

CASE STUDY

In a French ammonia plant a broken compressor piston rod needed urgent replacement.

Improved availability through new piston and rod

Compressor manufacturer: DUJARDIN & CLARK			
Type	CLRA4	Gas	H ₂ , N ₂ , CO, CH ₄
Power		Suction pressure	53 bar (769 psi)
Speed	333 rpm	Discharge pressure	153 bar (2219 psi)
Lubrication	yes		



Ammonia plant compressor

Facts in Brief

The piston rod of the Dujardin & Clark compressor suffered a fatigue failure.

Customer requirements

- New piston rod redesigned to suit the current working conditions
- Time limit of 4 weeks

Solution applied

- Strip, inspect and measure the old piston rod
- Ultrasonic inspection of the material
- Select material for new piston rod and nut
- Design and manufacture piston rod, nut and cylinder ring
- Apply coating and check integrity
- Final inspection and documentation

Results

- New piston rod quickly designed and manufactured
- Compressor started up within 4 weeks



New piston rod assembly