

CASE STUDY



Guaranteeing positive system isolation with Habonim Dual-Safe valves

Inspired By Challenge

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Ammonia Nitrate Bullets Upgrade Project

Introduction

A leading provider of commercial explosives and innovative blasting systems to the mining, quarrying, oil and gas, and construction markets was forced to shut down operations and suit up workers in order to safely recertify pressure relief valves (PRVs).

The company used a single isolation ball valves to isolate pressure relief valves (PRV) at 2 x 100 ton and 1 x 300 ton Ammonia Nitrate (AN) bullets. Every four years the AN bullets need to be de-pressurized and taken offline in order to recertify the PRVs. Positive isolation could not be guaranteed with the single isolation ball valves, thus requiring the plant workers to be suited up in order to perform the PRV recertification procedures.

It was decided that, prior to the next shutdown planned towards the end of 2017, the isolations valves would be upgraded to a dual-safe design. The next window of opportunity will be another four years away.

The Solution

The company searched unsuccessfully for suitable replacement valves.

A traditional solution of two valves and a bleed valve had been considered, but this would have added more weight, occupied more space, and introduced more potential leak paths. For all these reasons, the solution was not considered appropriate for the existing installation.

It was generally agreed that compact dual-safe valves would be the best solution, but locating the right valve for their application turned out to be tough.

Why HABONIM?

The Habonim Dual-Safe valve series presents the optimal design solution and guarantees isolation on critical applications and service when an emergency shut-down (ESD) valve is a necessity.

The Dual-Safe unit incorporates two main isolation valves and one bleed valve in a single body construction, thus securely isolating gas furnaces, dual fuel marine engines, LNG tanks, LNG fuelled trucks and plant sections.

This special construction offers the lowest possible number of potential leakage points from a process connection and reduces the overall valve envelope size and weight by integrating valves, piping, and fittings into one compact design.

Habonim was able to propose dual safe valves that meet the required specifications and the required delivery time.

Dual-Safe advantage

- Increases system reliability
- Saves space and reduces weight
- Reduces installation time
- Streamlines maintenance operations
- Reduces number of items in repair kits
- Rugged construction
- Bubble tight shutoff on all three valves
- Coupled operating mechanism reduces the number of actuators on the main line
- Tongue and groove design for all body seals Variety of end connections (welded, threaded, flanged)

Optional configurations:

Dual-Safe basic version

Manually operated suitable mainly for sampling system and instrumentation



Complete in-house package solution

A complete solution including: valves, Actuators, and accessories, Assembled, calibrated, and factory tested.





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