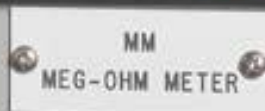
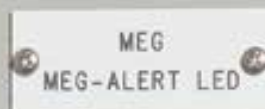
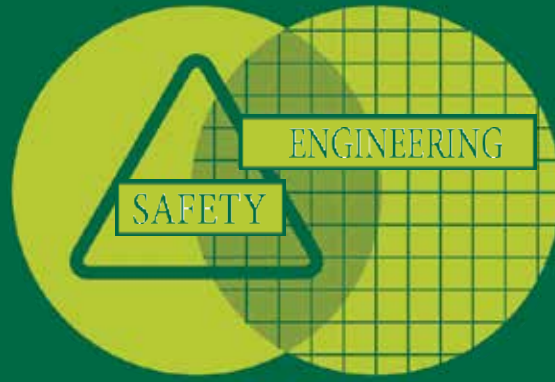


SAFETYZONE

MAGAZINE

Continuous “Hands Off” Insulation Resistance Testing of Critical Motors





Master of Engineering

**Advanced Safety Engineering
& Management**

A Safer World Begins With You.

Learn from distinguished faculty at a world-renowned research university and join fellow safety professionals representing over 150 national and international companies.

100% Online | Pay In-State Tuition | Finish in as few as 18 months

www.uab.edu/asem | 205-975-3891

Trust the Experts in Electrical Safety



Martin Technical Electrical Safety Services combine decades of experience with today's technologies providing real world solutions which help reduce risk and improve inefficiencies in the work place.

- Arc Flash Risk Assessment
- NFPA 70E® Electrical Safety Training
- Safety Qualified™ Electrical Worker Certification
- Electrical Safety & Reliability Audits
- Written Electrical Safety Policies
- Infrared Thermography Inspection
- PPE Consultation & Recommendations



Explore our Electrical Safety Services

PG 4	Company Profile: Safety Through Engineering
PG 6	Continuous "Hands Off" Insulation Resistance Testing of Critical Motors
PG 16	Cintec™ Fire Resistant Anchors
PG 22	Company Profile: Jesco
PG 24	Ad Index



33% of the world's workforce has uncorrected *vision problems* netting approximately **\$269 billion** USD in lost productivity

From the Leaders in Vision Screening,
New OPTEC® PLUS
Smart Vision Screener



- A comprehensive library of tests in software for occupational screening
- Customizable test protocols
- Electronic reporting for easy record keeping



STEREO OPTICAL

www.StereoOptical.com | info@StereoOptical.com
1.773.867.0380

SAFETYZONE MAGAZINE

Vol. 19 Issue 5

PRESIDENT

Glen Hobson
205-441-5591
glen@tipsmag.net

PUBLISHER

Anne Marie Miranda
205-624-2185
annm@handfmedia.net

ADMINISTRATIVE DIRECTOR

Steven Hobson
steven@tipsmag.net

EDITOR

Brandon Greenhill
brandon@handfmedia.net

CREATIVE/ WEB DIRECTOR

Jacklyn Greenhill
jacklyn@handfmedia.net

P.O. Box 1568 • Pelham, AL 35124
Phone: 205-441-5591 • Fax: 205-624-2181
www.safetyzonemagazine.com
info@safetyzonemagazine.com

Safety Zone Magazine™ is published six times a year on a bi-monthly basis by CJS Media, P.O. Box 1568, Pelham, AL 35124 USA. *Safety Zone Magazine™* 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.

Safety Zone Magazine™ is distributed to qualified owners and managers in the safety 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
CJS Media • P.O. Box 1568
Pelham, AL 35124
PRINTED IN THE USA

NEED A SIMPLER WAY TO ENSURE NOISE LEVEL SAFETY?

JOB DONE.



When it's time for a workplace noise survey, you need a sound level meter solution that gets your job done faster, easier and problem-free. The new B&K 2245 gives you absolute confidence and control through user-friendly mobile apps and functionality tailored for your task, including simple guidance to ensure each step is completed, on-site results, smart data handling on your PC, and more.

To simplify your job-to-do, visit www.bksv.com/2245

INTRODUCING A NEW SOUND LEVEL METER DESIGNED FOR YOUR JOB.



