



THE BEST READ AND ONLY GLOBAL PUBLICATION IN THE CHEMICAL PROCESS INDUSTRIES

FEATURE REPORT

Novel and Conventional Approaches to Sterilization

Summary: The inactivation and elimination of bacteria are important issues in high-purity application areas. This article describes the three predominant forms of sterilization that are in use: moist heat, radiation and ethylene oxide sterilization. It also includes novel approaches, such as plasma sterilization, dry-heat sterilization and novel autoclaves.

Related equipment and services: All types of sterilization equipment, such as those mentioned above; equipment and services used in high-purity applications, such as pharmaceutical, medical-device and food applications

Energy Efficiency

Summary: Increasingly, the onus is on industry to improve energy efficiency before governments begin legislating targets for individual sectors and companies. This month's Feature Report will cover a wide range of opportunities for economically reducing energy consumption from product design and manufacturing; to steam systems, like steam generators and steam traps; maintenance; and the supply chain. Attention will also be paid to conserving energy in office building and warehouse scenarios relevant to the chemical process industries.

Related equipment and services: Enterprise resource planning, steam traps and steam generators, sustainable engineering design and consulting services, distillation columns, scrubbers, pumps and energy-oriented optimization software

FOCUS

Filtration

Summary: This month's Focus on filtration technology will cover developments in specific filters – such as Y-strainers, air and liquid separators, and duplex basket and plug-type strainers – as well as related support products, like filter leak detectors and filter housings.

Related equipment and services: Filters, separators and related support equipment

ENGINEERING PRACTICE

A 'Lessons Learned' Knowledge Management System for Engineers

Summary: This article will focus on how a lessons learned process coupled with today's highly capable databases has the potential to measurably increase the productivity of a project-intensive organization, as well as increase the quality of the services they provide.

Related equipment and services: Project management, scheduling, materials, management and database software

Correlation Accurately Predicts Physical Properties of Hydrocarbon Compounds

Summary: Continued growth in the CPI is increasing the need for understanding different compounds' properties and characteristics for prediction methods and their impact on unit operations, process simulation and design. This month's Engineering Practice feature presents a new, simple-to-use correlation for predicting physical properties of different pure hydrocarbons and petroleum fractions for when experimental data is not available.

Related equipment and services: Software for curve fitting, process simulation software, modeling software

SOLIDS PROCESSING

Preventing Caking and Agglomeration

Summary: Caking occurs when an easy-flowing powder becomes cohesive after storage or transport, forming agglomerates comprised of individual particles that are bonded together. The consequences range from problems with product quality to extreme cases that subject personnel to danger. This article will provide insight for preventing caking and agglomeration.

Related equipment and services: All bulk solid equipment in general, especially testing equipment for characterizing a particular bulk solid, and services related to bulk solids system design and troubleshooting



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NEWSFRONT

Heat-transfer Fluids

Summary: The August Newsfront will take a look at the latest developments in heat-transfer fluids, with particular emphasis on products that have recently been introduced into the market (or will be soon).

Related equipment and services: Heat transfer fluids, cooling fluids, heating fluids, hot oils and thermal fluids

FACTS AT YOUR FINGERTIPS

Valves

Summary: This one-page guide will describe and illustrate the most common types of valves used in the CPI, along with a discussion of proper valve selection for particular applications.

Related equipment and services: All types of valves (gate, pinch, diaphragm, ball, plug, butterfly, check, safety, etc)

TECHNOLOGY SHOWCASE

Reverse Osmosis Market Forecast

Summary: Market forecasters anticipate that the global market for reverse osmosis (RO) equipment and membranes will climb to \$5.6 billion in 2012, compared with \$3.8 billion in 2008. The August Technology Showcase will explore three major markets driving RO sales growth, semiconductor manufacturing, pharmaceutical processing, and desalination: industries that utilize this technology for removing contaminants from wastewater streams and providing for ultra-high-purity water to both processing and residential applications.

Related equipment and services: Reverse osmosis filtration membranes and related equipment; fluid dynamics software and consulting services

LOOK FOR THESE ARTICLES COMING IN THE SEPTEMBER ISSUE:

Feature Reports

Water Supply & Reuse
Process Control Setup

Equipment

Weighing,
Proportioning &
Feeding

Focus

Pipes & Fittings

and more...

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