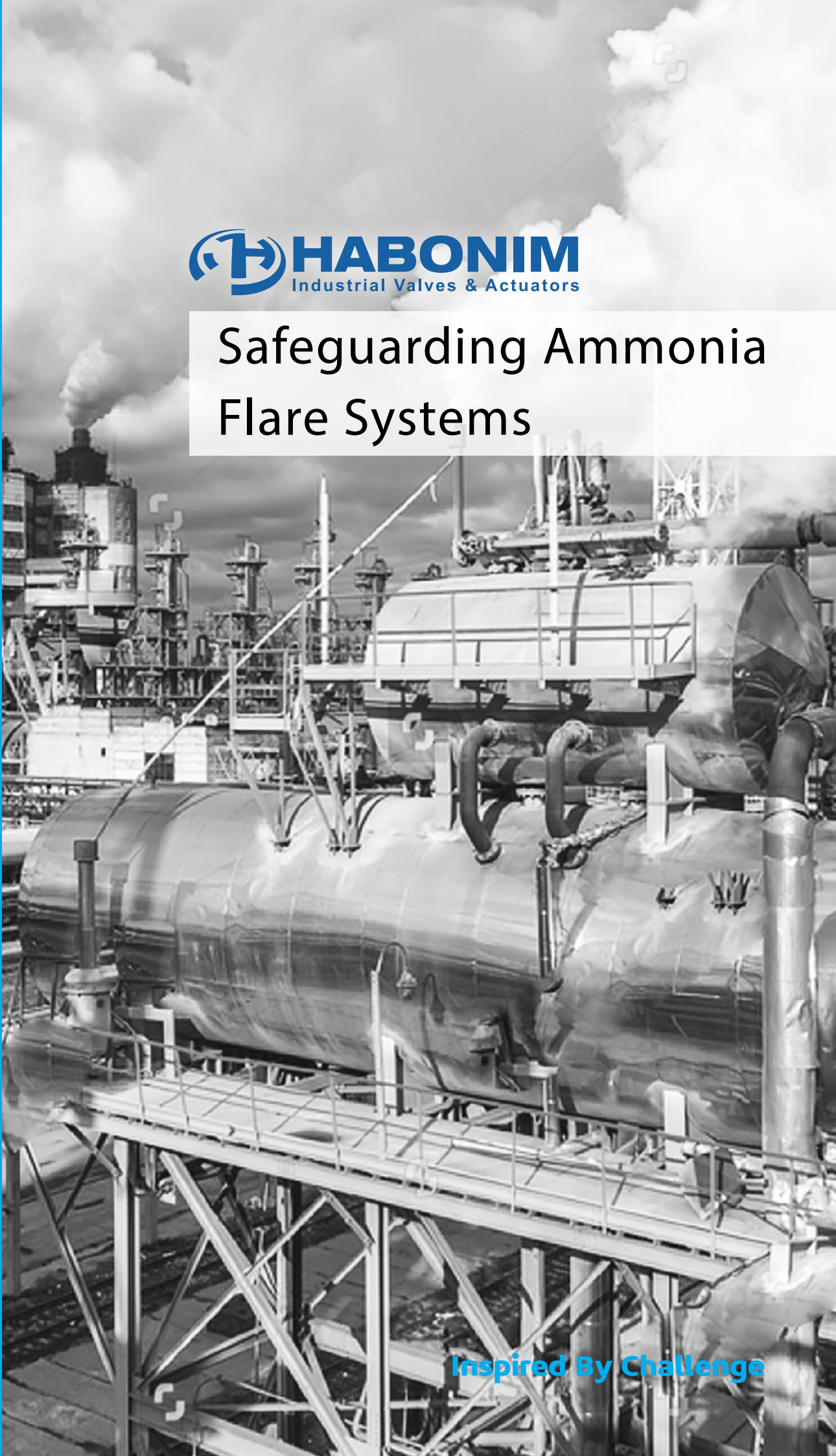


# CASE STUDY



## Safeguarding Ammonia Flare Systems



GAS  
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Inspired By Challenge

# Safeguarding Ammonia Flare Systems

## Ammonia Flare System Upgrade Project

### Introduction

A leading provider of commercial explosives and innovative blasting systems for the mining, quarrying, oil and gas, and construction markets required a solution for flares killed by the liquid Ammonia introduced into the flare system. This resulted in Ammonia being emitted into the atmosphere and creating an unsafe work environment, forcing the plant to shut in the flare system.

### The Challenge

In order to overcome the problem, the company decided to upgrade the existing single isolation ball valves that were used to isolate the Ammonia flare system DN25mm, ANSI class 150#, body and internals 304 SS, hybrid spring-loaded seat design to a dual safe design, but the existing pipework could not be modified. One end of the valve was flanged and the other end was socket weld. In addition, the socket weld-end connection of the existing (non-Habonim) valve could not be removed.

### The Solution

Habonim proposed to deliver, within very short delivery time, valves that would fit in the existing face-to-face dimension, as well as have one side of the valve manufactured to match an existing and proprietary end-connection

Due to the low operating pressure in the process, Habonim proposed to use a hybrid seat design with spring-loaded seat rings to ensure positive isolation at low operating pressures.



A view of the loading line with flare

### 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, marine motors, LNG tanks, and LNG fuelled trucks.

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.

### 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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