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

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.



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



Continuous “Hands Off” Insulation Resistance Testing of Critical Motors

Constant monitoring of critical motors while de-energized prevents failures on startup, reduces unscheduled downtime, saves on major rewinding repairs and increases personnel safety

For decades, utility plant personnel have performed insulation resistance tests with handheld megohmmeters to prevent motor failures that lead to costly unplanned shutdowns, penalties and re-winding repairs.

However, these tests only provide a “snapshot” of motor health. In a matter of only a few days, motor windings and cables that are exposed to moisture, chemicals, contaminants or vibration can become compromised and fail at startup.

Portable megohmmeters also require electrical technicians to manually disconnect the equipment cables and connect the test leads on potentially energized or damaged equipment to perform the manual testing.

These tests expose technicians to potential arc flashes when they access the cabinet. In the United States non-fatal arc flash incidents occur approximately 5 to 10 times per day, with fatalities at the rate of approximately one per day.

With so much at risk, plant managers are recognizing the value of continuous megohm monitoring of

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 FORKLIIFT 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.



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.

jescoGARD®



jesco® WORK PLATFORM

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

insulation resistance that initiates the moment the motor is off until it is re-started again.

Armed with this real-time information, maintenance personnel are able to take corrective actions ahead of time to avoid a failure that would interrupt production. By doing so, they can save utilities hundreds of thousands of dollars in repair fees for expensive rewinding, failure-to-produce penalties and lost production time.

Furthermore, permanently installed automatic testing devices allow for “hands-off” monitoring without having to access cabinets – keeping technicians out of harm’s way.

Motor Protection at Utilities

Power generation utilities rely heavily on motors, though the number and type vary depending on the size of the plant and type of fuel burned. Coal-fired power plants can have as many as 20-30 critical motors, with less for other types of fossil fuels. A combined-cycle plant may have less motors.

Critical motors are essentially those that could significantly impair the ability to safely meet business objectives or affect production levels if unexpectedly offline. This could include small 480 volt motors up to 13,800 volts. Some examples include circulating water motors, boiler feed pumps, gas compressors, forced draft and induced draft fans.

Most utilities maintain these motors through time-based preventative maintenance (PM) programs. Insulation resistance tests are typically scheduled on a semi-annual basis; however, given the reduction in personnel at most plants, it may even be less frequent. Based on these tests, motors may be scheduled to be sent out to repair shops for reconditioning.

Typically, insulation resistance tests are also conducted at the start of annual overhauls or planned outages, to identify any motors that might also need repairs.

Still, despite PM programs, motors that are offline or are frequently cycled can be quickly compromised.

“We had our fair share of motor failures, and it became quite costly,” says Richard Hohlman, who retired after 37 years working in power generation.

In the 90s, Hohlman was plant manager at a four-unit 1500-megawatt plant located on Long Island Sound.

“Sometimes the failures can be really expensive,” says Hohlman. “At that particular plant, we had a couple of Westinghouse two-speed PAM AC induction motors and rewinding one of them would have been a six-figure expense.”

“From an O&M [Operations and Maintenance] perspective, if we can identify a weak motor and avoid the risk of trying to start it up and having it fail, that is a big savings,” adds Hohlman.

To avoid this scenario, Hohlman says he required all critical motors that were shut down for 24 hours or more to be manually tested with a megohmmeter before being restarted.

“That became an expense in itself, because the tests are often conducted at different hours of the day, at overtime rates,” says Hohlman. “But, by doing it we avoided a number of motor failures.”

Hohlman says a member of his team discovered a continuous testing and monitoring device, the Meg-Alert, and installed it initially on four circulating pumps and several induced draft fans. Later, the devices were also added to several forced draft fans and other critical motors throughout the plant.

The Meg-Alert unit is permanently installed inside the high voltage compartment of the MCC or switchgear and directly connects to the motor or generator windings. The unit senses when the motor or generator is offline and then performs a continuous dielectric test on the winding insulation until the equipment is re-started.

The unit functions by applying a non-destructive, current limited, DC test voltage to the phase windings and then safely measures any leakage current through the insulation back to ground. The system uses DC voltage levels of 500, 1000, 2,500

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

or 5,000 volts that meet the IEEE, ABS, ANSI/NETA and ASTM International standards for proper testing voltage based on the operating voltage of the equipment.

