SPECIAL report: plant safety and environment

**Digital approaches to safety instrumented systems provide faster ROI**
Automated testing and monitoring increase safety and lower costs
E. Fillion

**Select the best protection method for electrical apparatus in hazardous areas**
Here are the trade-offs between safety and cost-of-ownership
Z. Stanley

**Calculating settle-out pressure in compressor loops**
Simple procedure can be used to help determine piping and equipment design pressures into process loops
A. Heydari Gorji and H. Kalat Jari

**Issues and crisis communications management**
For plant owners and operators, the right words and actions can make a meaningful difference
L. Pennino

**Process safety concerns can arise when using refurbished or new-surplus equipment**
This basic knowledge can help mitigate potential hazards and improve regulatory compliance issues
R. Baker

**New developments in portable infrared camera technology**
Using these devices can improve facility safety and the bottom line
R. Madding

**BONUS report: water management**

**Avoid failures in waterside utility systems**
Use these preventive steps to improve operations and reliability of process water treatment units
L. Huchler

**Optimize operations of demineralization units**
Better selection of resins and operating practice improve operation of this water treatment method
B. P. S. Mehta

**Improve oily wastewater treatment**
Innovative methods meet challenges to pretreat and dispose of process wastewater properly
T. E. Schultz

**Understand reverse osmosis as a vital water treatment**
Normalizing plant data reveals true condition of membrane systems
J. Kucera

**engineering case histories**
Case 35: Technical checklists
Our memories are not always adequate
T. Sofronas

hp impact

New study reexamines link between oil, natural gas prices
World transportation fuel demand resilient despite high prices
Shortages in project, operations workforce concern HPI leaders
Coal-fired power boosts demand for water treatment chemicals
Growth in TPA, polyester markets region-specific
SABIC buys Huntsman’s Europe base-chemicals and polymers business
Study quantifies R&D’s contribution to US economic growth

editorsials

HPI In Reliability
Field-installed vibration values for centrifugal pumps
HPI In Europe
Maiden voyage into refining yields renewables megaproject
HPI In LNG
Diversification shrinks international gas trading market
HPI Integration Strategies
Benchmarking consortium includes operator training
HPI In Control
Jim Ford’s views on advanced process control
Guest Editorial
Process plants’ safety and security dilemma
HPI In Water Management
Reduce risk of feedwater oxygen corrosion
Letters to the editor

news/products

HPI In Brief
HPI Innovations
HPI In Construction: North America
HPI In Construction: Europe
HPI In Construction: Africa
HPI In Construction: Asia-Pacific
NEW developments products, services and software
FREE literature

About the Cover
Neste Oil’s Porvoo Refinery is one of the most advanced and versatile refineries in Europe. Refining capacity is approximately 27,000 tpd (196,000 bpd) of crude oil. Main products are sulfur-free transportation fuels and base oils. A plant for high-quality, second-generation biodiesel is under construction and is scheduled to start production in the second quarter of 2007.

Copyright © 2006 Hydrocarbon Processing