



CONQUEST
Eliminate Damaging
Acoustic Resonance

A
AREVA
forward-looking energy

The Challenge

Acoustic resonance in power plant steam lines can result in severe damage to relief valves and other components, such as steam dryers. The resonance is caused by vortex shedding from the standpipe inlet and acoustic standing waves in the standpipe, occurring when the two frequencies match.

The Solution

To address the root cause of vibration-induced damage to reactor internals and relief valves, plant operators can install Conquest, an acoustic resonance elimination device. This simple and effective device is designed to mitigate the resonance while not impairing the performance of the relief valves. The device decouples the acoustic resonance from the vortex shedding. It accomplishes this action by extending into the flow stream and moves the vortices away from the entrance of the standpipe.

This innovative device was designed to minimize plant modifications making it the most cost-effective solution available.

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Features and Benefits:

- Design-based on in-depth understanding of phenomena
- Small, compact device
- Mitigates the root cause by moving any vortex formation away from the standpipe entrance
- Works for all flow conditions (not tuned to specific flow rates)
- Simplicity of design results in lower cost of installation and maintenance
- Substantial dose savings are derived from simplified installation

CONQUEST

Eliminate Acoustic Resonance

U.S. Patent Number: 8,113,313 B2

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ANP:U-452-V3-16-ENG