The test does not cause any deterioration of the insulation and includes current limiting technology that protects personnel.

"With continuous monitoring, the O&M team is aware at all times of the motor's fitness for duty," says Hohlman.

"Every single time the motor shuts off, if it is for seconds, a day, or for the 10 days of an outage, the motor is being tested," he adds. "And, if it goes below a safe level, it alarms immediately and can lock the motor from even starting."

This stands in stark contrast to the snapshot taken by a megohmmeter at the start of a shutdown. In a matter of days, the motor can pick up considerable moisture due to humidity and contamination.

"After a planned maintenance period, you can have megohmmeter readings that look good, but perhaps something happens to cause a delay to the start up," says Hohlman. "Now, the motor is sitting in moist or damp conditions and insulation resistance to ground is degrading. Perhaps two days later, you start the motor and lose it because the conditions have changed."

"Hands-Off" Monitoring

The continuous monitoring system also allows for a "hands-off" approach that does not require service technicians to access control cabinets to perform a manual insulation resistance test.

Instead, an analog meter outside on the control cabinet door shows the insulation resistance megohm readings in real time. The meter also indicates good, fair and poor insulation levels through a simple "green, yellow, red" color scheme. When predetermined insulation resistance set point levels are reached, indicator lights will turn on to signal an alarm condition and automatic notifications can be sent out to the monitoring network.

"With the Meg-Alert, you can walk up and just look at the megohm meter on the panel," says a

Maintenance Supervisor who has spent 40 years working for a large American energy company. "The advantage is you know in real time, whether or not there is a low resistance reading on it."

At the first facility he worked at, the company purchased 23 Meg-Alert devices for critical motors.

"If you lose a critical motor, especially during peak production time, you have just lost 350 megawatts of production at the site," he adds. "You could be down for weeks if you have to remove the motor and send it out for repairs. That can have a huge financial impact."

Even if a spare motor is available on-site, the downtime and labor costs can escalate quickly.

Continuous monitoring can also show if the heaters used to maintain thermal temperatures or prevent condensation are working properly.

Most motors utilize heaters to maintain the temperature inside the motor so it doesn't vary drastically from operating temperature or ambient temperatures outside the unit. If it goes below the dew point, the motor will start picking up condensation while offline. However, if these heaters fail to operate properly or the circuit breaker is tripped, plant personnel may not be aware of it until the motor fails on startup. Although these motor heaters are checked regularly, this can leave critical motors unprotected for weeks or even months.

"Given that a large 4160V pump motor costs about \$150,000 to rewind, I can buy an awful lot of continuous insulation testing and monitoring devices for that price and it prevents the issue," says the Maintenance Supervisor.

"I'm just trying to automate the process to prevent problems," he adds.

Preventing Arc Flashes

According to Hohlman, safety is another major driver behind the decision to install the continuous insulation resistance monitoring devices. Reducing employee exposure to potential harm from arc flash is important to every safety program.



**You're safety management
just got mobile.**



The only mobile centric software
developed by safety experts, for safety experts.
This simply is the smartest and most robust software
ecosystem in health and safety.



LOTO
Procedures



Training
Management



Hazard & Incident
Reporting



Inspections &
Audits



LOTO
Inspection

SCHEDULE YOUR DEMO TODAY

WP **MAKE EVERY STEP A SAFE ONE**

Help Prevent

SLIP AND FALLS

Flex-Tred®

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

Arc flashes are an undesired electric discharge that travels through the air between conductors or from a conductor to a ground. The flash is immediate and can product temperatures four times that of the surface of the sun. The intense heat also causes a sudden expansion of air, which results in a blast wave that can throw workers across rooms and knocked them off ladders.

Arc flash injuries include third degree burns, blindness, hearing loss, nerve damage, and cardiac arrest and even death.

Among the potential causes of an arc flash listed by NFPA 70E includes "improper use of test equipment."

Although de-energizing equipment before testing and wearing appropriate personal protective equipment (PPE) is recommended, the best solution is to eliminate the need to access the control cabinets at all to perform insulation resistance tests.

"Safety was definitely a major driver in our decision to purchase the Meg-Alert devices," says Hohlman.

