Amine Advanced Training

Process, Operations, Monitoring & Troubleshooting

September 15-16, 2010 Calgary, Alberta Canada

Who Should Attend? This training is designed for production and processing personnel including plant engineers, process engineers, operations personnel, field supervisors, environment and pollution control engineers and others who select, design, install, evaluate or operate amine systems. The emphasis is on **Operations**.

Course Outline

A. Purpose

B. Process principles:

Basic chemistry, Vapor-Liquid equilibrium reactions, Absorber heat balance, Regenerator heat balance, Commercial amines and their properties

C. Amine unit process flow

D. Amine unit equipment & operation

1. Gas and LPG treating equipment and operation: Feed preparation, Absorber O/H KO drum, Gas absorber, LPG contactor, LPG-amine coalescer.

2. Amine regeneration equipment and operation: Flash drum, Rich amine pump, Lean/rich exchanger, Regenerator, Reboiler, Regenerator overhead condenser, Reflux drum, Reflux pump, Lean amine coolers, Amine filter, Amine carbon bed filter, Carbon treater after filter, Amine surge tank, Lean amine pump, Reclaimers, NH3 scrubber, Sumps, Safety relief systems.

E. Amine unit monitoring:

Monitoring amine quality, Heat stable salts, Makeup water, Analytical considerations, Unit performance.

F. Conversion to "super" amines

G. Materials and corrosion

H. Amine unit economics:

Benefits, Costs, Tradeoffs, Project justification.

Instructors

Duke Tunnell has over 20 years experience with engineering companies involved with the refining and gas processing industries. The focus of this experience was design engineering associated with sulfur recovery/tail gas treating units and included sour water treating and amine treating units.

His many years experience includes developing and managing both in-plant and open forum training seminars for the industry in the US and internationally.

He was also instrumental in establishing the Amine Best Practices Group (ABPG), is an active participant in the ABPG Data Exchange Network (DEN) and is one of the founders of BSDT Seminars.

Lou Beke has over 30 years experience with Mobil and has a technical background in research, capital projects, technical service and troubleshooting, and turnaround planning/support. Particular expertise in Claus sulfur recovery systems including, sour water treating, amine treating and tail gas treating. He has also consulted on emission issues relating to compliance with applicable environmental regulations.

Services he has provided to Mobil and the industry: ♦ Process training seminars for operators, engineers and managers ♦ Facilitated Mobil's global best practice network ♦ Process engineering input to ensure compliance with Benzene National Emissions Standards ♦ Consulted on caustic management and spent caustic disposal practices ♦ Technical support for HAZOPS and other PHA studies ♦ Turnaround planning and consultation ♦ Startup assistance ♦ Primary consultant in the identification of a technology to control mercaptan odor ♦ Control objectives analysis and reality checks for DCS projects ♦ Conceptual design and P&ID review.

What Will You Get Out of It?

This course focuses on the practical aspects of safely operating. monitoring and troubleshooting amine units with common errors that are easy to avoid.

You receive a comprehensive manual that is recently included.

You gain entrance to the Exhibition and cocktail reception. Registration is $900US by August 6, then $1000.

BSDT SEMINARS

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