

Today's

February 2019

Industrial Products & Solutions™

The Complete Purchasing Guide for Today's Industrial Market

www.tipsmag.net

Forging Ahead
with Advanced
HDPE Cooling
Towers

Comprehensive Emergency
Lighting System Solutions
from Single Source Providers

GERDAU
TUBO S.p.A. PISA



*Innovation. Quality & Performance
Backed By Decades Of Experience*

(251) 937-0947

FABRICATING MACHINERY

**Meeting Today's Industry demands for tough and reliable
Fabricating Machines** sales@carellcorp.com • www.carellcorp.com

Plate Rolls

1/8" to 4" Capacities, CNC Options,
Vertical Rolls, Translating Geometry
& More!

4 Roll
3 Roll
2 Roll

Superior
PLATINUM
Warranties



Over 150
Models



Angle Rolls

1" to 10" Capacities, 30 Models Available
Push Button or Graphic CNC Controls, LED's & Universal Rolls
Are Standard, Variable Pitch Coiling Solutions,
Half Pipe Production Options,
Custom Tooling for all Profiles

Pipe Benders

**Carell & Eagle Carry 100+ Units in Stock
Backed by Superior Warranties & Service**



- Horizontal Presses
- Tube & Pipe Benders
- Rebar Benders & Shears
- Ornamental Bar Workers
- High Speed Production Cells
- Custom Machines

Profile Bending Machines



Heavy Duty & Affordable
1" to 3" Capacities, 15 Models
CNC & Ornamental Options
All work both Horizontal & Vertical



NEW! Eagle DP7 Controls
w/ Direct Radius Readout



All Models In Stock
Custom Tooling
Built In-House



(251) 937-0947

www.eaglebendingmachines.com
sales@eaglebendingmachines.com

JESCOHYDRATILT™ DUMPERS



HYDRAULICALLY CONTROLLED HOPPERS

These units are ideal where control of the quantity of material dumped or the rate of discharge is critical. They operate off the hydraulic system of your forklift and come complete with male quick-disconnect hoses for easy attachment to the forklift.

JESCO® PARTITIONS



DIAMOND WIRE MESH ENCLOSURES

Time tested diamond mesh partitions have been preengineered for easy installation, give an unrestricted view into the cage, total air circulation, low initial cost and maintenance. Send us the footprint of your project and allow our engineers to assist you on your next project!



CONVERT YOUR FORKLIFT INTO A WORK PLATFORM!

Base and 4 inch side curbs are formed from one piece of heavy gauge sheet for extra strength. Slip resistant floor. Hinge gate with safety lock. Safety pins behind each fork. Safety chains on back to attach to forklift carriage. Meets or exceeds OSHA safety guidelines. Several accessories to choose from. Available in 40', 72', 96', and 120' lengths.

JESCO WORK PLATFORM



JESCO GARD®

PROTECTIVE GUARD RAILING

These versatile guards act as both a visual and physical barrier to help protect people and property such as aisles, docks, conveyors and other equipment.

Designed and tested to stop a 10,000 lbs load impacting at 4 mph from breaking through. All hardware is included.



Call 800-529-6697

Visit www.JescoOnline.com

JESCO
— Since 1932 —

Jesco Industries, Inc.
Ph: 517-542-2903 Fax: 517-542-2501
PO Box 388 Litchfield, MI 49252-0388

TIPS CONTENTS

- PG 4 Comprehensive Emergency Lighting System Solutions from Single Source Providers
- PG 10 Company Profile: Safety Through Engineering
- PG 12 Forging Ahead with Advanced HDPE Cooling Towers
- PG 18 Beckwood and KOMT Deliver Automated Press for Spirit AeroSystems Joule Form™ Manufacturing Process
- PG 20 Amada Miyachi America Announces MM-400A Desktop Resistance Weld Checker
- PG 22 Avoid Non Compliant Payroll Errors - Avoid Stiff Fines- Jail Time
- PG 26 Company Profile: Jesco
- PG 28 Ad Index

PUBLISHER

Anne Marie Miranda
205-624-2184
anm@handfmedia.net

ASSOCIATE PUBLISHER

Bart Beason
bart@tipsmag.net

EDITOR

Brandon Greenhill
brandon@tipsmag.net

CREATIVE/ WEB DIRECTOR

Jacklyn Greenhill
jacklyn@handfmedia.net

ADMINISTRATIVE DIRECTOR

Steven Hobson
steven@tipsmag.net

CEO

Christy Hobson

PRESIDENT

Glen Hobson

Get Cool!

Extend transformer life!
Increase transformer capacity up to 166%!

- expert technical assistance
- low sound levels
- energy-efficient motors
- large inventory
- one-piece cast aluminum blades
- galvanized or stainless steel guards

KRENZ-VENT
quality engineered, performance tested

www.krenzvent.com



Executive and Advertising Offices

P.O. Box 1568

Pelham, AL 35124

Phone: 205-441-5591 Fax: 205-624-3354

www.tipsmag.net • glen@tipsmag.net

Today's Industrial Products & Solutions™ is published ten times a year on a monthly basis by H & F Media, Inc. Today's Industrial Products & Solutions™ is distributed free to qualified subscribers. Non-qualified subscription rates are \$57.00 per year in the U.S. and Canada and \$84.00 per year for foreign subscribers (surface mail). U.S. Postage paid at Birmingham, Alabama and additional mailing offices.

Today's Industrial Products & Solutions™ is distributed to qualified owners and managers in the industrial industry. Publisher is not liable for all content (including editorial and illustrations provided by advertisers) of advertisements published and does not accept responsibility for any claims made against the publisher. It is the advertiser's or agency's responsibility to obtain appropriate releases on any item or individuals pictured in an advertisement. Reproduction of this magazine in whole or in part is prohibited without prior written permission from the publisher.

POSTMASTER: Send address changes to

H & F Media, Inc. P.O. Box 1568

Pelham, AL 35124

PRINTED IN THE USA



HERCULOCK

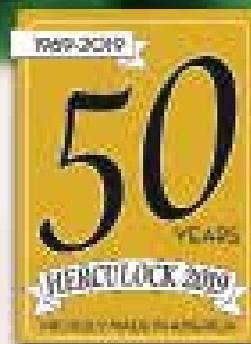
Hercules Industries, U.S.A.®

Solid Brass Padlocks

Hercules Industries, Inc. brings to you the most complete line of solid brass tumbler pin padlocks:

Our locks serve the needs of utilities, state and local governments, business, and agriculture. Precision crafted out of solid brass, our locks withstand inclement weather conditions, and are available with brass, stainless steel, and heat treated (HT) stainless steel shackles. Locks are available keyed alike or different, masterkeyed, and grand masterkeyed. We also can key our locks to most popular keyways (i.e. Master, Corbin, Yale, Best, and others).

