Replacement of end of life Compressor

Project Highlights

- Reduced overhang and weight of compressor
- Increased rotor stability
- Extended life of the compressor
- Redesign, upgrade and manufacture of replacement compressor

Project Overview

A customer in the Netherlands required a failure root cause analysis, engineering, upgrade and replacement of compressor at end of life. EthosEnergy were required to perform vibration measurement on-site followed by a complete rotordynamic analysis.

The EthosEnergy Solution

- Redesign and upgrade of compressor
- Manufacture of upgraded design

Key Challenges

- Replacement of end of life compressor with high vibrations and unusual response to daily water wash cycles.

Key Results

- Reduced overhang and weight of compressor
- Increased rotor stability with less requirement for water wash cycles
- Titanium compressor meaning extended life
- Other units received same solution

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EthosEnergy is a leading independent service provider of rotating equipment services and solutions to the power, oil & gas and industrial markets. Globally, these services include facility operations & maintenance; design, manufacture and application of engineered components, upgrades and re-rates; repair, overhaul and optimization of gas and steam turbines, generators, pumps, compressors and transformers; delivery of gas turbines and generators, and supply of overhauled and warrantied equipment on a FAST TRACK basis.

Our Compressor Capabilities:

**Inspection and Repairs:**
- Centrifugal compressor rotor inspection
- Axial compressor rotor inspection
- Repair of seal areas, shaft journals and tapers
- Re-staging of re-blading
- Rotor low and high speed balance
- Bearing inspection and repair
- Seal inspection and repair
- Stationary component repairs

**Redesign and Upgrades:**
- Impeller or axial blade redesign
- Labyrinth seal upgrades
- Bearing upgrades
- Seal conversion (i.e. oil to dry gas)
- Material upgrades
- Coatings

**Field Services**
- Scheduled field inspection
- Scheduled major overhaul
- Vibration measurement and analysis
- Field alignment
- Rotor trim balancing
- Troubleshooting

**Other Services**
- Failure root cause analysis
- Reverse engineering
- Rotor, impeller and diaphragm manufacture
- Rotor storage containers

**Special Features:**
- Advanced shaft weld repairs
- Rotor OpSpeed™ balance (High-speed)
- Compressor re-rates
- Climate controlled rotor storage facility

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