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The world of Industrial Processing Equipment

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AVAGO
TECHNOLOGIES LIMITED

This e-newsletter
brought to you by:
Avago Technologies Limited

Industry Trends & Events . . .

[Questions and Discussions](#)



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At the Scene of the Crime



In industrial processing, it's known as a failure scene — the site of an equipment breakdown or malfunction that causes an entire system or line to cease functioning. Everyone from management to the machine operator wants that equipment up and running again as soon as possible, but Jim Fitch, an oil and machinery lubrication specialist says first you must conduct a [root cause analysis](#) at the scene of the crime. Like any investigator, you must be observant: pay attention to signs that indicate your equipment may be near the end of its life, take more oil samples, and save oil filters for further analysis. And, if a failure happens, secure the scene immediately to preserve the evidence. Could some good detective work at your plant save the life of your processing line?

Have a Question?

Post your question...

...to our CR4
Engineering
Community

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Spotlight On . . .

Dust-free Bulk Bag Unloaders with Optional Conveyors and Weigh Batching Controls

Flexicon Corporation



[New generation unloaders](#) eliminate dust during untying, discharging, retying, collapse, and removal of bulk bags while promoting complete discharge of bulk solid materials. [Low-cost half-frame models, to full frame models](#) with forklift or hoist/trolley loading of bags (shown), to automated weigh batching systems complete with mechanical or pneumatic conveying systems.

Filter Monitoring Differential Pressure Gauges and Switches

Mid-West Instrument



Prevent unexpected down time and system contaminants as a result of clogged or dirty filters. With the use of our "Filter Minder" filter monitoring differential pressure gauges, switches, and transmitters, [Mid-West Instrument](#) can provide solutions. Gauges are backed by our **5-year warranty** and made in the **USA**. [Learn more.](#)

Kepeco's Din-rail Kits for Easy Mounting of Power Modules

Kepeco, Inc.



[Kepeco's DIN-Rail kits](#) provide mounting hardware and clips allowing easy mounting and dismantling of power modules in a variety of orientations at a low cost. Kits include enclosures for open construction PC card and L-chassis power supplies. Models using input/output connectors have mating connectors included. [Learn more.](#)

How to Size an In-Line Furnace

Furnace Fixers, Inc.



Furnace Fixers, Inc. manufactures [conveyor furnaces](#) with flat and turned-up edge belts to meet your applications. [Furnace Fixers, Inc.](#) product lines can be customized to meet your application specifications.

Fluid & Gas Handling Equipment . . .

[Learn More](#)

Pumping Up the Assembly



A maker of [airless metered pump dispensers](#) for pastes and gels partnered with an assembly line manufacturer to help increase their production efficiency while reducing the footprint of the line. But, more importantly, the new assembly equipment provided the high tolerances needed to ensure that each pump produced was airtight and dispensing an exact dose.

When Your Equipment Has Gas

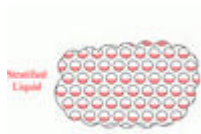


Fluid handling equipment can suffer from a variety of digestive problems, just like you do. [Gaseous noise](#) can create serious problems, from hearing loss among operators to damaging vibration and even equipment failure. Find out the most common causes of gas and how to use a noise attenuation system to clear the pipes and keep things running smoothly.

Thermal Processing . . .

[Learn More](#)

Keeping Your Cool



Is the layout of your [subcooling system](#) less than ideal? Not to worry — with a bit of creative thinking, you can still make your system produce. One example: use an oversized condenser to provide more than enough surface area for cooling. Other tips include using an air-fin exchanger as your condenser or restricting the flow from the condenser to the drum.

Heat Treat at the Nano Level



bubbling.

Heat-treating steels usually involves working in an open-air environment at very high temperatures. Research shows that this can lead to oxidation, scaling, and possible degradation that results in component failure. A new process called NanoTech Surface Treatment Technology (NSTT) may provide a solution to the problem by first creating a layer of [carefully chosen atoms](#) on the surface of the steel prior to heating. Early tests show that the NSTT-treated steel is free from surface oxidation and

Accent On . . .

Safe and Robust Industry Process Control

Avago Technologies Limited



Avago Technologies offers a broad portfolio of Optocouplers that provide safety insulation that meets various communication protocols, EMC, and ground loop elimination required by industry process system.

