Continuous Innovation of Products and Services

Troy Bengtzen
VP Marketing and Business Development

October 2017
Innovation and Experience

1000+ units sold
100+ refineries
20+ countries

Millions of safe cycles
110+ patents world-wide

Top Unheading Device
with Integrated Safety System

Retractable Center Feed Device

Bottom Unheading Device

Isolation Valve
Bottom Unheading Device

- Technology proven since 2001
- Approximately 400 units sold world-wide
- Innovative Planetary Roller Screw (PRS) electric actuator (smallest, lightest, most efficient design)
- Ultra-low steam consumption
Bottom Unheading Device Steam Consumption

Results from design improvements

Utilizing previous seat design

Utilizing Gen II welded bellows seat design
Retractable Center Feed Device

- Technology proven since 2011
- 34 units sold / 50+ in negotiations
- Improved feed and quench channeling
- Reduced drum stresses
- Increased drum life
Top Unheading Device and Safety System

- Technology proven since 2006
- 250+ units sold
- Electric and hydraulic actuation options
- Built-in drill stem guide / blowout diverter
Isolation Valve

- Technology proven since 2008
- 100+ units sold
- Ultra-low steam consumption
- In-line maintainable
- Low operating costs
Installation Services (Revamp Projects)

- Leveraging lessons learned from over 100 installations
- In-house engineering, design, procurement, and construction management
- Work with your EPC or direct hire
- Goal: streamlined low-cost revamp installation
Why Choose DeltaValve

• Experience
• Technological Innovation
• Product Quality/Certifications
• Global sourcing and delivery capability
• Global aftermarket service/support
Why Choose DeltaValve

• Experience (Lessons learned from 100+ installations)
  – Every Coker Unit is unique (Performance expectations are different)
  – Single unit – 2 Drum, to Multi unit multi drum combination
  – Slow or fast cycle time
  – Small or large drums
  – Small or large diameter feed lines
  – Shot coke or anode grade coke
  – Different deck/structure constraints
  – Preference for electric or hydraulic actuation systems
  – Challenges of hot/humid or cold/dry climates
  – Cutting into pits, sluice ways, rail cars, etc. (capability to throttle)
  – Economic or safety driven projects
  – Turnaround planning and site audit expertise
Why Choose DeltaValve

• Technological Innovation (Industry Firsts)
  – Fully automated Bottom Unheading Device
  – Fully automated Top Unheading Device
  – Center Feed Device
  – Ultra-low steam consumption Isolation Valve

• Product Quality/Certifications
  – ISO, ASME, U stamp, R stamp
  – PED, CRN, TR CU, KHK

• Global sourcing and delivery capability
• Global aftermarket service/support