



## AGENDA

### OIL & GAS SEMINAR

#### Day 1

- 9:00 Steam Basics**
- How is it created? What is Steam?
  - Properties of Steam
  - Heat Value of Steam
  - The Perfect Steam System
  - Condensation in Steam Systems
  - Steam system Efficiency and Flooded Systems
- 10:30 Water Hammer**
- Types of water hammer
  - Effects of water hammer
  - Water hammer demo boards
- 11:00 BREAK**
- 11:15 Steam Trapping & HP Dynamics**
- Traps: Different types & their function?
  - Drip leg sizing
  - HP trapping (SAGD)
  - Trap applications
- 12:00 LUNCH**
- 13:15 Trapping Board Demo**
- 13:45 Condensate Management**
- Why We Return Condensate?
  - Flash Steam Recovery
  - Condensate Recovery (Electric & Mech)
  - Effect of Flash on Condensate Return
  - Returning Over Temp Condensate
- 14:45 BREAK**
- 15:00 Heat Exchangers & Process Control**
- Heat Exchanger Problems
  - Process Control (Level Control vs. Steam Control)
  - Understanding Stall
  - Vacuum Demo
- 17:00 Day Adjourned**

#### Day 2

- 9:00 Plate & Shell Heat Exchangers**
- Vahterus Introduction
  - Plate & Shell Technology
  - Main Applications / Case Studies
- 10:00 BREAK**
- 10:45 Tracing Systems & Critical Temp. Maintains**
- System Options (Electric, Steam, Oil, Glycol)
  - Jacketed Pipe vs. ControTrace vs. Tube Tracing
  - Proper Steam Design
  - System Operation and Isolation
  - Freeze and Thaw & The Effect of Temperature
  - Fouling & Corrosion
  - Flare Steam
  - System Options (Electric, Steam, Oil, Glycol)
- 12:00 LUNCH**
- 13:00 Sulfur Recovery Unit Heat Maintenance**
- Jacobs Comprimo Sulfur Solutions
  - Sulfur Unit Recovery Design
  - Locations for Accumulated Sulfur
  - Risks with Accumulated Sulfur
  - Heat Maintenance
  - Case Studies
- 14:30 BREAK**
- 14:45 Maintenance & Design**
- Typical Steam Design
  - Valves
  - Trap Valve Stations
  - Manifolds
- Maintenance Programs
- 16:00 Final Review / Closing Remarks**