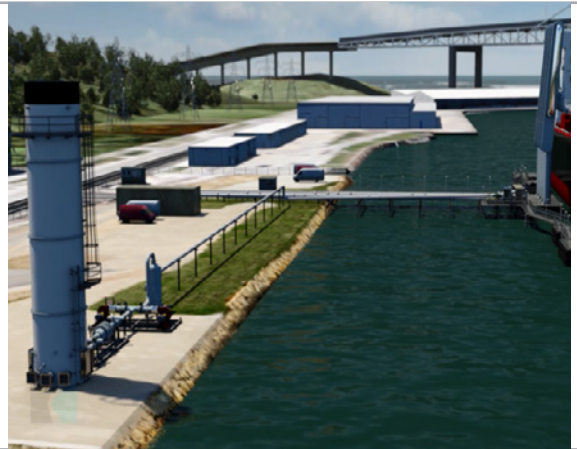


John Zink Hamworthy Saves Customer \$900K by Specifying Emerson Detonation Arrestors

RESULTS

- \$900,000 of capital cost savings to the end user due to the massive scope of the project, taking into account both the reduced cost of the vapor recovery unit as well as reductions in installation costs at the site.
- 5% direct cost savings on the project for John Zink based on the use of Emerson US Coast Guard-approved detonation arrestors, compared with the use of competitive technology.



APPLICATION

A crude oil and light naphtha marine vapor recovery system for four loading docks with a total system capacity of 64,000 bph, designed by John Zink Hamworthy Combustion, an industry-leader that offers clean air and emissions control systems to the world's most demanding industries, including hydrocarbon and chemical processing, biofuels, waste management, and many more.

CUSTOMER

A major shale crude oil distribution operation, located in South Texas.

CHALLENGE

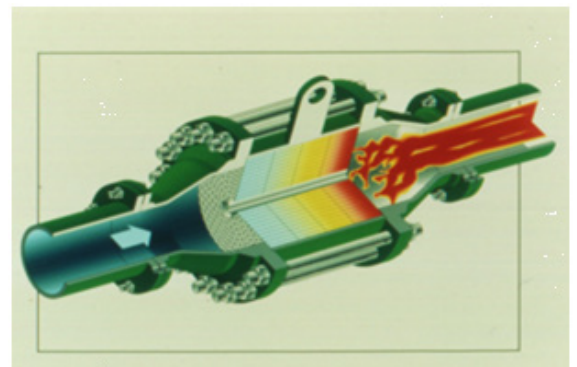
Combustible vapors generated during loading operations, if exposed to an ignition source, can produce a flashback in the piping that may develop into a detonation. The US Coast Guard requires the installation of detonation arrestors to protect ships during loading operations. The pressure drop imposed by arrestors must be overcome using blowers, with higher pressure drops requiring more expensive designs and potentially the addition of vapor cooling equipment.

SOLUTION

Emerson detonation arrestors incorporating specially-designed flame cell elements with larger channel openings limited the pressure drop such that single-stage blowers could be used in lieu of more expensive multi-stage designs. Additionally, heat input to the vapor stream was reduced, avoiding the need for expensive downstream vapor cooling equipment to protect the carbon adsorption vessels from temperature excursions.

“The end user saved \$900,000 and John Zink saved 5% on project costs due to Emerson’s low pressure drop arrestors.”

Terry McElroy
Product Director of Vapor Control Systems
John Zink Hamworthy



For more information:
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