

# PERFORMANCE STUDIES

Field Reports from Cook Compression

COMPRESSOR VALVES  
REPORT# 107

## Valves Achieve Run Time Target in Demanding Omani Gas Gathering Application

### SCENARIO

Harsh operating conditions were limiting compressor valve run times at a gas gathering facility in Oman. With uptime limited to 4 to 8 week cycles, the operator was searching for a way to achieve a full 8,000 hours of operation with no valve failures.

The operator chose to conduct a trial on one of its 7 compressors, an engine-driven, White Superior machine equipped with PEEK plate valves.

### SOLUTION

Cook Compression recommended its robust MOPPET® valve, featuring a patented design with a series of small, independently operating radiused-disc thermoplastic elements. The valves were installed for an uninterrupted 3-month test run and then removed for inspection.

Despite evidence of carry-over debris (molten PEEK and broken springs from the old valves in and around the enlarged spring pockets) all of the MOPPET valves functioned with no adverse effects on overall performance or reliability. The operator approved the valves for a full 8,000 hour run.

### RESULTS

Following a successful 8,000 hour trial with zero valve failures, the remaining 6 compressors on site were upgraded to MOPPET valves. Cook Compression also supplied new cages and engine performance analysis using a Windrock 6320 portable analyzer supported by a regionally based Windrock engineer. Windrock analysis confirmed that, in addition to being durable, MOPPET valves met all expectations for efficiency.

Field reparability and commonality of parts are other advantages of MOPPET valves. After an 8,000-hour run, the MOPPET valves were removed from the compressor, inspected and refurbished on-site with the use of a simple hand press. Each replaceable element is standardized for all valve sizes.

Uninterrupted 8,000-hour run times are yielding significant economic benefits. The operator has calculated savings in excess of \$125,000 USD per machine each year utilizing MOPPET valves.

*For more details and information about patented MOPPET compressor valves, contact your Cook Compression representative or visit [cookcompression.com](http://cookcompression.com).*



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