Constant Vigilance

According to Hohlman, the bottom line with automated, continuous insulation resistance testing is that it can help utilities ensure critical motor reliability, decrease the probability of failure on startup, reduce unscheduled downtime and save on repair costs.

He adds that plants can also avoid penalties associated with failure to meet contractual power generation commitments. If a surprise motor failure occurs, it can cause production delays or cause the utility to be temporarily de-rated.

"If you have continuous monitoring, it reduces exposure to those kinds of penalties as well," says Hohlman.

For more information, contact Meg-Alert at www.megalert.com; phone (800) 778-5689; or at 8766 Frank Drive, Minocqua, WI 54548.

www.megalert.com •

OIL ALERT®
LIQUID LEAK DETECTOR

DETECT OIL LEAKS AND SPILLS...FAST!



5 3/4" Dia. x 1 1/8" H

- AVOID OPERATIONS SHUT-DOWN
- REDUCE ENVIRONMENTAL RISKS
- MINIMIZE COSTLY CLEAN-UP
- MONITOR OFF-SITE EQUIPMENT

APPLICATION AREAS

Elevator Pits	Hydraulic Test Stands
Oil Storage Locations	Wind Turbines
Diesel fuel storage tanks	Hydraulic Piping
Remote Site Monitoring	Coolant oil storage

Go to WWW.OIL-ALERT.COM
OR CALL: 1-800-533-6392
FOR MORE INFO!!

DORLEN Products Inc.
 6615 W. Layton Ave. Milwaukee, WI. 53220

MADE IN THE USA

KEEP YOUR TEAM SAFE



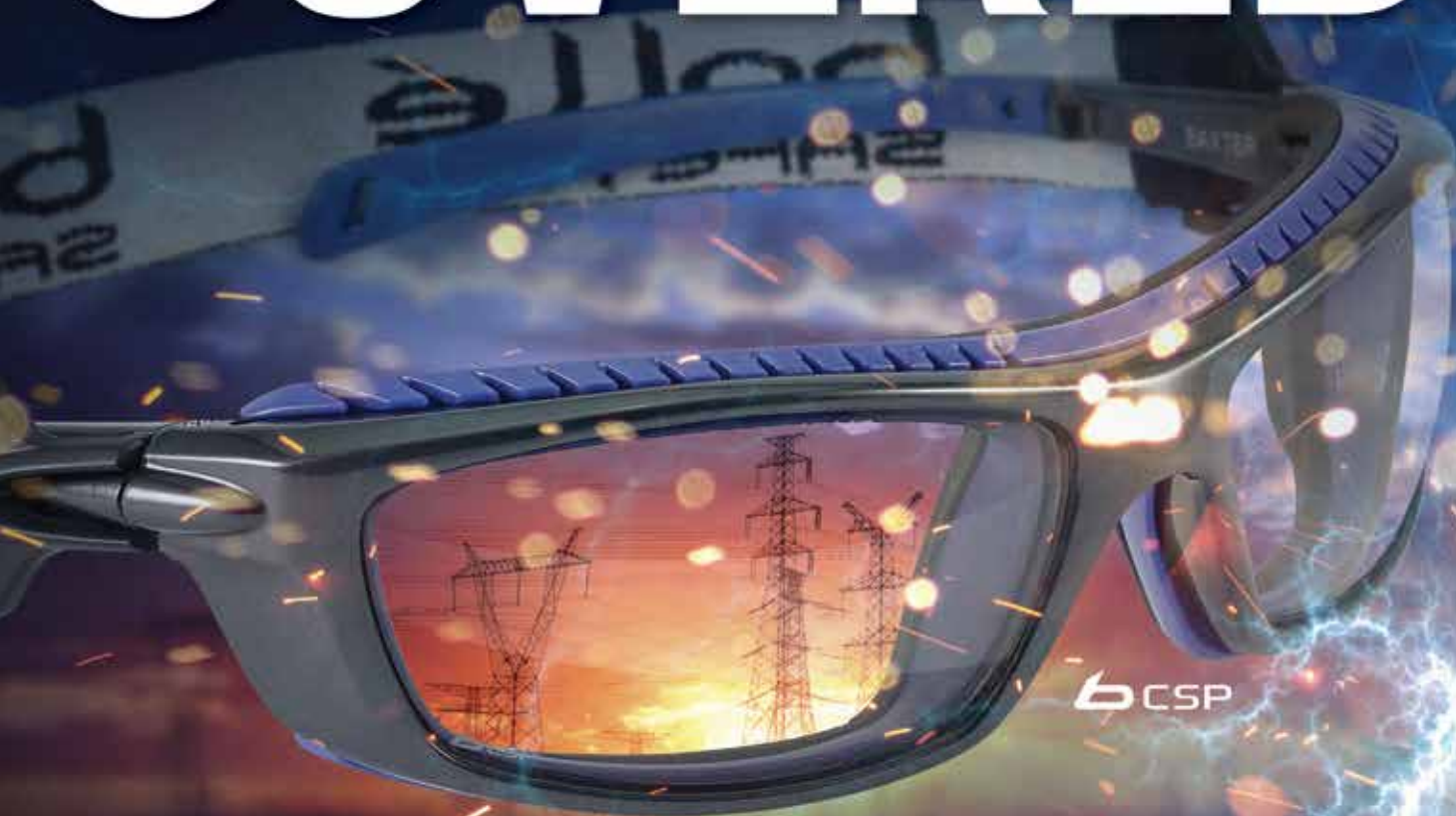
With more than 7,700 cases in 2018 alone, OSHA consistently cites more companies for fall protection violations than any other issue.