We are committed to competitive prices, fast delivery, and top quality.



HERCULES INDUSTRIES, INC.
Manufacturer of HERCULOCK Padlocks
P.O. Box 197 • Prospect, Ohio 43342
Toll Free: 1-800-345-2590
Fax: (740) 494-2274
www.HERCULOCK.com



Comprehensive Emergency Lighting System Solutions from Single Source Providers

From lights to exit signs, a single source emergency lighting system product supplier can streamline the design process for electrical engineers

For electrical engineers responsible for designing a building's emergency lighting system, the process of selecting and integrating the various component parts from lights to exit signs is not a one-size-fits-all proposition.

After all, there are a myriad of combinations and approaches available that will sufficiently provide one-foot candle of illumination along the path of egress specified by the NFPA.

These options often begin with deciding on the type of power source that will be used in the event of a power outage. Often, existing architectural lights are incorporated if possible, powered by centralized inverters or generators. However, when that is not sufficient, dedicated battery powered emergency lights may be required.

In an industry flooded with inexpensive, commoditized products, another key decision is whether to specify higher end, architectural alternatives.

Dedicated emergency lights, for example, can be concealed until needed behind panels that can be covered by wallpaper or matching wall paint, if desired. Even emergency exit signs require consideration, with options ranging from inexpensive thermoplastic models to more elegant, energy efficient models.

Additional challenges can occur within the design and specification process as well.

Although electrical engineers are well trained in emergency lighting system design, it is often one of the last aspects considered. This can create difficulties sourcing and receiving items – often from multiple parties.

However, for those emergency lighting product companies that provide a full catalogue of options from lights to exit signs and inverters, much of the pain can be taken out of the process by simplifying the interaction and providing a single source.

“Electrical engineers prefer not to source items from three different companies: one for the exit sign, one for the inverter, and another for the lighting,” says Bill Lynch, President of Isolite Corporation, a company that offers high quality, specification grade emergency lighting products.

Design-Conscious Emergency Lights

Dedicated emergency lighting is often utilitarian, obtrusive and unsightly. One of the most common, low cost options involves two lamps and a bulky battery pack that is often referred to as a "bug-eye" light.

Fortunately, more stylish options exist. At the top of the list is incorporating existing architectural lighting into the emergency lighting plan. In this approach, the architectural lights operate as normal. If utility power is lost, however, supplemental power can be supplied via an inverter or generator.

While this approach is ideal, there are many situations in which the existing lighting will not provide the requisite illumination along the entire path. When this occurs, lighting designers often seek out more high-end, stylish fixtures. Even items such as bug-eyes and exit signs are available in more aesthetic versions.

When emergency lighting is necessary, one of the most aesthetic options is actually to conceal it until it is required. Some ingenious units are even designed to blend in with the existing decor by being painted or covered with wallpaper.

For example, one manufacturer of specification-grade emergency lighting products, Isolite, offers the Genie, along with a more compact version called the Mini Genie, that remain fully recessed behind two flat panel doors until required.

"If power is lost, the battery-powered units automatically open to light the way," explains Lynch.

Exit Signs

Although exit signs must be functional, they do not

WP MAKE EVERY STEP A SAFE ONE

Help Prevent

Flex-Tred®

SLIP AND FALLS

Stairmaster®

WOOSTER PRODUCTS

For more products & information visit us on-line or call:
www.wooster-products.com
800-321-4936

MADE IN U.S.A. PRODUCT

The advertisement features a red background with a circular inset showing a factory floor. It displays a roll of yellow and black striped tape, a container of 'Walk & Grip' slip-resistant paint, and a roll of 'Stairmaster' slip-resistant matting. An American flag is also visible in the bottom right corner.

Since 1993

NEW!

ASM 925

TESTING DYNAMIC COEFFICIENT OF FRICTION (DCOF)

DIGITAL ASM 825A SLIP METER

WET AND DRY TESTING
CALIBRATES TO ANSI/MFSI B101.1

SAFE FLOORS MAY INCREASE
PRODUCTIVITY AND WILL
CERTAINLY REDUCE LOSSES

SCOF RESULTS WITH AN EASY-TO-USE
PORTABLE FLOOR FRICTION TESTER

941-681-2431
www.americanslipmeter.com

AMERICAN SLIP METER®
FAX: 941-681-2487

The advertisement shows two slip meters: a black ASM 925 and a red digital ASM 825A. The ASM 825A is shown in a close-up view, highlighting its digital display and keypad.

need to be ugly. A variety of aesthetic options exist including slim profiles, specialty finishes, and recessed power supplies that help units blend in with interior decor and architectural features.

Because exit signs operate 24/7, however, they should also be energy efficient. As such, some energy efficient LED edge-lit exit signs use less than 3 watts and offer a 3-hour emergency run time with a

battery diagnostic monitoring system.

Today, new “dual technology” exit signs are even combining the efficiency of LED lighting with revolutionary new photoluminescent materials to increase reliability and performance over decades of use.

This hybrid approach combines two established exit sign technologies in a single unit – LED and photo-

luminescence. During normal power conditions, the sign is illuminated with highly efficient LEDs. When the power goes out, a translucent exit stencil diffuser made of photoluminescent material provides the illumination. This is charged by the LEDs while electric power is provided to the sign.

“Although LED technology has improved to the point where it can last over 20 years, battery technology has not kept pace and has been the weak point in exit sign reliability and maintenance,” says Lynch. “Hybrid LED/photoluminescent technology eliminates this weakness and provides more reliable operation for decades.”

Inverters

When a building-wide power outage occurs, electrical engineers have several options when it comes to powering emergency lighting systems mandated by the NFPA and International Building Code (IBC).

Material Handling Equipment

Your One Source For All Your Material Handling Needs

- Storage Products (Steel Cabinets, Shelving & Lockers)
- Loading Dock Equipment
- Conveyors
- Pallet Racks
- Mezzanines
- Carts & Trucks
- Containers & Bins
- Safety Equipment
- Drum Handling Equipment
- Hoppers
- Wire Partitions
- Lift Tables
- In-Plant Buildings
- Cranes (Jib & Bridge)
- Hoists & Trolleys



1-800-239-3434

WAREHOUSE EQUIPMENT AND SUPPLY CO.®
116 West Park Drive • P.O. Box 19808
Birmingham, AL 35219
Email: sales@warehouseequipment.com
Web: www.warehouseequipment.com



The first is to install dedicated lighting fixtures that provide temporary power from built-in battery packs. The other is to utilize centrally located inverters tied to back-up batteries that can provide utility-grade power to both existing architectural and dedicated emergency lighting in the event of a power outage.

