



THE QUARTERLY NEWSLETTER FROM  
A.E.F. SALES ENGINEERING COMPANY

FALL 19  
WINTER 92

Over the years, I have used this part of our company newsletter to pass along information that I thought would be helpful to our readers, or that would explain something about the company and how we see our role in the marketplace.

In this issue, I'd like to pass along what I think are some very important changes in the National Electric Code for 1993. The change effects branch circuit protection and applies to all methods of electric de-icing and snow melting.

Section 426-53 states that "Ground-fault protection of equipment shall be provided for branch circuits supplying fixed outdoor electric de-icing and snow melting equipment."

**memo**  
**from the desk of Tony Fasolino**

This requirement affects circuit lengths chosen, voltages used, and other basic design parameters.

For 28 years, we have been assisting in the design of these systems, and we are available to discuss and design systems to comply with the new code requirements.

Give us a call!

Back at the turn of the century, college football was a very different game than it is today. It only took five yards to make a first down -but many games still ended in scoreless ties. Play after play, teams would square off at the line of scrimmage and slam into each other at the snap of the ball. Running plays up the middle were the order of the day. The forward pass was illegal.

As early as 1903, visionaries like John Heisman of Penn were pushing for a rule change to allow the forward pass. And in 1906, the rule makers of college football gave in - after a fashion. The forward pass became legal, but an incomplete pass was subject to a 15 yard penalty - with loss of down. With that kind of penalty on innovation, few teams were willing to give it a try.

In 1912, the rules were changed again. An incomplete pass still meant the loss of a down, but no yardage penalty was tacked on. Still, the college football powers of the East stayed with the tried and true: three yards and a cloud of dust.

Then, in November of 1913, a lightly regarded team from Notre Dame came to West Point to battle Army. Quarterback Gus Dorais and a receiver with the unlikely name of Knute Rockne showed the East how the passing game worked. They beat Army by a score of 35-13, and the game has never been the same since.

At A.E.F. Sales, there's never been a penalty on innovation. New products, new services, new technologies, and new ways of doing business are constantly being evaluated and tested.

The goal, in our case, is not the end zone. Our goal is to reach a level of customer service and satisfaction that will leave our customers with only one question: how did we do business in the old days?

**INSIDE THIS ISSUE**  
**EPSI: HEADING TO VENUS?**  
**GLEASON: AWAY WE GO!**  
**A.E.F. SALES: WHAT'S NEW**

## AND AWAY WE GO!

*I don't like money,  
actually, but it quiets  
my nerves.*

*Joe Louis*

*Credit: a person who  
can't pay, gets another  
person who can't pay,  
to guarantee that he can  
pay.*

*Charles Dickens*

*Parents were invented  
to make children happy  
by giving them  
something to ignore.*

*Ogden Nash*

*The race is not always  
to the swift, or the  
battle to the strong--  
but that's the way to  
bet.*

*Damon Runyon*

*I have already given  
two cousins to the war,  
and I stand ready to  
sacrifice my wife's  
brother.*

*Artemus Ward*

*Gardens are not made  
by singing, "Oh, how  
beautiful," and sitting in  
the shade.*

*Rudyard Kipling*

*Before I got married I  
had six theories about  
bringing up children.  
Now I have six children  
and no theories.*

*Lord Rochester*

Gleason Reel Corporation has been doing business since 1911, and is an industry leader in cable and hose handling equipment. Last year, A.E.F. Sales was appointed as Gleason's rep agency in the New York/New Jersey area.

Gleason's product lines have included Cable Reels, Hose Reels, Festooning Systems, PowerTrak, and Slip Rings for virtually any application. But they're not resting on their laurels -- now there is something new . . .

### **ERGONOMICS**

Starting at the beginning, what exactly is Ergonomics? Is it:

- A) Something to do with Jane Fonda?
- B) The driver's seat of a Lexus?
- C) The slogan that made Rene Descartes famous?
- D) The scientific study of the relationship between a worker's job performance and well-being, and his tools, equipment, environments, and tasks?

The correct answer is "D", but we'll give partial credit for "C" -- at least it has an ergo in it.

A worker asked to perform a task for which his body is not designed must change something: either the rate at which he works, or the

quality of his work. Either way, performance suffers and productivity is lost.

If the worker makes no adjustment, an ergonomic injury may occur. And these injuries and illnesses are having a staggering effect on industry: repetitive motion disorders are expected to exceed all other work-related injuries during this decade. Carpal Tunnel Syndrome and tendonitis are two examples. And ergonomic injuries are expensive.

### **AN OUNCE OF PREVENTION**

Your grandmother was right: an ounce of prevention is worth a pound of cure. And in this case the ounce is a properly designed workplace, using standardized and relatively inexpensive Workstation components from Gleason. Tool balancers to make tools weightless. Torque arms to neutralize the torque generated by power tools. Trolleys to put the right tool in the right place. And Workstation kits, Boom kits, and Jib kits to put the trolley in the right place.

All from a manufacturer you know-- Gleason -- and folks you know -- A.E.F. Sales.

Call us and we'll make sure you get a copy of Gleason's ED92 catalog.

Wouldn't it be nice if all your problems were this easy to solve?



## EPSI POWERHOUSE CHOSEN FOR VENUS COLONY PROJECT

**DATELINE HOUSTON 1997**  
NASA officials here announced that Electrical Power Systems Inc. of Tulsa, Oklahoma has been selected to design and build the critical Terraforming Initialization Powerhouses for the Venus Colony Project.

