

CASE STUDY

Field-Repairable Compressor Valve Improves Maintenance Logistics

SCENARIO

Apache Energy Limited is an exploration and production company for crude oil, condensate and natural gas. Headquartered in Perth, Apache is active offshore Western Australia in the Carnarvon Basin.

In 2003, Apache Maintenance Supervisor Bob Johnson was looking for ways to simplify compressor valve repair and improve reliability for three reciprocating compressors at Apache's Varanus Island gas processing facility. The compressors, which are used for natural gas production and reinjection, include two Superior three-stage model MW-64-6 units and one Energy Industries/Gemini FE-665.

The remote location makes conventional valve repair costly and turnaround times lengthy. Johnson needed a valve that was easier to maintain, could be repaired on site, and provided good reliability. For assistance, he contacted Cook Compression® representative John Gillett of Compressor Supply & Engineering.

SOLUTION

After evaluating the application, Cook Compression recommended changing to its robust and field-repairable MOPPET® valve. The patented design consists of a series of small, identical, radiused-disc thermoplastic elements that operate independently of each other. The design provides outstanding resistance to damage and wear from entrained debris.

Especially important for Apache, MOPPET valves are reconditioned simply by replacing worn cartridges. There is no lapping, grinding or machining. In minutes, cartridges are replaced on site.

RESULTS

"Switching to MOPPET valves has changed the way we maintain our compressors," said Johnson. "We can now operate for extended hours and easily change wear

components in the field. Although we change our valves at 8,000 hours, we can go longer if needed. This gives us the flexibility to extend operation if production constraints require it.

"Being able to repair a valve in the field is a huge benefit. Previously we would remove the valves, install a spare, and then send the old valves away for overhaul. Turnaround times were restrictive and costly.

"MOPPET valves are simple and straightforward for our field service mechanics to maintain. The nylon discs Cook recommended seem to be just the right material composition for our process as we have very little seat damage."



MOPPET® compressor valve