FREE DOWNLOADABLE FALL PROTECTION PLAN

Need a Fall Protection Plan? We've got you covered. Download our free, customizable Fall Protection Plan at <https://maltadynamics.com/fall-protection-plan/>.



WE'VE GOT YOU COVERED



 **PLATINUM** WHEN YOU WORK. IT WORKS.

No other brand on the market will work harder to preserve your vision and protect your eyes, while providing ultimate fit and comfort. CSP technology's ability to perform in indoor to outdoor environments and in hot to cold conditions is combined with the exclusive PLATINUM® coating to substantially combat fogging and provide permanent visual comfort from a single pair of glasses.

800-262-7306
bollesafety-usa.com

bolle
SAFETY

CoreTex[®]

Products Inc.

BE SAFE. BE PREPARED. BE PROTECTED



SunX50
sunscreen lotion

SunX30
sunscreen

SunX
Multi-Purpose Foil Pack

BugX30
INSECT REPELLENT

BugX FREE
INSECT REPELLENT

IvyX
PRE-CONTACT SKIN SOLUTION

IvyX
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

CINTEC™ FIRE RESISTANT ANCHORS

In view of the recent fires and loss of life in refurbished buildings, Cintec™ has been fully aware of the danger of fire and has always produced fire resistant remedial anchors and reinforcement.

In the past few years, fire has been an increasing concern when buildings are being retrofitted, restored, or modernized. On June 14th, 2017, a fire broke out in the 24 storey Grenfell Tower, widely reported as the worst residential fire to take place in the U.K since the second World War, due to failures by design.



As concerns over fire safety spread through the country, Prime Minister Theresa May ordered a public inquiry. As stated in the final report of the review of building regulations and fire safety, England is by no means alone in needing to improve building safety, as building regulations are a global concern.

Under the terms of the EC Construction Products Directive, resistance to fire is one of the essential requirements for which performance tests are required. In Europe, thin-joint mortars have become popular, thus there are a number of situations where fixings are made using organic polymers as either the tie body, or in the form of resin glues. Such ties are not inherently fire resistant and could fail and shorten the life of a cavity wall in a fire, or lead to the collapse of cladding resulting in danger to escaping occupants and fire fighters.