For engineers that must select an inverter, calculating the size needed as well as AC load requirements is a relatively simple matter.

However, there are multiple factors that should also be considered in making a final inverter selection that best suits the application. These include selecting inverters that provide pure sine wave AC power, operate at their designated rating, and provide automated testing/reporting.

Given the increasing use of LEDs in architectural lighting, it is important to select an inverter that incorporates pure sine wave technology.

Pure sine wave inverters provide cleaner, utility grade power than modified sine wave models and work better with LED drivers. In addition, pure sine wave models have a high surge capacity which means they are able to exceed their rated wattage for a limited time to meet the high inrush currents of LEDs.

“When utility power is lost and the current influx from LED fixtures is drawn from an inverter, most standard inverters are not able to handle the inrush even when they are rated for the total rated load,” says Lynch.

To accommodate such challenges, the company offers a variety of units. This includes units incorporating pure sine wave technology as well as units

that can be sized to meet full building load requirements for power up to 18,000 watts.

In order to meet safety and regulatory requirements for emergency lighting, one of the most important capabilities of advanced inverters is the ability to automate testing and reporting functions.

NFPA code requires that emergency lighting systems are tested for 10 minutes every 30 days, and to be discharged for 90 minutes once annually. Records must be kept for review by Fire Marshalls or other officials that make periodic inspections of emergency lighting systems.

The more advanced inverter systems keep a record of all of that information. A Fire Marshall can simply review the logs and see the testing was automatically performed as scheduled as well as see any alarms.

The inverters can also be controlled through a unique web interface that allows a facility manager to monitor multiple inverters at the same time as well as set alarms and automatic notifications. The system also conducts and records data related to the regular monthly tests required by code.

“When electrical engineers face tight deadlines to design emergency lighting systems so a building or facility can be opened for use, partnering with a vendor that offers comprehensive options can streamline the process,” concludes Lynch. “In this regard, some domestic manufacturers can provide a fully integrated system with as little as two weeks of lead time.”

For more information, contact Isolite Corporation at 31 Waterloo Avenue, Berwyn, PA 19312; call 800-888-5483; or visit them on the web at www.isolite.com •

Southern Stud Weld, Inc.

www.studweld.com

Manufacturer and Supplier of Stud Welding Equipment, Accessories and Fasteners.



Stud Welding is a versatile, one-step metal fastening system. It is an instantaneous welding process in which a metal fastener is end-joined to a metal surface by creating a high quality fusion weld.

WE ARE YOUR ONE STOP SHOP

Industries We Serve

Aerospace
Appliances
Automotive
Construction
Electronics
Food Service

Insulation Installation
Light/Heavy Duty Equipment
Offshore
Petrochemical
Shipbuilding
Signs and Decorative Trim



Two Locations To Serve You

15603 West Hardy Road.
Houston, TX 77060

800-929-0296

713-691-0897

Sales-Houston@studweld.com

3645 Conflans Road
Irving, TX 75061

877-929-6707

972-790-3339

Sales-Dallas@studweld.com

FLEXIBLE SOFTWARE PLATFORM

SOUND AND VIBRATION SOFTWARE THAT WORKS LIKE YOU WORK



BK CONNECT™ – A FLEXIBLE SOFTWARE PLATFORM DESIGNED AROUND YOUR NEEDS AND TASKS

Full of innovative features and functions, BK Connect – the new sound and vibration analysis platform from Brüel & Kjær – is designed around user workflows, tasks and needs, so you get access to what you need, when you need it. This user-friendly platform streamlines testing and analysis processes, which means you work smarter, with a high degree of flexibility and greatly reduced risk of error.



Brüel & Kjær 
BEYOND MEASURE

Brüel & Kjær Sound & Vibration North America, Inc.
3079 Premiere Parkway, Suite 120
Duluth, GA 30097
Telephone: 800 332 2040
bkinfo@bksv.com

bksv.com/bkconnect

About Safety Through Engineering

Safety Through Engineering, Inc. is a Structural and Safety Engineering, Expert Witness, Safety Training and Consulting firm with the reputation as a pioneer of innovative design and safety solutions. For over 35 years we have provided cutting-edge design services by expanding traditional engineering approaches.

At STE, we incorporate new concepts and technology throughout our projects with 3D BIM, finite element analysis, fabrication drawings and a plethora of services. Fueled by a forward thinking team, STE serves a superior client base with innovative industry solutions.

Why Choose Us

Uniquely qualified engineers, construction specialists, fall protection experts and advanced safety trainers, STE's team of professionals advocate solutions based on practical experience, emerging technology, customized education and specialized training.



SUSTAINABLE SAFETY®

Phone: 937-964-1900

E-mail: Info@ste4u.com



Obtaining Sustainable Safety®
in Design

“Our approach to any design must consider all possible outcomes, especially the safety of the individuals for whom and through whom our designs are intended.”

*Mike Wright
President, STE Inc.*



Engineering

STE is recognized for safe, sustainable, cost effective designs and analyses

Training

Knowledge facilitates wisdom, which facilitates innovation



Safety Consulting

Efficiency is reached with usable solutions that synchronize safety and engineering

Expert Witness

Let us help you understand and untangle the complexities



Forging Ahead with Advanced HDPE Cooling Towers



Patriot Forge Co. depends on advanced HDPE cooling towers to maintain optimum bath temperatures for quenching metal forgings and cooling hydraulic systems.

The forging industry has achieved an impressive place in the North American industrial economy by producing components with unique benefits that are difficult to duplicate. Forging, a manufacturing process of shaping metal by applying a variety of powerful compressive forces to it, is known for producing parts that feature excellent fracture toughness, ductility, as well as both impact- and fatigue-strength.

However, delivering on those attributes also requires dealing with the extremely high heat generated during the forging process, which can reach up to 1,150 degrees C (2,102 F). For Patriot Forge, a Canadian supplier of custom open die and rolled ring forgings, controlling those high temperature hinges on dependable cooling tower technology.

