

# Improved Operational Efficiency with CPI Hi-Flo™ Radius Disc Valves in this Hydrogen Rich Refinery Mix

## The Challenge

The original OEM HPS valves installed on this lubricated hydrogen compressor typically operated for approximately four weeks before experiencing failure.

To improve reliability, OEM Magnum valves were later introduced as an upgrade. However, instead of enhancing performance, these valves demonstrated reduced operational lifespan—failing after just two weeks of service.

## The Solution

The CPI Hi-Flo™ RD valves was introduced and operated continuously for 24 months before undergoing a routine changeout. Upon inspection, the valves were found to be in excellent condition—indicating a potential for significantly longer service life.

Our customer operates two compressors, originally designed so that one could function as a standby unit. However, due to the poor performance of previously installed valves, both compressors were required to run simultaneously in order to meet capacity demands.

Since the implementation of the CPI Hi-Flo™ RD valves, the system now reliably achieves the required output of **6,500 NM<sup>3</sup>/hr** using just one compressor. This has restored the intended configuration, enabling one unit to serve as a true standby.

## Key Benefits Delivered:

- **Enhanced reliability**, enabling single-machine operation
- **Reduced maintenance time and cost**
- **Lower power consumption**, leading to **£240,000 in savings** within just one year