The standard design EPSI powerhouse uses "Galvannealed" steel. The galvannealing process begins with a hot dip galvanized material that is heat treated to produce a zinc-iron alloy. This eliminates spangle and provides a uniform thickness of coating with a weight of A60 -- which meets ASTM A525. Unlike ordinary galvanized steel, Galvanneal has superior paint adhesion characteristics compatible with most paint systems. The result is a Powerhouse that provides many years of service in environments ranging from tropical salt-laden air to harsh corrosive geothermal geyser fields.

*Each decade goes exactly twice as fast as the decade before.*

Dave Barry

*You may have noticed that the less I know about a subject, the more confidence I have, and the more new light I throw on it.*

Mark Twain

*When you have got an elephant by the hind legs and he is trying to run away, it's best to let him run.*

Abraham Lincoln

*I honestly believe it's better to know nothing than to know what ain't so.*

Josh Billings

*It is inexcusable for scientists to torture animals; let them make their experiments on journalists and politicians.*

Henrik Ibsen

*All of the animals except man know that the principal business of life is to enjoy it.*

Samuel Butler

According to NASA, the Initial Phase (prior to the establishment of the Biosphere) presented enormous problems due to the environment: the planet is surrounded by thick clouds of sulfuric acid, has an atmospheric pressure of 1352 pounds per square inch (compared with 14.7 here on Earth), and surface temperatures of up to 850 degrees Fahrenheit.

"The difficulties caused by the extreme conditions almost forced us to cancel the whole project," according to one official, "but fortunately EPSI came up with a design that did the job." The trick, according to EPSI designers, was to fully utilize new technology. "We used an inner wall of diburnium-osmium alloy reinforced with titanium, with an outer shell of transparent aluminum. It was the only way to go."

**SOLUTIONS FOR TODAY**  
The problems EPSI's customers face today may not be so exotic, but they still require creative thinking and flexibility.

Special environments require unique designs. For an extremely corrosive environment in a West Texas refinery, EPSI recently built a Powerhouse completely out of stainless steel. And when a customer in New Jersey wanted their Powerhouse to blend in with its surroundings, EPSI shipped a building with a concrete aggregate exterior.

In both cases, the procedure was the same: find out what the customer needs and build it.

Can we build one for you?

## NEUTRINO ALERT!

Neutrinos are highly energetic subatomic particles, with little or no mass, produced by the sun. The particles are so tiny that they can pass through solid materials at the speed of light. Right now, as you are reading this, neutrinos are passing through your body at the rate of trillions per second. This is true even at night: neutrinos pass easily through the earth. Scientists estimate that a neutrino collides with one of the atoms your body about once a year. Ouch!



## WHAT'S NEW

The last twelve months have been especially exciting here at A.E.F. Sales. A brief look at some of what's new:

**Design and construction of new office and material storage facilities in Mamaroneck. This project went from concept to reality in less than six months.**

**Installation of a new phone system, with enhanced internal and external communications abilities.**

**Upgrade of power protection on all computers and communications equipment, including installation of a UPS able to run critical voicemail and fax equipment for over four hours on batteries.**

**Installation of a Windows-based accounting program to handle all resale activities, including purchasing, invoicing, inventory, and detailed customer records. In its first year of operation, over five hundred transactions were recorded with a total value in excess of one million dollars.**

**Addition of three new 486 based computers, and the retirement of the last sub-386 machine.**

**Addition of a back office facility to handle resale operations, production and mailing of the newsletter, and develop in-house CAD capabilities. Also functions as a remote hot site for critical main office applications.**

**Watch for a whole new look in our next issue of FYI, coming to your mailbox on or about March 1st. You'll receive four big issues every year, at the same great price.**

**We welcome your comments on this issue, and invite your suggestions for future issues. Drop a note to:**

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## A. E. F. SALES WHO & WHAT

### **BEST POWER TECHNOLOGY**

*(Authorized Reseller)*

*Ferrups Single Phase UPS to 18kva*

### **LORTEC POWER SYSTEMS**

*On-Line UPS to 225kva*

*Specialty Inverters*

### **RAPID POWER TECHNOLOGIES**

*Power Conditioners to 1000kva*

*Voltage Regulators to 1000kva*

*Isolation Transformers to 750kva*

### **GLEASON REEL CORPORATION**

*Cable and Hose Reels*

*Festoon Systems and PowerTrak*

*Workstations and Tool Balancers*

### **MYRON ZUCKER, INC.**

*Low Voltage Capacitors to 600 volts*

*Harmonic Traps*

### **R.E. UPTGRAFF MANUFACTURING**

*Liquid-Filled Transformers to 15mva*

*Subsurface, Load Center, Station Type*

*Rebuilding and Rewinding Services*

### **CENTRAL MOLONEY**

*Single Phase Transformers: Pole Type,*

*Padmounted, Vault, and Stepdown*

*Components:*

*Bushings, switches, accessories*

### **NELSON ELECTRIC**

#### **HEATER PRODUCTS**

*Mineral Insulated Cable for Pipe*

*Tracing and Snow Melting*

*Self Regulating Cable for Pipe Tracing*

*Thermostats*

*Control and Monitoring Panels*

### **ELECTRICAL POWER SYSTEMS, INC.**

*Low and Medium Voltage Switchgear*

*and Motor Control*

*Powerhouses: Special Purpose*

*Buildings for Distribution and Control*

### **NEHRING ELECTRICAL WORKS**

*(For Utilities Only)*

*Bare Copper and Aluminum Cable*

*Aluminum Clad Cable*

*Ground Rods and Accessories*

### **NORBERG INDUSTRIES**

*Silver Sand Current Limiting Fuses*

*Type R Motor Starting*

*Type E General Purpose*