!

### **BREAKING THE SILENCE**

After years of silence, a word from our own Mr. Pete!

### **PENGUIN LOVE**

It ain't easy trying to raise a family in Antarctica. Emperor Penguins manage it.

## SuperCablefrajilisticexpialadocious!

**EDITOR'S NOTE:** On behalf of the entire staff of aef/fyi we'd like to apologize for the above headline, which is as lame as anything we've ever come up with. But do not be afraid--the article itself contains valuable information which has the potential to turn you into a Hero.

Customers of AEF Sales have come to rely on our reputation as 'Mavens of Heat' to keep them a step ahead in heat tracing, and AEF has recently come up with the latest thing in aheadedness, Nelson's type CLT-JT SuperCable.

CLT-JT starts out just like Nelson's famous CLT-CB heater cable, which is frankly a pretty good place to start.

After all we've used miles and miles of this all around AEF Land, and it's one solidly built self-regulating cable. Its' copper conductors are *bonded* to the conductive core, which is *bonded* to an inner thermoplastic jacket, which is *bonded* to an outer thermoplastic jacket, which is lovingly surrounded by a tinned copper braid. (Note: all that bonding is absolutely vital to the life of the cable, *and no one else does it!*)

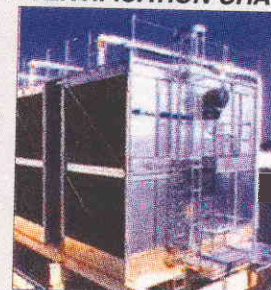
That tinned copper braid provides mechanical protection to the heater, and it also provides a path for fault current in order to trip protective devices, reducing the potential for fire and electric shock. This is so important that the NEC has required it (along with GFI breakers on every branch circuit) since 1996. But AEF (and their customers) were already ahead of the curve: from the very beginnings of plastic field-fabricated heater cables, AEF always supplied the "optional" protective braiding as standard, just because it was the right thing to do: when important issues like the safety of maintenance personnel, system reliability, and overall installed costs are considered, the small premium for the braid represented a cheap insurance policy. It took years for the NEC (and our competitors to catch on).

**Ahead of the Curve. Again.** Now we're standardizing on CLT-JT Supercable in most of our designs (and in our Amazing Local Stock), for a whole lotta good reasons. (Continued on 3)

### HANDY REAL-LIFE TOWER IDENTIFICATION CHART



IVORY TOWER



COOLING TOWER

If you're designing a heat tracing system for an Ivory Tower, use anything. If you're designing for a real cooling tower in a not-so-perfect world, you want CLT-JT cable. AEF has miles and miles of it on the shelf, just for you.

Clip and Save



**HARVARD BIG SHOT**  
Take a hike, pal.

## Oops, We Did It Again

Last year we put so much heater cable into our Amazing Local Stock that a group from Harvard Business School actually came by our offices just to make fun of us. From what we could make out, they were saying something about too much Inventory, inadequate Return on Investment. They said we needed to minimize Capital Outlays, and put people on Hold more.

Well, we were so impressed with their wisdom that this year we put in even *more* stuff, just to aggravate them. So right now our shelves are loaded up with *over eleven miles* of heater cable in 33 flavors, plus piles of accessories and thermostats, and not one, not two, but *three* of Nelson's fabulous CM-1 Monitor Panels (12 and 24 circuit). We figure everything'll work out OK, especially for our customers. Seems to us that when one of our customers needs heater cable, especially this time of year, a lot of the time they need it RIGHT NOW. That's why we keep it RIGHT HERE. Last year we shipped most of our orders directly from our Amazing Local Stock, and 96% of those shipped *the same day the order was placed!* Good to know.

Anything's possible,  
but some things are  
very unlikely.

Dooms Madigan

A good parent  
remembers what it was  
like to be a child.

Anna Quindlen

Do not become righteous  
overmuch, nor show  
yourself excessively wise.  
Why should you cause  
desolation to yourself?

Ecclesiastes 7:16

Most people operate on  
the basis of: 'Do unto  
others as they do unto  
you except you do it first.'

George Harrison

Is it cold in here,  
or is it just you?

Joe Diffie

The wine and the sun  
will make vinegar  
without any shouting to  
help them.

Tuscan Proverb

I hate people who  
are intolerant.

Laurence J. Peter

I wish I didn't know now  
what I didn't know then.

Bob Seger

Never go to bed mad.  
Stay up and fight.

Phyllis Diller



## A Word from Mr. Pete

He's our sunshine, our inspiration, our Fearless Leader.  
And he signs our checks. Please listen to him.

