CASE STUDY

A refinery in Germany needed help from HOERBIGER to overhaul an existing H2 compressor and its foundation.

Increased availability and reliability through full overhaul and service also extended the lifetime of the compressor

Compressor manufacturer: MB HALBERSTADT			
Type	1HB8KT-400/270	Gas	H_2
Power	2600 kW (3535 hp)	Suction pressure	11 bar (160 psi)
Speed	270 rpm	Discharge pressure	36 bar (522 psi)
Lubrication	no		

Compressor totally dismantled from the foundation

Laser alignment and boring of bearing tunnel

Crankshaft assembled

Overhauled compressor with low bearing temperatures

Facts in Brief

- The original steel supports were placed in wet concrete. The resulting corrosion caused misalignment, resulting in shutdowns to repair heavy bearing and crosshead wear.
- The special design has a single motor mounted at the centre of two 4-throw compressors.

Customer requirements

- To extend the lifetime of the compressor and reduce downtime, the customer wanted an overhaul including a new foundation

Solution applied

- Disassembly of the complete units including piping, vessels and internals for a complete rebuild, including laser alignment
- New epoxy grouting
- Bore shafts installed to allow on-site machining of the bearing tunnel in both frames
- Installation of repaired crankshaft, crossheads and new bearings
- Project management and documentation

Results

- The compressor is now more durable
- The bearings run at lower temperatures due to the reduced web deflection of both crankshafts