

FEATURE REPORTS

Heat Transfer Special Report

Summary: This two-part article will address heat exchanger design from the following perspectives: Two-Phase Flow through Horizontal Tube Bundles and Avoidance of Tube Bundle Vibration for Shell-and-Tube Heat Exchangers.

Related equipment and services: Heat exchangers, heat transfer fluids, and related equipment and services

Total Cost of Ownership (TCO) Approach to Seeking Value

Summary: When negotiating with suppliers for equipment and support services, taking a TCO approach can help maximize the value a company gets for its purchase. Focusing on price exclusively can lead to problems. This article describes how to adopt the TCO approach.

Related equipment and services: Equipment procurement-related information services or software, capital cost estimation software

NEWSFRONT

Personal Achievement Award: Call for Nominations

Summary: This article will announce that the nomination period for *CE*'s Personal Achievement Award is now open and explain how to submit an entry.

Ammonia and Urea

Summary: Although one of the more energy-intensive processes, ammonia production continues to grow in importance, as it is the main precursor for fertilizers. Meanwhile, urea production — made from ammonia — is growing, not only as another fertilizer, but also for its dual environmental benefits — as a carbon-dioxide sink and for reducing NO_x emissions from diesel engines. This month's Newsfront will present the latest developments in ammonia and urea process technology, as well as emerging alternatives to the 100-year-old Haber-Bosch process.

Related equipment and services: Gasification, steam-reforming and other synthesis-gas technologies, ammonia and urea synthesis technology, catalysts, engineering and construction

Send editorial material for consideration to senior editor, Gerald Ondrey (gondrey@che.com).

Centrifuges

Summary: Centrifuges are widely used for solid-liquid separation, and new "twists" in centrifuge design are continuously evolving. This Newsfront will present the latest designs and applications for centrifuges.

Related equipment and services: All types of centrifuges

Send editorial material for consideration to contributing editor, Joy LePree (jlepree@che.com).

FRACTIONATION COLUMN

Summary: This monthly column in *CE* is written by the technical director at Fractionation Research Inc., a consortium of end-users, engineering companies and distillation equipment providers that pool budgets on distillation research.

Related equipment and services: Distillation towers, trays and packings, tower-scanning equipment and services

FACTS AT YOUR FINGERTIPS

Pressure Relief

Summary: This one-page reference will outline tips for avoiding problems with pressure relief valves and rupture disks.

Related equipment and services: Pressure vessels, safety release valves, rupture disks

ENGINEERING PRACTICE

Selecting Lubricants for Rotating Machinery

Summary: Lubricants are routinely used in rotating machinery to reduce friction and wear, dissipate heat, protect surfaces, keep out foreign contamination, and remove wear particles. This article discusses the pros and cons of the two main types of lubricants — petroleum-based mineral oils and synthetic oils — and provides tips for proper specification and use of each type. The article also provides several case studies.

Related equipment and services: Lubricants (petroleum-based mineral oils, and synthetic lubricants), reciprocating compressors, screw compressors, pumps, gas turbines, motors and engines, fans

Project Management

Summary: Over the last three decades, project execution in the chemical process industries (CPI) has become almost standardized with the general adoption of certain well-known project management procedures. Those who are selected to manage the projects are generally the winners of rigorous elimination processes in their companies. But as every practitioner of the business knows, war stories of disasters abound. What seems to be the problem? In this article, we will focus on ten mistakes in project management that have overreaching impact on the outcome.

Related equipment and services: Project management services from engineering companies and consultants, software that aids in project management

FOCUS

Process Instrumentation and Control

Summary: This section will include a group of short descriptions of recently introduced products and services related to process instrumentation and control for chemical process industries (CPI) applications.

Related equipment and services: Devices that measure and control level, temperature, pressure, flow and other variables pertinent to CPI processes; analyzers; process control software

To be considered for coverage in this section, please send a news release and high-res photo (>300 dpi) to Dorothy Lozowski (dlozowski@che.com) with "January Focus on Instrumentation and Control" in the subject line.

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