A few years ago --- it seems like only a few weeks somehow --- the heater cable and controls inventory here at AEF Sales was pretty uncomplicated: two types of heater cable (500 or 1000 feet of each), two types of thermostats, one type of termination kit, a few rolls of fiberglass tape, and some warning signs. The whole inventory back then could fit very neatly into a small closet.

Our inventory today represents an enormous change in a fairly short amount of time. Rack after rack of floor to ceiling steel shelves packed with 33 types of heating cable, 12 types of thermostats (including NEMA 7 explosion proof), 19 types of termination kits and components (for ordinary, Division 1, and Division 2 areas), snow melting controllers and probes, and three CM1 monitor panels. We've gone from six line items to well over a hundred, from a thousand feet of cable up to eleven miles of it.

The purpose of all this inventory is to help us grow the company by providing the best possible service to our customers. We keep our existing customer base happy by getting them the products they need quickly. And we often get new customers because they need cable NOW and the "other guys" can't deliver quickly enough. The level of service that we provide means that many of these new customers become repeat customers. And with fall heater season coming up, we're beefing up our inventory even more.

Henry Thoreau wrote that the true cost of a thing is how much life we exchange for it. If you'd like to exchange less life for your pipe tracing and snow melting systems, why not give us a call?

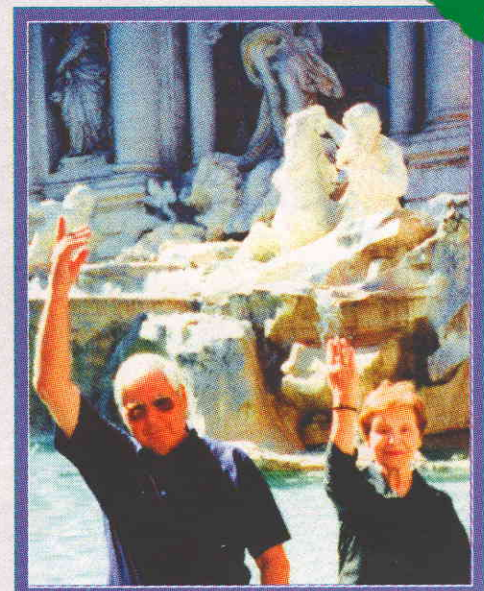


Enjoying a gondola ride on the Grand Canal with Stefano, the nicest gondolier in Venice. The famed Rialto Bridge is in the background.

In June AEF's Chairman Tony and wife Lucy made their first ever trip to Italy, spending two beautiful weeks in Venice, Rome, Naples, Capri, and the tiny southern hill town of Calitri (to visit cugini). They were accompanied by **acf/fyi** Editor Chris Fasolino and his family.

Italy is so beautiful that we believe everyone should be forced to go there. Call Tony for the name of the best place to eat in Venice, the best ceiling in Rome (Hint: it's not the Sistine Chapel), and the inside scoop on the best ristorante in the world (it's in the Santa Lucia section of Naples). Please go to Italy immediately, even if you don't have

## Chairman Tony's Excellent Adventure



Two Coins in a Fountain. Tradition has it that if you throw coins into the Trevi Fountain, you will return to Rome. This actually seemed to work: this photo was taken June 5th, and Lucy and Tony returned to Rome on June 12th!

# Bernadette

## The AEF Sales Answer Cow

Guest Columnist



*Bernadette is a Registered Holstein, and a Notary Public.*

DEAR BERNADETTE:

I've got a real situation and I don't think there's any help out there--you're my last chance. In the building I manage the demand for power has been creeping up for years (all those computer monitors I guess) but we've been able to get by. Not any more; I need to replace the main transformer. My problem is space--the unit that's there now barely fits. Plus a new unit is going to have to match up with the existing switchgear (at least there's enough spare capacity there). I've talked to every transformer company I could think of, but none of them can build what I need. Any ideas? N.B.

DEAR N.B.:

Those companies you speak of can't help you, and chances are they don't even understand your problem. One of the sad things in the world today is that while there's no shortage of fancy dancers and

*Need Help? Don't fret, ask Bernadette. E-mail her: [bernadette@aeftsales.com](mailto:bernadette@aeftsales.com)*

## SuperCable . . .

While that tinned copper braid is vital, it's not invulnerable. It's susceptible to corrosion from moisture. In the real world, weeks may go by between installation of the heater cable and the time the pipe is insulated, and by that time damage may have already been done.