High linearity **HCNR200** and **HCNR201** are de facto standard isolators for 4-20mA analog current loop and HART communicators. [Refer App note.](#)

Improve Performance and Uptime with Hotset Electric Heating Elements

Hotset Corp.



For electric heating applications such as hot runner, form, fill and seal, and hot adhesive systems-application specific, Hotset heaters are often the most cost-effective performance improvement you can make.

Built to order in the U.S. within seven business days, [Hotflex](#) tubular heaters ship same day. www.hotset.com or (269) 964-0271.

Solids Handling . . .

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Go With the Flow



The spring 2008 edition of *Processing Magazine's Powder Handling* supplement features a case study on a West Coast concrete manufacturer looking to replace its bulk handling system. From the supplement's Table of Contents in the top menu bar, click on "[Revolutionizing the Stone Age](#)" to read about how the company used a custom system of bulk bag dischargers, mechanical conveyors, and rotary feeders to optimize the flow of materials.

Innovating How We Move Materials



A company in Illinois is creating a new corporate research center devoted to the study of heavy industry bulk handling systems. The Martin Engineering Center for Bulk Materials Handling Innovation will focus on ways to make bulk handling in mining, concrete manufacturing, and aggregate production safer, cleaner, and more efficient. The center is equipped to test a variety of materials, from [metals to polymers](#), and includes an environmental laboratory and a three-belt conveyor system.

Filtration, Separation & Recycling . . .

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One Stop Shopping



footprint.

One company has combined the steps of conveying, feeding, and separating dry powder or granules into one contained system. The new system eliminates the need for an extra feeder and hopper by using a [vacuum conveyor](#) to transport the materials to the separator. The combined unit can reduce both capital and energy expenditures, as well as your equipment's

Saving Water with Air



Washing aggregate materials with copious amounts of water has been the traditional way to separate and classify these products. Some producers are trying to reduce the amount of sludge created and conserve water by turning to a dry air separation process. Not only have they saved water and fuel costs, several companies have discovered the process provides them with a [second saleable product](#): dry fines removed from limestone or granite can be used as fillers for fertilizers or bedding for pipelines.

Focus On . . .

LaserStar iWeld Advanced Laser Systems

LaserStar Technologies Corporation



The [iWeld laser](#) is ideal for a wide range of metal joining and [repair applications](#). Common industry applications include: medical device component assembly, complex electronic components, high-precision industrial assemblies, pressure-sensitive hermetic seals as well as many other unique applications for the automotive, aerospace, aviation, computer, prototyping laboratories, and medical instrument and consumer product industries.

Paint Can Compactor

Bee Cool Mfg.



The portable, lightweight table top [LS-98S Little Squeeze](#) electric 110 V chrome can crusher basic for crushing small cans up to 1 gal is the least expensive on the market. It [crushes one can in eight seconds](#), can crush six cans in a minute, and 360 cans in an hour!

Careers & Commentary . . .

[Engineering Jobs](#)



A Better Job Search by Design

Dice



[DiceEngineering.com](#) offers thousands of quality engineering jobs at top technology and engineering companies. Find jobs in your area of expertise. [Search now.](#)

Protect Your Design



Engineers are trained to design with both equipment and operator safety in mind, but that doesn't always protect them from possible litigation [when a product fails](#). Learn how to use the analytical approach in the courtroom before a problem arises with your design. Balancing technical and legal considerations is partly common sense, but it also involves taking some time to assess all of the potential hazards.

Diversions . . .

Space Aged Solids Handling



The successful landing of NASA's Phoenix Mars Lander was a thrill and a welcome boost to the space agency's unmanned probe program. Now, however, there is a glitch with the lander's Thermal and Evolved-Gas Analyzer (TEGA). It seems that the soil sample intended for the analyzer got [hung up on the screener](#). Scientists are planning to send a new command to a small vibration tool that can shake the screen in hopes of loosing some of the particulate matter.

Share Your Thoughts . . .

Join a Conversation About This Month's Topic...



Controlling the Weather

The Chinese government has perfected a cloud seeding system to ensure that the Beijing Olympics are dry and sunny. Is this kind of control a benign effort to ensure smooth running of the games or does it pose a potential environmental problem?

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