Frequently used for industrial applications such as refineries, metal foundries and manufacturing plants, cooling towers remove heat from cooling system water and exhaust it into the atmosphere.

Needing an advanced solution

With plants in Branford and Paris, Ontario, Patriot Forge produces products in a variety of materials ranging from carbon, alloy, stainless steel, nickel-based alloys and aluminum. Producing for demanding industries such as power generation, petrochemical, heavy-equipment manufacturers, military and aerospace requires consistent quality, including the vital hardness characteristics of forgings ranging from 5 lbs. to 50 tons.

According to Derek Hynes, Senior Mechanical Engineer at Patriot Forge, three years ago, the company decided to begin the process up replacing its aging, multi-use cooling tower, located at Building One of its Branford plant.



WHY IS IT OKAY WHEN IT'S ONE OF YOUR WORKERS?

Don't fall victim to inadequate fall protection.

Not following industry standards? One fall can have disastrous consequences for your workers, their families and your business. You can't afford to wait to change the way you look at workplace fall protection.



Find out how you can prevent the inevitable from becoming the unimaginable. Download our new ebook at gorbel.com/righttrack.



“The tower we were replacing was a traditional steel model that was rotting out,” Hynes explains. “Also, metal models tend to rust and corrode, which usually leads to plugging the water flow – and that can interfere with cooling capacity.”

This cooling tower is used to expel heat from the Building One quench system, a 42,000-gallon water tank into which parts are submerged in water or polymer baths in order to achieve the desired hardness.

Hynes and his team took the time to investigate what other cooling tower design options were available that could provide reliable, trouble-free operation for a longer period of time.

The team ultimately chose a cooling tower constructed on HDPE (high-density polyethylene) manufactured by Delta Cooling Towers (www.deltacooling.com), the company that originally developed the engineered plastic technology.

HDPE cooling towers are impervious to corrosive environments, and require lower amounts of expensive water treatment chemicals as well as less downtime for repair or replacement. The same manufacturer also offers models with energy-saving features such

as direct drive fan motors that can drastically reduce electricity costs.

“We saw that this was a polymer-based tower that was UV-protected, and included a 20-year warranty, so we were convinced that it would offer long-term dependable service,” Hynes says.

Supporting multiple systems

After the initial HDPE tower was successfully installed and exceeded expectations, Patriot Forge decided to acquire a second HDPE cooling tower to support hydraulic cooling for their new 5,000-ton hydraulic press, rail-bound manipulator, and hydraulic ring roller.

“This new tower needed to support multiple systems within the Building One,” explains Hynes. “This included cooling the water that flowed through a heat exchanger used to draw heat off the hydraulic systems of three large pieces of production equipment, including the 5,000-ton press that plays a primary role in the forging processes of the plant.”

“Essentially, all three machines are cycling the water that flows through their hot hydraulic heat exchangers and then through this cooling tower. This enables us to

THINK™

DESIGN SOLUTIONS

... with i-Clamps - Wire Connectors



One-Way Series
for splicing several
lines together



Two-Way Series
uniquely designed for
pre-assembly to add
fixtures or components
to existing wiring



T-Series
for branching off
a common wire run



LISTED
E490522,
E490623

- IDC (Insulation Displacement Connectors) • Easy to use • Quick and reliable connections
- Tamper Proof • Designed to withstand shock and vibration • Housing made from durable Polycarbonate • Tin-plated, High Performance, copper alloy contacts
- For use with 10-22 AWG insulated wires

IT'S WHAT'S ON THE INSIDE THAT COUNTS

KEYSTONE®

ELECTRONICS CORP.

www.keyelco.com • (516) 328-7500 • (800) 221-5510



REQUEST CATALOG M85

keep the hydraulic fluids at a stable 110 degrees (F).”

Extending the benefits

Then earlier this year, Patriot Forge acquired an additional twin cell HDPE cooling tower to help cool the quench tanks that are part of the company’s heat treat system in Building Two.

“Both of the quench tanks are 105,000 gallons, and we use the cooling towers to help maintain a heat level of approximately 100 degrees (F);” Hynes says.

The cooling towers that Patriot Forge selected for this building were the same design as the one selected as a replacement in Building One, Delta TM Series Induced Draft models.

One of the unique benefits of the TM Series towers is the ability to configure them in combination of up to six units with cooling capacity from 250 to 2,500 cooling tons. This modular design gives companies the opportunity to conveniently add cooling towers as their processing grows. The new, cooling towers installed at Building Two are installed in a two-cell

configuration with combined cooling capacity of 836 cooling tons.

“We decided on this size and configuration because the quench tanks in Building Two are much larger,” says Hynes. “So, there is a lot more water you have to process through the towers.”

He notes that installation of the factory-assembled cooling towers was relatively easy. “The HDPE plastic towers are lighter, so we were able to use a smaller crane to install them, which was much more convenient than having to deal with larger, bulkier cranes.”

Hynes says the towers feature vibration sensors on all fans, which eliminates the need to climb the towers in order to check out the operating performance of the fans, a benefit that Hynes feels is particularly appealing because one of the towers tops out at a daunting 65 ft. – “a long way up.

“For more information, contact Delta Cooling Towers, Inc.; (800) 289.3358; email: sales@deltacooling.com; or visit the web site: www.deltacooling.com •



PIRANHA LITES



KNOW when you are in the ZONE

The **PIRANHA LITES**® are a simple safety accessory that can easily attach to almost any scissor or boom lift. The lights are a great way to highlight the surrounding perimeter of a scissor or boom lift that is in operation, helping the operator and the workers on the ground stay safe.

- Kit includes a set of 4 lights and wiring harness
- Lights are durable and built to withstand the harsh job site environments
- Installs using clamps. No drilling required



PIRANHA LITES are approved for use by major OEM's of mobile work platforms



www.piranha-safety.com /// 1-800-738-5004

Mention this ad and receive a discount!





Beckwood and KOMT Deliver Automated Press for Spirit AeroSystems Joule Form™ Manufacturing Process

Beckwood Press Company, a leading manufacturer of custom hydraulic presses, and Kansas Oklahoma Machine Tools (KOMT), a prominent machinery distributor throughout the Midwest, recently delivered the first ever press with automated die change to Spirit AeroSystems for use in Spirit's Joule Form™ manufacturing process.

The Joule Form™ process is a proprietary method developed by Spirit for shaping metal parts at elevated temperatures in the fabrication of aerospace components. Using the automated press system from Beckwood, Spirit will be able to efficiently form lightweight titanium parts by directing energy only where it is needed, ultimately decreasing machined-part costs.