As a leader in structural preservation, Cintec™ has always been an advocate for the restoration of safe buildings through fire-resistant anchors, as long ago as 1993 fire tests were carried out by

SAFETY RAILINGS MEET STYLE

ACCU-FIT

DON'T HIDE YOUR RAILINGS, EMPHASIZE THEM



TRADITIONAL STRAIGHT SERIES



DESIGNER CURVED SERIES



ARCHITECTURAL CURVED SERIES

- UNIFORM LINES
- NON-PENETRATING
- SLEEK APPEARANCE

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

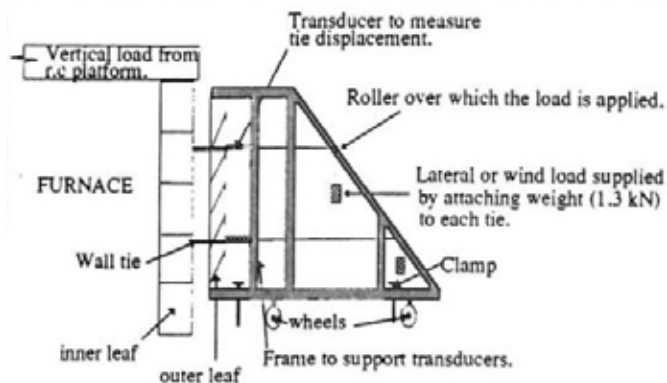


Figure 1 Side view of the test rig and the test wall

the internationally recognized Building Research Establishment in accordance with BS476(), ISO(), and CEN(). The fire rig was designed for use in the measurement of the performance of Cintec's™ anchors in a fire situation while subjected to a mechanical load which might be a result of wind suction of fire-induced thermal movement.

Cintec's™ remedial anchors survived a two-hour test without failure of any of the samples. Every sample reached several hundred degrees in the part of the anchor nearest to the fire face. This indicates the anchor system can be recommended for repair work to buildings requiring a fire rating of up to two hours.

Cintec™ Anchors were later, unintentionally, put to the test at the Fullers Brewery in London. The Cintec™ anchor system had been used extensively to repair and restore the Brewery's facade. A fierce fire followed, destroying large sections of the building. Despite the brickwork being subjected to extremely high temperatures, tests revealed that the cementitious Cintec™ anchors did not fail, performing to their original design. They retained their integrity and could be reused for the repair work. If the anchors were an epoxy or resin type, they would have melted, releasing potentially dangerous fumes in the process and have been easily pulled out, allowing the wall to collapse. One could say that the Cintec™ Anchors having

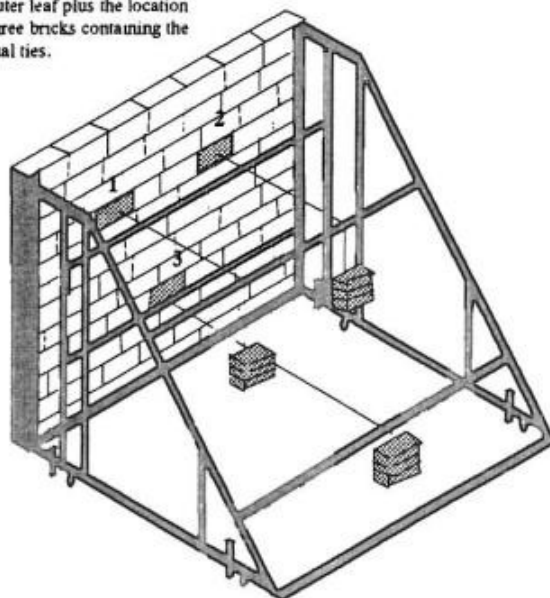
survived the fire are in fact fire proof.

In New York City, according to the NYC Buildings Department, adhesive anchors are not permitted to support fire-resistance rated construction unless the use of such anchors meets the conditions set forth in the acceptance criteria. Post-installed anchors in masonry must be designed in accordance with the NYC Construction Codes, describing the masonry substrate type and condition, as well as proof of pull tests.

Howard Zimmerman, the well-known NY Architects, had concerns about the lack of fire ratings for resin-based anchor systems in high rise apartments near Central Park, New York. After reviewing Fire Test Data and performance tests on a severely damaged building after a fire, it was determined that the Cintec™ System was the best anchor to meet the project engineers' concerns.

Cintec™ anchors are the cementitious fire-resistant alternative to resin anchors. Since Cintec's™ anchors are based on reliable restoration materials, cementitious grout and stainless steel, they easily provided the elusive fire rating typically absent in other systems.

Brick outer leaf plus the location of the three bricks containing the individual ties.





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 (ie. Master, Corbin, Yale, Best, and others).