The danger persists even after the pipe has been insulated: if the insulation gets damaged, or if the pipe or a valve or a flange starts to leak, that tinned copper braid may find itself in a permanently wet environment.

If any of those things happens (and they happen every day), the braid can deteriorate and you can lose your fault current path; then those expensive GFI breakers become worthless, unable to do their job. That's bad.

**Survivor.** They say that you should never watch sausage being made, and you're also probably better off not seeing heater cable installed in the Real World. It's not pretty: heavy tools get dropped onto innocent heater cable; and watching a hundred foot long piece of cable get pulled through hangar supports is not for the squeamish. That's why the overjacket is so danged important--it protects that vital braiding, and at the same time provides an extra measure of moisture resistance. (Moisture working its way into the cable can cause the cable to fail, and can even cause fire. You don't want that.) That's why when you get a design or a quote from the sweet people of TEAM AEF, you'll see them using CLT-JT. And that's why they've got mountains of it in their Amazing Local Stock, so you can have it tomorrow.

So remember, if you're designing a heat trace system for an Ivory Tower, use whatever the heck you feel like using. But if you're designing for the Real World in all its' brutality, make sure you're using Nelson's CLT-JT SuperCable. All together now:

***SuperCablefrajilisticxpialidocius!***

### APOLOGY

We had promised our readers that this issue of **ae/fyi** would be totally devoted to Willie Nelson, and it didn't happen. We regret any inconvenience, but there's nothing we can do about it now.

smooth talkers, there's fewer and fewer people who actually know what they're talking about. This is particularly noticeable when it comes to liquid filled power transformers--some of these big corporations seem to want you to order by catalog number, so they won't get confused.

The trick to making your way in this kind of world is to find people who know what they're doing, and stick with them. While thirty years ago there were a number of companies you could turn to for a solution, today there's only one: Uptegraff. They've done these things before, and they still can. Go to them--you'll be very happy.

DEAR BERNADETTE:

I was watching Sesame Street with my nephew and after the show it said that the show was made with funding from the Corporation for Public Broadcasting, which is basically tax money. Just in my nephews bedroom there's gotta be eight or nine hundred dollars worth of Sesame Street junk, so I figure over the last twenty years they must've sold billions of dollars worth of stuffed animals and such, so how come they still need public funding? W.D.

DEAR W.D.:

There are some things that nobody knows, and that's one of them. Try not to think about it too much.

### ★ QUESTION FOR EXTRA CREDIT ★

#### WHY NOT JUST USE A STAINLESS STEEL BRAID?

*Glad you asked. While it's true that a stainless braid wouldn't be subject to corrosion, it has two big problems.*

- 1. It can't really carry fault current, so your GFI breakers don't do any good.*
- 2. It's too brittle--if someone drops a tool on it it won't give, it'll just cut right into the cable it's supposed to be protecting.*

*Also, you wouldn't be getting the extra protection from moisture the overjacket provides. Capisce?*

*Might is not only very often right, it is often the equivalent of beauty, culture, intelligence and charm as well.*

*Luigi Barzini*

*Every nation ridicules other nations, and all are right.*

*Arthur Schopenhauer*

*There's movies today I wouldn't let Trigger see.*

*Roy Rogers*

*It is hard to believe in God but it is harder to disbelieve in Him.*

*Harry Emerson Fosdick*

*People demand the freedom of speech to make up for the freedom of thought which they avoid.*

*Soren Kierkegaard*

*We heap up around us things that we do not need just as the crow makes piles of glittering pebbles.*

*Laura Ingalls Wilder*

*Live so you can at least get the benefit of the doubt.*

*Kin Hubbard*

*I know just what I'd change if I went back in time somehow, but there's nothing I can do about it now.*

*Willie Nelson*

*O bla di, o bla dah, life goes on.*

*The Beatles*

# Penguin Love



The biggest of all penguins is the Emperor Penguin, three feet tall and weighing up to ninety pounds. Emperor eggs take a long time to hatch, and once hatched, the chicks take a long time to grow big enough to fend for themselves. So instead of laying eggs in spring like most birds, Emperors have to start the process at the beginning of winter, which can be pretty challenging if you live in Antarctica.

The female lays one egg, which she has to lift off the ice before it freezes. She passes it to the father, who keeps it balanced on his feet, under his feathers. She then heads off to sea, to get food. The problem is that by this time ice has been forming, and the sea is now ninety miles away. It takes a penguin a long time to walk ninety miles.