"This is an emerging manufacturing improvement for shaping metallic plate products that can replace more expensive techniques, such as die forgings and extrusions," said Kevin Matthies, Spirit's senior vice president, Global Fabrication. "Implementing this new technology will allow advanced production for parts such as those for propulsion systems. No one else in the industry has a comparable high-tech and cost-saving solution for this application."

"Beckwood is continually on the forefront of new manufacturing technologies because R&D is at the heart of every press we build," said Beckwood president Jeffrey Debus. "This exclusive system will revolutionize Spirit's titanium forming operations around the globe."

Spirit AeroSystems designs and builds aerostructures for both commercial and defense customers. Headquartered in Wichita, Kan., Spirit operates sites in the U.S., U.K., France and Malaysia. The company's core products include fuselages, pylons, nacelles, and wing components for the world's premier aircraft.

About KOMT

KOMT distributes and supports a broad range of advanced technology machine tools throughout the Midwest. Serving Kansas, Oklahoma, and the western half of Missouri, their highly experienced team of sales engineers and support technicians provide clients with an uncompromising level of service – both before and after the sale. With over 40 product lines represented, KOMT offers a breadth of manufacturing solutions unparalleled in the market, including some of the most unique and customized tooling products in the world. Learn more at komt.com.

About Beckwood Press Company

Beckwood Press Company is a leading manufacturer of custom hydraulic presses and automation equipment located in St. Louis, MO - USA. Their industrial solutions support nearly every industry and application including: aerospace forming, compression molding, Hot Forming / SPF, sheet hydroforming, stretch forming, and stamping. Stay up to date with the latest news from Beckwood at beckwoodpress.com/news.

Your One Stop Shop for Sound and Vibration Measurement Needs

Sound Level Meters



Vibration Meters



Dosimeters



Scantek's product line provides complete solutions designed for:

- Occupational & Industrial Hygiene Noise Evaluations
- Hearing Protector Selection
- Workplace Noise Measurements
- Measurements and Analysis of Acoustic and Vibration Signals
- General Noise Measurements
- Loudness and Sound Quality Analysis
- Measurements of Sound Power Levels

Distributed by:

Scantek, Inc.

www.ScantekInc.com

Amada Miyachi America announces MM-400A Desktop Resistance Weld Checker

Ideal for monitoring and managing key welding variables in process development and production environments

Amada Miyachi America, a leading manufacturer of resistance welding, laser welding, marking, cutting, and micromachining equipment and systems, announces the new MM-400A desktop resistance weld checker. With the MM-400A, operators can easily monitor and manage key welding variables that result in changes in weld heat, including current, voltage, time, force and displacement. The compact unit supports AC, DC inverter, AC inverter, transistor and capacitive discharge resistance welding technologies.

The MM-400A is ideal for use in process development, where it can be used to correlate waveform and numeric data with process results and provide detailed weld data for process optimization and validation. In a production environment, it reduces scrap by detecting drifts in the weld process and alerting operators before process failure. The MM-400A also reduces the frequency of destructive testing and provides an independent way of monitoring the welding power supply.

The MM-400A features a simple and intuitive user interface and color touch panel display. An envelope function allows the operator to set upper and lower segmented or continuous limits around the entire waveform. The unique seam welding mode monitors AC current and voltage or DC voltage for up to 5 minutes. The unit provides ISO17657-compliant measurement for current (when used with available ISO-compliant toroidal coil) and offers Ethernet (TCP/IP), and RS-232/485 communication. Pre-weld displacement measures workpiece thickness prior to welding. Multi-language support includes English, Spanish, Japanese, Chinese, Korean, German, and French.

Available accessories include shunt resistor force sensors, a built-in force sensor, displacement sensors, and weld thru sensors that offer simultaneous measurement of applied force.

For more information, visit the Amada Miyachi America website at <http://www.amadamiyachi.com>.

About AMADA MIYACHI AMERICA

Since 1948, Amada Miyachi America, Inc. has worked to achieve one goal: to solve customer's manufacturing challenges. Knowing there is no one solution that fits all, the company strives to provide customers with innovative and reliable manufacturing technology solutions in an effort to be their single source provider. Amada Miyachi America manufactures equipment and systems for resistance welding, laser welding, laser marking, laser cutting, hermetic sealing and hot bar reflow soldering and bonding. The company serves a wide range of markets including medical devices, battery, aerospace, automotive and electronic components. Amada Miyachi America is an ISO9001 certified company. Contact Amada Miyachi America at info@amadamiyachi.com. Learn more about the company's products and services at www.amadamiyachi.com •



CoreTex

Products Inc.

BE SAFE. BE PREPARED. BE PROTECTED



Sun X50
SUNSCREEN LOTION

Sun X30
SUNSCREEN

Sun X
Multi-Purpose Foil Pack

Bug X30
INSECT REPELLENT

Bug X
INSECT REPELLENT

Ivy X
PRE-CONTACT SKIN SOLUTION

Ivy X
POST-CONTACT SKIN CLEANSER

Sun X SPF 50 Broad Spectrum Sunscreen

SPF 50 Broad Spectrum Active Sunscreen is tough enough to stay on during the most rigorous conditions. Keeping everyone protected while working in the sun.

Sun X SPF 30 Broad Spectrum Sunscreen

Our formula offers equal UVA and UVB protection from the sun's harmful rays and is rated water resistant w/maximum duration time allowed by FDA (80 min).

Sun X SPF 30 Broad Spectrum Multi-Pack w/Dry Towelette

A new, innovative and FDA compliant single-dose foil package design. This packaging offers a convenient way to apply sunscreen; the dry towelette is intended to absorb sweat, dirt, sunscreen and other substances.

Bug X 30 Insect Repellent

With 30% DEET it is effective up to 7+ hours of protection against mosquitoes, ticks and other insects carrying diseases like Zika virus, West Nile virus and Lyme disease.

Bug X FREE

A natural, DEET-FREE Insect Repellent providing protection against biting insects. Safe to use while wearing Fire Retardant (FR) clothing.

Ivy X Pre-Contact Skin Solution

Acts as an invisible barrier to help protect against outdoor irritants.

Ivy X Post-Contact Skin Cleanser

Effective in assisting in the removal of poisonous plant oils (Urushiol) commonly found in Poison Ivy, Poison Oak & Poison Sumac.

YOUR SKIN PROTECTION SOLUTION!



