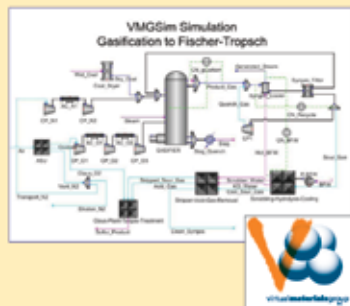


## Loved by Engineers

### VMGSim Process Simulation

- Gasification • Fischer-Tropsch
- Reforming • Carbon Dioxide Removal • Sulfur Recovery



APPROVED By CFOs

Virtual Materials Group, Inc.  
USA 281-346-1200  
Canada 403-457-4595  
www.virtualmaterials.com

www.aiche.org/cep or Circle No. 150 on p.67

## Safe Access for Tanker Trucks and Rail Cars



- Gangways & Access Ramps
- Loading Racks
- Lifeline Protection
- Hose & Loading Arms
- Excess Flow Check Valves

(877) 394-3626 Toll Free  
HemcoCEP.com

**Hemco**  
ramping up safety

www.aiche.org/cep or Circle No. 151 on p.67

## Multitubular reactor scale-up and design

- Design of multitubular fixed-bed catalytic reactors
- Scale-up from bench to pilot and commercial
- Gas or liquid phase
- Tube-side design (number, dimensions)
- Shell-side design (baffle configuration, tube pitch, coolant flow)
- Catalyst layer optimization
- Impact of catalyst shape, size, internal structure
- Hot spot management
- Kinetics identification, catalyst deactivation
- Advice on design of experimental programs



e: reactors@pseenterprise.com  
w: pseenterprise.com/multitubular  
t: (973) 290 9559

www.aiche.org/cep or Circle No. 152 on p.67

## Free Tutorial CD Featuring Fluid Flow, Heat and Mass Transfer, & Reaction Kinetics



COMSOL® is now offering a free copy of the 2012 Edition of the Conference CD! This CD is a well rounded compilation of works from the worldwide multiphysics simulation community. It contains over 700 presentations from our recent conferences in Boston, Stuttgart and Bangalore. Applications featured include microfluidics, electrochemistry, transport phenomena, reaction engineering, and many more.

Request your complimentary copy of the CD at [www.comsol.com/cep-showcase](http://www.comsol.com/cep-showcase)  
Tel: 781-273-3322



www.aiche.org/cep or Circle No. 153 on p.67



Designed to monitor high, intermediate or low point-level detection on dry bulk solids as well as liquids or slurries, the Dynatrol® Level Detectors are available in corrosion-resistant coatings. The compact, rugged detectors are built in the USA and are solidly constructed for a long operating life. They have no moving parts, require no adjustments and are virtually wear-free – delivering a worry-free solution for your demanding service conditions.

Request your copy of the latest Dynatrol® catalog - on CD!



Covers the complete Dynatrol® line of level switches & detectors, on-stream process analyzers, measurement & control instruments and a new line of accessories. Includes detailed drawings, wiring diagrams, and examples of proven uses.

Automation Products Inc  
3030 Maxroy St  
Houston TX 77008  
800 231-2062  
sales@dynatrolusa.com  
www.DynatrolUSA.com

www.aiche.org/cep or Circle No. 154 on p.67

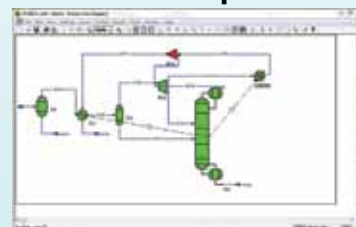


**XPSIM**

## eXtending Process SIMulation to flow assurance

- ✓ Characterization of oil&gas properties for upstream
- ✓ General unit operations
- ✓ Single and multiphase pipeline simulation
- ✓ Gathering systems and general networks

### ALL in ONE product



Visit [www.xpsimworld.com](http://www.xpsimworld.com) for more information.

www.aiche.org/cep or Circle No. 155 on p.67