

CASE STUDY | Emission Reduction

STRAIGHTFLO[™] VALVES EXTEND MTBF FROM DAYS TO YEARS, ELIMINATE EMISSION EVENTS

COMPRESSOR DESCRIPTION

Manufacturer/Model: Ariel JGA-2 Power: 140 hp Speed: 1800 rpm Stages: 4 Suction Pressure: 23 psi Discharge Pressure: 290 psi

- Problem: A compressor in oil & gas production experienced shutdowns shutdown every 21 -28 days due to valve failures. The 4th stage discharge valve required replacement at every shutdown. Polymerization in the gas stream was a significant factor.
- Solution: After an evaluation of available valve technologies, the operator chose Zahroof StraightFlo[™] compressor valves. StraightFlo[™] valves were installed in July 2014.
- **Results:** With StraightFlo[™] valves, Mean Time Between Failure (MTBF) increased from an average of 25 days to more than 7.5 years.

Extended run times with StraightFlo[™] compressor valves eliminated 12 emission events per year. The operator was also able to reduce power consumption after conversion to StraightFlo[™] valves.



90 FEWER EMISSION EVENTS



25 DAYS →7.5 YEARS

StraightFlo[™] Advantages

- Eliminates multiple emission events (blowdown, purge, flare) during operation of compressor
- Reduces engine emissions or electricity consumption by increasing compressor efficiency
- Reduces call-outs for compressor service (miles driven), eliminates carbon footprint in repair and replacement of valves.
- Minimizes exposure of mechanics to toxic gases and noise



OEM valves failed due to heavy polymerization.

Debris-tolerant design of StraightFlo[™] valves.



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