



SUCCESS STORY

INCREASED SYSTEM EFFICIENCY AFTER REVAMP OF OTHER BRAND COMPRESSOR

After the breakdown of an other brand process gas compressor (make-up), the Indian Oil Corporation Ltd Refinery in Panipat, India, contracted Burckhardt Compression (BC) to carry out a compressor revamp as a local service partner. The refinery was running at high risk, with only a single stand-by compressor in operation. In order to avoid a complete plant shutdown, a reliable solution had to be found and fast.

CUSTOMER ISSUES

- Main compressor broke down during operation
- High risk of complete plant shutdown
- High-pressure piston rod became detached at crosshead connection and hit the cylinder head
- Heavily damaged parts, it was impossible to dismantle the assembly
- The plant was operating on a single stand-by compressor, putting the plant at risk of a complete shutdown
- A reliable solution had to be found, and fast

APPLICATION DESCRIPTION

Revamp of other brand make-up gas compressor			
Type	Other brand process gas compressor 2HF/2	Gas	H ₂ rich gas
Power	2'175 kW / 2'900 hp	Suction pressure Discharge pressure	6.5 bara / 90 psia 25 bara / 355 psia
Speed	272 rpm	Lubrication	Non-lubricated

BURCKHARDT COMPRESSION SOLUTION

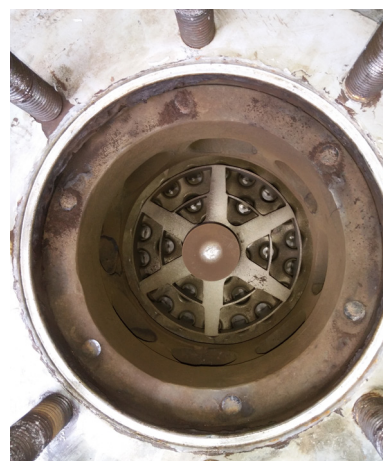
- After a detailed analysis, the required parts were engineered and manufactured, including reverse engineering where needed
- Upgrade existing plate valves and actuators with Burckhardt Poppet Valve™ and unloaders
- Modify the design of the existing piston rod glands and upgrade it to latest BC state-of-the-art technology
- Develop, manufacture and install new high and low pressure sealing elements
- Rectification of the cylinder head end support foundation
- Upgrade piston rod with Tungsten Carbide (TC) coating for longer lifetime
- Erection and commissioning carried out according to BC standard

CUSTOMER BENEFITS

- System efficiency increased by 17%, vibrations were reduced by 27%
- Highly qualified Field Service Representatives for a reliable and fast execution
- Higher compressor reliability due to the upgraded valve design and actuator
- Enhanced piston rod lifetime due to TC coating
- Less process gas leakage from the packing
- Zero safety incidents/accidents during the entire project



Revamped compressor cylinder during assembly



Exchange of existing plate valves by Burckhardt Poppet Valve™



"After the revamp, our compressor has operated to our full satisfaction without any issues. We appreciate Burckhardt Compression's rapid response, the superb quality and high safety standards of its work."

Shridama Yadav
Manager (Mech Maintenance), Indian Oil Corporation, India

Burckhardt Compression

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