Order Toll Free: 1-877-684-5774 or Fax 1-661-833-2753 • www.coretexproducts.com



See Our Full Line of Products at www.CoreTexProducts.com

Avoid Non Compliant Payroll Errors - Avoid Stiff Fines - Jail Time

By John Trydaler

Change is consistent in the construction industry.

Payroll changes happen almost hourly on many construction sites because working conditions change.

An employee may be asked to work in his secondary classification because the site is short of a key employee due to weather, family emergency, sudden illness, or a key piece of equipment breaks down.

The payroll system must be malleable to cope with a wide variety of reporting differences.

Daily payroll changes for 10's or hundreds of workers is a daunting task.

A payroll change concerns the worker, their supervisor, an admin and a payroll administrator. Ultimately, the construction company ownership can feel the painful result of a payroll error.

That "innocent" payroll error is usually an illegal compliance issue.

The Davis - Bacon Act of 1931 has 30+ compliance issues that must be adhered to for every check of every employee.

Non-compliance can lead to a hefty fine or jail time.

What can the payroll administrator of a construction company do to easily handle daily changes in payroll?

The Compliant Client system by eMars interface captures the "dailies" from a construction site, then submits those changes directly into our certified payrolls. Compliant Client then matches the hours, electronically, submitted on the certified payroll to the actual hours on the construction site. This process replaces the manual task of making

sure the certified payroll hours equal the manually collected hours recorded by the foreman.

Human error is eliminated.

The foreman can concentrate efforts on the primary tasks, not payroll issues.

This process is referred to as: On Site Employee Verification.

"Time is money" is the old adage that you've probably said or heard hundreds of times in your life.

It's true.

Spending time in non-income areas of your business is like throwing money in the trash.

But, if you're the CFO or the payroll accountant, you have to pay strict attention to your payroll, every week of the year. Using time to make sure every employee gets the correct pay is critically important.

Time well spent, right?

Is your organization spending three to 10 hours or more every week making sure that the payroll is correct and compliant? Could that time and energy be better spent in other areas of your business?

But, you have to focus your time on the weekly payroll. Right?

Is there a possible alternative to spending hour upon hour making all of your checks compliant and entering "correct" numbers and information into your payroll database? Yes.

Compliant Client by eMars makes running your payroll an eight-minute, worry-free task. eMars and Compliant Client take care of all the compliance issues, guidelines and mandates of the

Davis-Bacon and Related Acts and many state variations.

The Davis-Bacon Act, passed by congress in 1931, requires private contractors to pay "prevailing wages" to employees on all federally funded construction projects valued more than \$2,000. Stiff fines, debarment and jail time can result if payroll checks are not in compliance with this act. There are 30 compliance regulations that must be adhered to for every check. Thirty issues for each check.

So, if you have 100 employees, that's 3,000 possible errors every week. If you have 500 employees, that's 15,000 possible errors that must not happen. The time involved to keep watch over 30 compliance issues for 100 employees is staggering. Does your organization have time to personally watch over every check and every compliance issue?

The downsides to not investing the time on this issue are:

- Angry employees
- Large fines
- Jail time
- Going out of business

Out-of-compliance payroll difficulties don't go away by saying, "I'm sorry, I didn't know and we'll fix this problem real soon."

How many checks does your organization handle every week? Can you catch every error, every week? Doing payroll by hand every week is time consuming, costly and risky.

Many of these financial executives do not protect their company and its top executives from submitting erroneous non-compliant, illegal payrolls. Based on a study of 100,000 payrolls, at least

20 percent of construction company payrolls will contain one or more errors, when audits of these payrolls rely on human review. Here's how to reduce your compliance risk and reduce time managing your weekly payroll by 80 percent.

Worry Free, Time Savings

The Compliant Client system by eMars is your answer for worry-free, time-saving compliant payroll. The system is easy to install and use. It provides immediate, concurrent, real-time visibility of all payroll records of the sub, prime, plus – the owner agency. All screens are printable. Every submitted payroll is audited, online and in real time, against the wage determination and all 30 causes that are in support of Davis-Bacon and Related Acts. The results of these comparisons to the provisions set forth in the act are immediately reported, allowing corrections to be made promptly.

A typical payroll is prepared in less than eight minutes. Compliant Client requires a PC and less than 30 minutes

of training. Complete implementation takes less than one day after loading the wage determination. Compared to paper-and-pencil preparation, the eMars system represents an 80 percent productivity improvement, plus instant recognition of payroll errors that prompt the user how to solve the problems and guarantee compliance.

The system was designed with considerable input from the Department of Labor, agencies and contractors. Compliant Client's more than 15,000 clients have not had any random Department of Labor audits for the past three years. The Department of Labor's Chief of Compliance stated, "your system already has completed the first level of an audit." Compliant Client also encrypts at-rest data, giving another layer of security for this sensitive data, disallowing use of the information.

What happens to typical at-rest data in most computers? For many organizations, private at-rest data is only protected by the user name and code that is used to get into the computer. "The primary purpose of encryption is

to protect the confidentiality of digital data stored on computer systems or transmitted via the internet or other computer networks," says Rick Paul of ITS Risk Paul, an IT consultancy. "Modern encryption algorithms play a vital role in the security assurance of IT systems and communications."

Paul notes encryption algorithms can provide confidentiality, as well as the following key elements of security:

- = Authentication - the origin of a message can be verified.
- = Integrity - proof that the contents of a message have not been changed since it was sent.
- = Non-repudiation - the sender of a message cannot deny sending the message.

Why would eMars, offering Compliant Client, protect its at-rest data? "Security and peace of mind for our clients is our major concern," says Woody Chamberlain, president of eMars Inc., which offers Compliant Client. From routine payroll reviews to the complicated tracking of certified apprentices and calculation of restitution, the Compliant Client ensures at-rest payroll data is encrypted, remains error-free and follows Davis-Bacon.

"eMars encrypts sensitive at-rest data," Chamberlain adds. "We handle, save and encrypt hundreds of thousands of bits of information for our clients. Their workers' privacy and sanctity cannot be compromised." Chamberlain formerly was in high-level administration for a select group of top organizations across the United States.

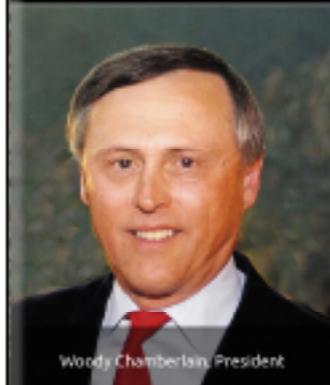
Perhaps some financial executives are unaware of the amazing Compliant Client system by eMars. "Ignorantia legis neminem excusat" is the famous Latin phrase, translated to English meaning "ignorance of law excuses no one."

