

## CASE STUDY

A French chemical plant had to replace a crosshead guide due to an age-related crack (the compressor is 40 years old).

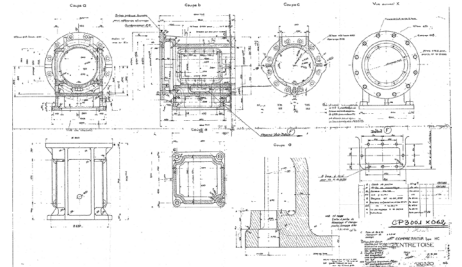
**Improved reliability and efficiency under changed conditions due to compressor upgrade**

### Compressor manufacturer: ATLAS COPCO CREPELLE

Type	3-3HC6GT	Gas	CO <sub>2</sub> /NH <sub>3</sub>
Power	1470 kW (1998 hp)	Suction pressure	1.0 bar (14 psi)
Speed	428 rpm	Discharge pressure	9.0 bar (131 psi)
Lubrication	no		



*Old, cracked crosshead guide*



*Original drawing for crosshead guide*



*Finished crosshead guide*



*Crosshead guide installed on the compressor*

### Facts in Brief

- Crosshead guide cracked after 40 years of operation
- No spares available from compressor manufacturer

### Customer requirements

- Deliver one crosshead guide
- Supervise installation
- Re-machine crosshead

### Solution applied

- Inspected the cracked crosshead guide, with on-site meeting to clarify any doubtful points
- Used original AC Crepelle drawings from customer to cast and machine new crosshead guide
- Final checks (magnetic particle and ultrasonic inspection)
- Supervised installation
- Re-machined crosshead
- Old crosshead guide was repaired by Atlas Copco, with increased diameter
- Project management and documentation

### Results

- New crosshead guide was manufactured to dimensions and quality approved by the customer
- Crosshead guide was delivered and installed as requested