What's left is a couple of thousand father penguins, each balancing an egg on his feet, waiting out the dark Antarctic winter, spending two months standing out in temperatures that reach seventy below zero. The expectant fathers change places, so each has some time in the relative warmth of the inside of the crowd, out of the wind.

Eventually the two months pass, and the chick hatches, a little gray ball of fluff. But Dad has no way to feed it, and Mom's nowhere to be found. As unlikely as it seems, this is the moment when all the penguin mothers are returning. (It's spring now, so the coastline is not as far away as it was.) In that mob of thousands of penguins, which all look alike to us, she goes directly to her mate, relieves him of duty, and then feeds her chick with a tasty bit of regurgitated fish.

It makes you wonder: How do they know what they know? How is their timing so perfect? And how the heck do they tell each other apart? (Try to think about penguins for a while without smiling.)

## Backwords

### Smart Dude

Eratosthenes, the chief librarian of the Museum of Alexandria around 2,200 years ago, was one smart dude. He wanted to know the diameter of the earth, a sticky problem given the tools available to him, so here's what he did. The learned ancients believed the earth to be a sphere. (This was before Europe's Dark Ages.) At noon on midsummer's day, the sun is directly overhead in Syene (a city some 150 miles due south of Alexandria), and so casts no shadows. At that same time Eratosthenes measured the shadow of a vertical post in Alexandria. Knowing the distance between Alexandria and Syene, he used plain old Euclidean geometry to calculate the circumference of the planet, and hence its diameter. He came out with a diameter of 7850 miles; today's scientists have it figured at 7900 miles. There is something audacious about a man less than six feet tall being able to gauge the form and size of something as big as the Earth. If he was around today he'd probably spec Nelson's CLT-JT heater cable all the time.

### Smart Site

nelsonheaters.com, already the smartest heat tracing site on the net, has gotten even smarter. Everything you need, from physical and electrical diagrams of every type of connection kit and thermostat, to a tour of Nelson's sophisticated Monitors and Controls. You can even download RENEGADE, the best heat tracing software in the world FREE. If you log enough time on this site, you may eligible to become an official Assistant AEF Maven of Heat, and cleared to wear an AEF Secret De-coder Ring. (Ask your rep for details.)

### Dodgers

Back in the old days there were so many trolley lines criss-crossing Brooklyn that folks from Brooklyn were called 'trolley-dodgers'. Now you know how the Brooklyn Dodgers got their name. Go amaze your friends.

# aef

A.E.F. SALES ENGINEERING COMPANY

## TRANSFORMERS

### Central Moloney

Single Phase Transformers: Pole Type, Padmounted, Vault, and Stepdown  
Three Phase Padmounted Transformers  
Components: Bushings-Switches-Accessories



### R.E. Uptegraff Manufacturing

Liquid Filled Transformers to 20mva  
Subsurface, Load Center, Station Type  
Rebuilding and Rewinding Services



## HEATER CABLE & CONTROLS

### Nelson Electric Heater Products

MI Cable for Pipe Tracing & Snowmelting  
Self-Regulating Cable for Pipe Tracing  
Self-Regulating Cable for Roof & Gutter De-Icing  
Thermostats & Controls  
CM-1 Cable Monitoring Systems  
CM-2 Heat Trace Management System



## CLEAN POWER PRODUCTS

### Rapid Power Products

Power Conditioners, Voltage Regulators  
Isolation Transformers to 1000kva  
Rectifiers, 50kw to 3000kw



## WIRE & CABLE

### Conex Cable

Aluminum Clad Shield Wire, Guy Wire  
Messenger Wire, and ACSR/AS (AW)



### Nehring Electrical Works

Bare Copper and Aluminum Cable  
Aluminum Clad Cable  
Weather Proof Copper Wire  
Ground Rods & Accessories  
Cathodic Protection Cable



## AEF's NELSON (Electric and Willie) HISTORY QUIZ CONTEST

We haven't had a contest around here in quite a while, so here she goes. First Prize will be the CD "Willie Nelson: 16 Biggest Hits".

Here's the QUESTION:

Which President of the United States had 15 children? (Eight with Wife #1, and seven with Wife #2)

Here's another Clue for you all:

He married Wife #2, who was thirty years younger than him, while he was President.

e-mail your entry to Bernadette@aefsales.com

Bernadette will be the sole judge; her decision is final.

This issue of aef/fyl is brought to you by the letter 'G'

## -IN THE NEXT BIG ISSUE -

Frankly, we have no idea at this point what's going to be in the next big issue, but we're not going to start worrying about it now.