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



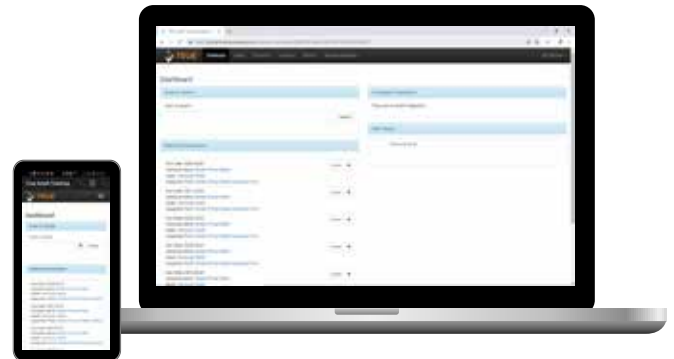
HERCULES INDUSTRIES, INC.
Manufacturer of HERCULOCK Padlocks
P.O. Box 197 • Prospect, Ohio 43342
Toll Free: 1-800-345-2590
Fax: (740) 494-2274
www.HERCULOCK.com

The Link Between You and Your Assets

Providing the Who, What, Where, When, and Why of your tools, equipment, and training certifications

Your Secure Cloud-Based Platform

One location... so you can track, manage, and maintain your company's assets, equipment inspections, and training certifications.



RFID + Matching QR Code

Training Tracker Cards

TRUE-TTC's provide a simple, manageable solution to workplace training records and certification compliance. One card will hold any number of personnel training certifications, allow for real-time updating, notifications for retraining, and easy viewing of certifications via TRUE's app.



Flexible Adhesive Tags

Our tags provide a wide-range tagging option for your assets. The durable, flexible and weatherproof PET material combined with 3M Adhesive make it a universal option for equipment, tools, PPE, and mobile devices - along with many others.





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.



Established in 1932 in Detroit, Michigan, by the grandfather of the company, 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 range of products which may be used from the processing department through the shipping department. A Woman Owned Small Business is WBE Certified.



current owner,
features of materi-
a wide variety
ough to the ship-
certified.

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

Ad Index

Company	Pg.	Website
Bruel & Kjar	3	www.bksv.com/bkconnect
Bolle Safety	14	www.bollesafety-usa.com
Coretex	15	www.coretex.com
Dorlen Products	12	www.waternalert.com
Emars Inc	24	www.emarsinc.com
Gorbel	21	www.gorbel.com
Herculock	19	www.herculock.com
Jesco	7	www.jescoonline.com
Malta Dynamics	13	www.maltadynamics.com
Martin Technical	1	www.martintechinc.com
Mil-Ram	BC	www.mil-ram.com
Safety Hive	11	www.safetyhive.com
Safety Rail Co	17, IBC	www.safetyrailcompany.com
Safety Through Engineering	5	www.ste4u.com
Scantek	9	www.scantek.com
Stereo Optical	2	www.stereooptical.com
True Asset Tracking	20	www.trueassettracking.com
UAB	IFC	www.uab.edu/aseam
Wooster	12	www.wooster-products.com



On Site Employee Verification

Bob Put In 9 Hours And 3 Minutes Of Work On Tuesday.
Stop Guessing. Start Verifying!

Always Know Who, When and Where with eMars Compliant Client and RFID
 Be Davis - Bacon Compliant In Minutes • Users Report 85% Savings of Money and Time • Alerts You of 30 Compliance Errors