Please contact eMars at 480-595-0466 for a no-obligation discovery phone call, or by email at Woody.Chamberlain@Emarsinc.com. You may also visit Emarsinc.com.

See the eMars video:
https://youtu.be/rWtJqy7H_8

COMPANY SPOTLIGHT

HELPING CONSTRUCTION COMPANIES STAY DAVIS-BACON COMPLIANT



Woody Chamberlain, President

eMARS INC

Profile: eMars / Compliant Client is an easy to use web based software that makes it easy for construction companies' payroll to be compliant with the Davis - Bacon Act of 1931.

This unique paperless system encrypts all employee information, offering an 80% time and labor savings over hand preparation. Weekly payroll can be run in 7 minutes.

ERROR-FREE, WEB BASED SOFTWARE
FINDS AND ALERTS USER OF 30+ COMPLIANCE ISSUES

President: **Woody Chamberlain**
Ph: 480-595-0466
Web Site: emarsinc.com
Email: Woody.Chamberlain@emarsinc.com
Area Served: **United States**

Compliant
client
by eMars

Guard-Safe Guarding

Utilizing Laser Scanning to Design Machine Guarding



- ❖ **Identify Hazards** – Access over, under, around or through to a moving or rotating part must be guarded.
- ❖ **Scanning & Measurements** – GSG visits your facility to acquire critical dimensions and perform scanning.
- ❖ **Designing Your Guards** – Accuracy of $-1/16$ " ensures that the guards we design from scanning will fit without interference.
- ❖ **Engineered Drawings** – Arrangement and details are approved by client prior to fabrication.
- ❖ **Custom Guards** – Powder coated Safety Yellow, preassembled parts ensure proper fit & function.
- ❖ **Installation** – GSG technicians assure that all guards are mounted rigid and secure.

To learn more about our custom engineered guarding process and our standard offerings including: Coupling Guards, Barrier Guarding, Idler Guards, V-Belt Guards and much more, please contact us via:

website: www.guardsafeguarding.com

phone: 712-754-4838

email: sales@guardsafeguarding.com



SAFETY RAILINGS MEET STYLE

ACCU-FIT

DON'T HIDE YOUR RAILINGS, **EMPHASIZE THEM**

- UNIFORM LINES
- NON-PENETRATING
- SLEEK APPEARANCE



TRADITIONAL STRAIGHT SERIES



DESIGNER CURVED SERIES



ARCHITECTURAL CURVED SERIES

Accu-Fit Fall Protection Railings from Safety Rail Company are the perfect solution for combining form and function with distinctive styling that compliments building architecture. Accu-Fit Railings offer clean sight lines, upscale styling, non-penetrating design and are assembled right on-site to ensure an accurate fit that maintains a uniform appearance throughout the installation.



**PROTECT LIVES.
BE OSHA COMPLIANT.
CONTACT US TODAY.**



SafetyRailCompany
Fall Protection for Life and Compliance

SAFETYRAILCOMPANY.COM | 888.434.2720



Established in 1932 in Detroit, Michigan, by the grandfather of the current owner, Jesco Industries Inc. has grown to become one of the leading manufacturers of material handling equipment. We serve our customers very well by offering a wide variety of products which may be used from the processing department through the shipping department. A Woman Owned Small Business is WBE Certified.



urrent owner,
atures of materi-
g a wide variety
ugh to the ship-
ertified.

JESCOHUSKYDUMPERS® available in over 60 different sizes and maintain stock of standard sizes over 800 standard units of self dumping hoppers (2000#, 4000# and 6000# capacities). We offer several large volume self dumping hoppers in 6 cubic, 8 cubic and 10 cubic yard 6,000-10,000 capacity. Special applications deserve a specially designed unit. After many customers inquiring about a controlled dump or hydraulic unit, we decided to engineer and add several different hydraulic units to the product line.

JESCOHYDRATILT™ Dumpers which are available in 4000# capacity in .50, .75, 1, 1.5, and 2 cubic yard. The units are operator controlled with the hydraulic system of your forklift and used while seated on the lift. These new units are ideal when controlling the speed of discharging material is critical. The quick-disconnect lines are included on each of the units and a safety retaining chain. To fill out the line even more we have included ten different sizes of our Filter Press Hopper. Then along came the 90 degree Side Pivot Hopper and Low Profile Portable Hoppers with casters already installed.

Wire Mesh Partitions: 2"x1" rectangular mesh 10 gauge wire welded into an angle frame system is easy to use and easy to install. Ideal for around your automation enclosures, prevent your valuable tools from walking away from the tool crib, and quality control on non-conforming material, computer rooms, high security storage and so many more uses. JescoPalletGards® are wire containment backs for the pallet racks with stand-off clips (1.25, 4, 6 or 8 inch) design to fit most standard drilled pallet racks spaced two inch on center. Double hinge doors or double slide doors is an excellent way to secure high value products on the shelves.

1-1/2" Diamond mesh 10 gauge wire partition system are engineered for easy installation allowing unrestricted visibility and total air circulation. Inventory of standard height panels of 7, 8 or 10 high are available; but don't stop there because many industries require partitions to reach the trusses or building joists and that certainly can be accomplished. If you are installing partition on a raised platform (mezzanine) remember this requires zero or "no" sweep to keep everyone safe walking below. This is to prevent tools from dropping from the edge of the platform. (OSHA 1910.23(e)(4) Either partition system will work well but the more project information you are able to supply, the more knowledgeable we all become and it is truly amazing how that works!

The JESCOGARD® industrial guard rail 3-rib corrugation system will act as both a visual and physical barrier around your facility. The Economy Rail System is a 2-rib system and has been tested to withstand an impact of 10,000# traveling 4-mph. Should the need arise you can count on its strength without compromising quality at a price you can afford. Each system has available a self-closing single hinge gate with a sound dampening gasket on the gate.

Industrial shelf carts, platform trucks die storage racks and material handling trucks are built tough to move raw stock, cartons or finished materials in your plant for many years to come. Special carts are no issue just let us know what you need.

