Drum Cycle Procedures
Marc Hoss

Coking.com Safety Seminar
May 1-4, 2006

How do you train and certify Coker Operators?
Safety executing the steps of a Drum Cycle Procedure.
Best Practices, some things that worked and some things that we've learned on our journey to improve this process.

An open dialogue with audience participation
Coker Shutdown from Failing Flange Weld

Shad Rahman

May 2006

In October 2005, the coker was shutdown when a flange weld at the bottom outlet nozzle of the fractionator began to fail. A custom-designed enclosure was expedited and installed with a strongback to prevent line separation before the unit returned to normal operation 3 days later. Detailed PMI and UT shear wave inspections showed a rogue Monel (low chrome) weld had been present, which was highly susceptible to naphthenic acid and sulfidation corrosion.

Lessons learned:
- Original fabrication PMI and retro-PMI inspections could have caught this defect if they had been performed.
- Locating a vessel bottom outlet flange near a skirt opening presents problems with either hot-bolting or torquing bolts in a tight position, and often required enlargening the skirt opening. RT of hot surfaces can be very difficult in tight locations.
- While Niton PMI equip is limited to 400F, Innovex PMI units can read up to 800F surfaces accurately.
- Timely surveillance and reporting by coker operators followed by prompt review by inspectors and engineers dramatically mitigated the effects of this unexpected failure.

May 2006
Major Coker Unit Upset
Lessons Learned
Ryan Miller

May 1-4, 2006 Coking.com Safety Seminar
Dropped Drill Stem

Robert Bell

May 2006

Notes

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