Ph. 480-595-0466

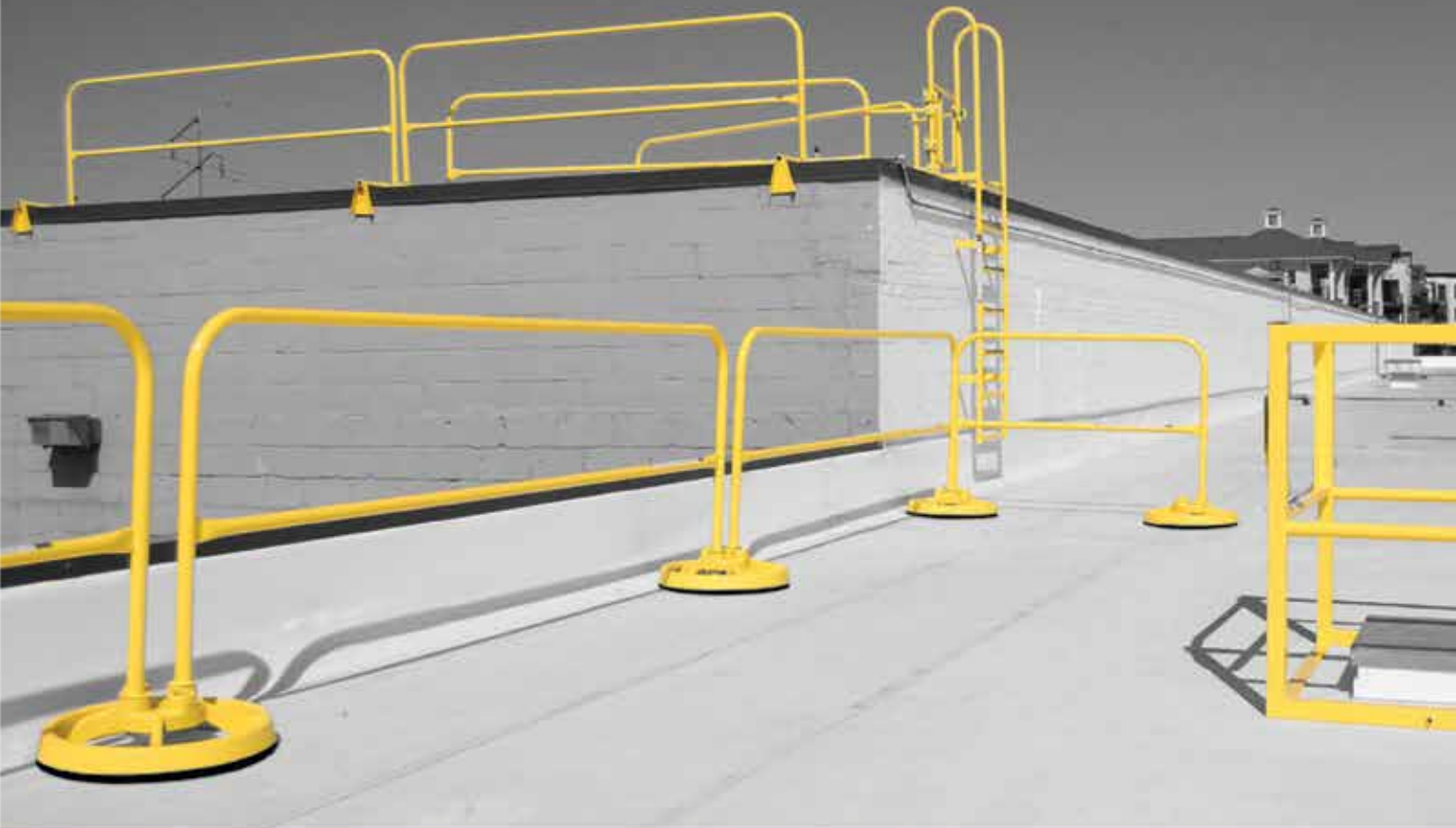


eMarsinc.com



SafetyRailCompany

Fall Protection for Life and Compliance



FALL PROTECTION REIMAGINED

COMPLETE • COMPREHENSIVE • COMPLIANT

COME SEE US AT THE ASSE TRADESHOW
BOOTH #2101

SAFETY RAIL COMPANY, LLC.

4244 SHORELINE DRIVE
SPRING PARK, MN 55384

PHONE: 888.434.2720

FAX: 888.471.4931

SAFETYRAILCOMPANY.COM

no false alarms

Gas Detection Excellence Since 1990

Industrial Gas & Fire Detection Systems

BUILD



TEST



DEPLOY



- Combustibles, LEL
- Hydrocarbons

- Refrigerants
- Toxics

- VOCs
- Oxygen



MIL-RAM TECHNOLOGY, INC.
CERTIFIED TO ISO 9001:2015
10000574 QM15

Tel: 510-656-2001 • Toll Free: 1-888-464-5726

Fax: 510-656-2004 • Email: sls@mil-ram.com

MIL-RAM
Technology, Inc.
no false alarms
Gas Detection Systems

For More Details Go to MIL-RAM.com