

## CASE STUDY

A 700kW compressor used for natural gas suffered a catastrophic failure. The crankshaft, connecting rod and housing of the compressor were among the parts that were severely damaged.

**Restoration of availability through repair and overhaul of crankcase and cylinder**

Compressor manufacturer: BORSIG			
Type	BX28-20/2S2	Gas	NG
Power	700 kW (952 hp)	Suction pressure	1.8 bar (26 psi)
Speed	375 rpm	Discharge pressure	8.8 bar (128 psi)
Lubrication	yes		



*Cleaning the crankcase*

### Facts in Brief

Failure of lubrication caused major damage to this natural gas compressor. The crankcase assembly, second-stage distance piece, liner and piston rod were all wrecked. The operating company commissioned HOERBIGER to assess the damage and develop a proposal for how to get the compressor running again with a higher level of safety.

### Customer requirements

- Complete review of all compressor parts
- Determine root cause of failure

### Solution applied

- Upgrade the pressure packing to HOERBIGER BCD rings
- Upgrade the oil wiper packing to OT oil wiper rings
- Install new cylinder rings
- Repair the cylinder and cylinder cover
- Replace the second-stage cylinder liner with one of improved surface quality
- Supervise installation and commissioning

### Results

- Cost-effective solution to repair a seriously damaged compressor
- Two non-working compressors were used to create an up-to-date, fully functioning unit
- Compressor was up and running within 4 months



*Crankshaft removed from the crankcase for inspection*



*Cylinder repaired*