



EPA Mandate on Coke Drum Venting

Zero-leakage Delayed Coker Valves

Industry: Hydrocarbon
Plant type: Refineries
Application: Delayed coker valve
Location: Texas and Louisiana
Product: Coking isolation valves

Overview: Implemented in 2016, the U.S. Environmental Protection Agency (EPA) issued a Risk and Technology Review (RTR) mandate on coke drum venting for petroleum refineries. Components of the rule include:

- New emissions controls for refinery storage tanks, CRUs and DCUs
- Work practice standards to reduce emissions from atmospheric PRDs and flares
- Continuous benzene monitoring at the refinery fence line to improve the management of fugitive emissions
- Elimination of exemptions to emission limits for uncontrolled releases during start-up, shutdown and malfunction

Requirement: The rule imposes monitoring and reporting of emission releases from pressure relief devices to the atmosphere. The regulation calls for a program of process changes and pollution prevention aimed at reducing visible emissions by major pressure release devices. This change affects a wide-range of applications including delayed coker units and its coking processes. Older coker valves are challenged to meet the rule and, because of this, refineries in the hydrocarbon industry must modify their existing process.

Solution: To meet EPA standards, ValvTechnologies recently installed zero-leakage coker valves in refineries in Texas and Louisiana ranging from sizes 14-20" 300# ANSI flanged with HVOF RiTech® coating. The valves are composed of C12 and carbon steel body materials and, based on the plant's needs, designed with either pneumatic or electric actuation.

Result: ValvTechnologies supplied these refineries with severe service technology to extend the valve's isolation capabilities, improve its processes with minimal shutdown maintenance and save operators thousands of dollars eliminating the need to install expensive emission reduction technology. In addition, ValvTechnologies' engineered solution ensures plants are in compliance with EPA's strict air-quality standards.