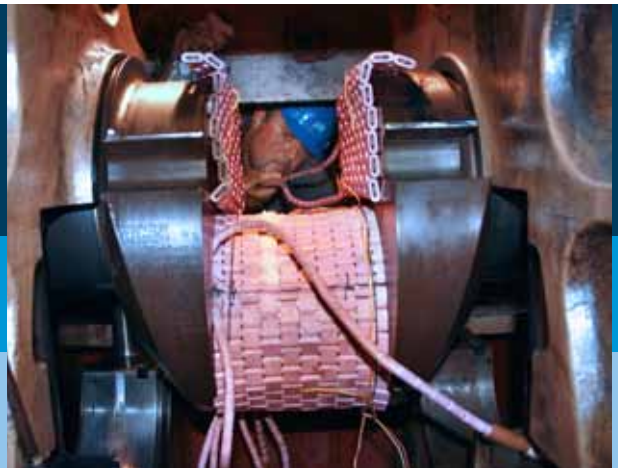
In-Situ Crankshaft Annealing

Saving condemned crankshafts



Over the past 5 years, Goltens stations around the world have successfully annealed over 75 crankshafts, saving customers tens of millions of dollars in unnecessary crankshaft purchases, major engine rebuilds, as well as countless days of lost operational capacity.

Loss of a crankshaft or any rotating shaft due to high hardness values is a costly, time consuming, and extremely disruptive occurrence. As the market leader in In-Situ crankshaft repairs, we encounter many crankshafts with areas of excessive hardness each year.

Excessive hardness can often be machined away by Goltens' In-Situ teams, provided that there is sufficient remaining material to remain within manufacturer's maximum allowable undersize. However, when this is not possible, the only remaining options are either to scrap the crankshaft, or remove hardness by annealing.

Over the years, we have refined our process for annealing crankshafts and other shafting, and can do this successfully in-place as well as in our workshops around the world. Our deep understanding of the metallurgy, expansion characteristics, and safety precautions, has been developed and refined over the years, to create a safe, repeatable, highly controlled, Class Approved process.

We have repeatedly demonstrated that hardness can be successfully removed and that minor finish grinding/cutting can restore the machinery to service with significantly less loss of shaft diameter, as well as the avoidance of costly shaft/equipment removal, and the purchase of a replacement crankshaft.

Goltens
Trusted Globally

Class Approval

- Goltens has received worldwide approval from Germanischer Lloyd for the in-situ annealing of medium speed 4-stroke diesel engines
- Goltens has undertaken extensive workshop trials with Class Society and select OEM involvement and subsequent metallurgical analysis to demonstrate the results of the process.

Goltens Advantages

- Comprehensive capability to handle all aspects of hardness treatment inclusive of engine preparation, inspection, pre-machining, hardness removal and finish machining as well as engine reassembly
- A large, global team of highly skilled In-Situ technicians to ensure a rapid, expert response anytime and anywhere
- Extensive experience successfully annealing crankshafts across a broad array of makes and models of engines and rotating machinery
- Globally deployed and available portable annealing equipment for In-Situ application

Partial List of Crankshafts successfully annealed:

- BERGEN BRM
- DEUTZ 12M640
- GMT 420.12
- MAK 453
- MAK 551
- MAK 6M453
- MAK 6M552C
- MAK 8M19
- MAK 8M32
- MAN B&W 10V52/55A
- MAN B&W 12V52/55
- MAN B&W 14V40/45A
- MAN B&W 16V40/54
- MAN B&W 23/30
- MAN B&W 28/33
- MAN B&W 28LH
- MAN B&W 40/54A
- MAN B&W 7L40/45
- MAN B&W 8L23/30
- MAN B&W 8L32/40
- MAN B&W 9L 40/54
- MAN B&W 9L28/32
- MAN B&W 9L40/54
- MAN B&W V9V 40/54
- MAN B&W 16U28LH-4
- MIRRLEES 16KV MAJOR MK II
- MIRRLEES K8 MAJOR
- MITSUBISHI MHI 16KU
- NIIGATA 16V32 CLX
- NIIGATA 32CX
- PIELSTICK 12VPC2
- PIELSTICK 14VPC4
- PIELSTICK PC2
- ROLLS ROYCE B-TYPE GAS
- SKL VDS 26/20
- STORK WERKSPOOR 280/8
- STORK WERKSPOOR 6TM 410
- STORK WERKSPOOR 8TM620
- SULZER 12ZV40/48
- SULZER 16ZAV40S
- SULZER AL 25/30
- SULZER ZA40
- WARTSILA 18V46B
- WARTSILA 4R32
- WARTSILA 9R32
- WARTSILA 6R32