



TechTip #6

Developing a Maintenance Plan for Unheading Valves

DeltaValve can assist in developing a maintenance plan to help customers achieve maximum value from their investment in a coke drum unheading system. The first step to developing this plan is performing a site audit conducted by qualified DeltaValve maintenance and service department representatives. The purpose of this audit is to give foresight—with a defined set of actions—that can be scheduled and performed over the years leading to the next scheduled turnaround and beyond.

It is recommended that a pre-audit and inspection meeting be held between key plant personnel and DeltaValve maintenance and service representatives the day leading into the audit. The purpose of the pre-audit meeting is to establish goals and set action items, plus answer any questions pertaining to the audit.

Systems to be examined during the audit include: hydraulic skid and components, hydraulic line runs, valve support systems, cooling box, water supply, steam supply and trends, gasket condition, condensate outlet(s), proximity switches, valve performance and condition, and safety.

A published report detailing all findings and recommendations, including basic safety procedures for the unheading valve, will be given to key plant personnel following the audit. A brief post audit meeting will be held to review or highlight more critical findings in the report.

A basic five-year maintenance plan may include the following:

Year 1

- Activities:
 - DeltaValve site audit
 - Adjust packing
- Parts:
 - Cooling box cover gasket

Year 2

- Activities:
 - DeltaValve site audit
 - Adjust packing
 - Inspect internal cavities via inspection covers
 - Flush cooling box, if needed
- Parts:
 - Cooling box cover gasket
 - Upper bonnet clevis access cover gaskets
 - Lower bonnet inspection port cover gaskets

Year 3

- Activities:
 - DeltaValve site audit
 - Adjust packing
- Parts:
 - Cooling box cover gasket

Year 4

- Activities:
 - DeltaValve site audit
 - Adjust packing
 - Inspect internal cavities via inspection covers
- Parts:
 - Cooling box cover gasket
 - Upper bonnet clevis access cover gaskets
 - Lower bonnet inspection port cover gaskets

Year 5

- Activities:
 - DeltaValve site audit
 - Inspect gate and seats
 - Replace body-to-drum gasket
 - Replace packing
 - Flush cooling box
- Parts:
 - Cooling box cover gaskets (2)
 - Body-to-drum gasket
 - Body-to-chute gasket
 - Actuator rod packing kit
 - Lockout shaft packing kit
 - Power shroud packing kits (GV815 and GV 820 only)

NOTE:

- ✓ Steam condensate strainers and traps should be purged monthly.
- ✓ DeltaValve recommends inspecting the gate and seats of one valve six months prior to a major turnaround.
- ✓ Internal component replacement schedule is dependent on the specific operating conditions and preventative maintenance action at each plant. Conducting regular site audits with DeltaValve will help determine at which major turnaround valve refurbishment should take place as well as the extent of the rebuild.