JESCOHUSKYDUMPERS®, wire partition systems, industrial guard rail systems, wire tenant storage lockers, industrial shelf carts, LP cylinder cabinets, machine guarding just to name a small portion of the products we offer to our customers. Our products are built to be the best in the industry and it is the reason customers keep coming back. Your satisfaction for a project well done is what really counts when the day comes to a close. We look forward for an opportunity to be able to assist your next industrial guarding or material handling requirements. Check out the full product line shown on the website at www.jescoOnline.com

"From the simplest to the complex, Jesco does it best!"

Jesco Industries Inc. • 950 Anderson Rd • PO Box 388 • Litchfield, MI 49252-0388

Email: Jesco@jescoOnline.com • Toll Free: 800-529-6691 • Direct: 517-542-2903 • Fax: 517-542-2501

TIPS AD INDEX

Company	Pg.	Website
ACO Pacific	28	www.acopacific.com
American Slip Meter	5	www.americanslipmeter.com
Bruel & Kjaer	9	www.bksv.com
Cortex	21	www.cortexproducts.com
Eagle Bending / Carrell Corp	IFC	www.eaglebendingmachines.com / www.carrellcorp.com
eMars	23	www.emarsinc.com
Federal Knife	BC	www.federalknife.com
Gorbel	13	www.gorbel.com
Greaves	IBC	www.greaves-usa.com
Guard Safe Guarding	24	www.guardsafeguarding.com
Herculock	3	www.herculock.com
Jesco	1	www.jescoonline.com
Keystone Electronics	15	www.keyelco.com
Krenz Vent	2	www.krenzvent.com
Piranha Safety	17	www.piranha-safety.com
Safety Rail Co	25	www.safetyrailcompany.com
Safety Through Engineering	11	www.ste4u.com
Scantek	19	www.scantekinc.com
Southern Stud Weld	8	www.studweld.com
Warehouse Equipment	6	www.warehouseequipment.com
Wooster	5	www.wooster-products.com

With Noise Mitigation

The Question is -

dB or not dB? SM

The Answer

The **SLARM**solution SM

Community/Industrial Noise Monitor and Alarm

Show Compliance
Be a Good Neighbor
WebSLARM
Build-in Web Server
Try It
netslarm.timewave.com
User: SLARM
Pw: admin

SLARMulti™



Standalone or w/PC
Text/Email Alerts
Rolling 3 weeks Logging
24/7 Alarm Scheduler
Ethernet, USB RS232
Secure Remote Access
SLARMsoft included

Indoors or Out





SLARM

successes

Construction
Johns Hopkins Hospital Floor Remodel
Apple's New Headquarters Construction
Airport Jet Run Up Monitoring

Industrial
Boatyards-Ferry and Tug construction
Hospital Medivac Helicopter Monitoring
Remote Alarm Monitoring-Dams

Entertainment
Red Rocks- Colorado
ATT Performing Arts-Dallas
Ocean Speedway -Watsonville,CA

ACO Pacific, Inc.

www.acopacific.com Tel: 1-850-595-8588 Sales@acopacific.com

On YouTube Search: SLARMsolution

When the cable doesn't fit, and you need a solution... **FAST**

GO TO THE GREAVES ADAPTER ZONE!



PT-FX Shoo-Pin™ Compression Adapters

- All-copper compression adapters
- Allows reliable termination of highly stranded flexible copper cable into mechanical lugs
- Used in locomotive, mining, marine, and machinery applications
- Fits into mechanical set-screw type connectors in panels, transformers and machinery
- Features revolutionary Shoo-in™ barrel-opening design for easy cable insertion
- Fabricated of wrought copper with pin of Class B copper conductor
- Insulating covers are provided



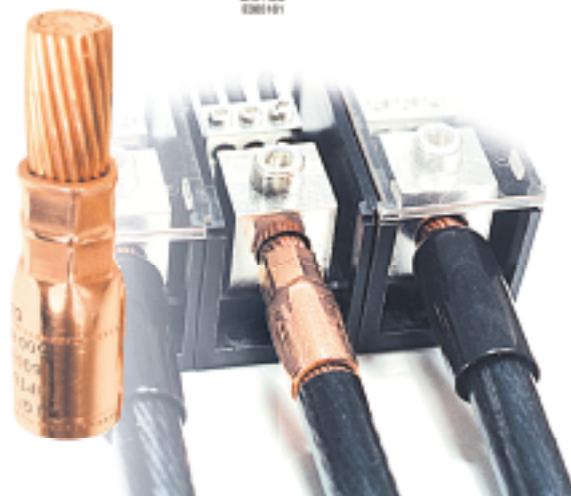
For Copper
Cable Only

PT-R Reducer™ Cable Reducing Adapters

- All-copper compression adapters
- Use where cable is oversized to reduce voltage drop on long runs
- Use fit existing C/B, transformer, or other gear lugs
- For Class B 'building wire' cable stranding only
- Fits into mechanical set-screw type connectors in panels, transformers and machinery
- Fabricated of wrought copper barrel with pin of Class B copper conductor
- Insulating covers provided



For Copper
Cable Only



GREAVES www.greaves-usa.com • 1-800-243-1130

FEDERAL KNIFE, INC.

Industrial Cutting Knives



1-800-23-KNIFE (800-235-6436) • 812-364-1418 (Fax)
P.O. Box 509 • 785 County Line Road • Pulkrigg, IN 47154



REPLACEMENT SHEAR BLADES DELIVERED FROM STOCK

Shear Blades of All Equipment Makes:

- CINCINNATI • WYSONG & MILES • HTC • ACCUR-SHEAR • PACIFIC
- AMERICAN HERCULES • NIAGARA • PEXTO
- AMADA • STEELWELD/CLEVELAND CRANE
- BETENBENDER • ATLANTIC / HACO
- LODGE & SHIPLEY / COLUMBIA • CENTURY • HERR-VOSS
- STANDARD • EDWARDS/ PEARSON • ADIRA • GATTI • LVD
- DIACRO / ELGA HYDRA • HYDRAPOWER • STAMCO
- BERTSCH • GUFIL • SAFAN • DARLEY • RHODES
- MORGAN • SUMMIT • DREIS & MANY OTHERS

Precision Blade Sharpening Is Our Specialty!!

Shear blades made from high quality tool steels "performance matched" to your unique cutting application.

Call one of our product specialists for more information.

www.federalknife.com

sales@federalknife.com



WE WILL BEAT ANY

COMPETITOR'S QUOTED PRICE
FOR NEW REPLACEMENT SHEAR
BLADES

BY 5% OR MORE GUARANTEED *



* PRESS BRAKE TOOLING ^ METAL SLITTERS ^ SLITTING SUPPLIES^ 1-800-23-KNIFE ^