

IN-SITU LINE BORING

40 TONNE BULK COAL HANDLING CRANE

SICAL Logistics Ltd, the operator and manager of Ennore Port Bulk Terminal in India, approached Goltens seeking a solution to a unique problem in, not one but two, of their 40 Tonne Bulk Coal Handling Cranes.

During the inspection of the cranes, Goltens Technicians discovered that the main cable drum, which is driven by a motor through a main gear box, had suffered damage to the drive shaft and the drive shaft flange bolts holes were found oval and the mating faces found worn out unevenly.

To correct the damage, Goltens proposed an in-situ line boring solution and post machining alignment. Goltens designed the fixtures and carried out the work around the clock to complete the in-situ work. The team then reassembled and aligned the complete drive system.

REPAIRS CONSISTED OF:

- Lifting of gearbox main casing and removal of the drive shaft to allow access to cable drum damaged area.
- Drum side drive shaft flange steel pad gouged out, bore area built up by welding.
- Setting up the line boring tool with required center line reference in horizontal and vertical plane with respect to Drum end plate and centerline of gear box drive shaft. Carrying out the boring to required 290mm bore.
- Welding of Pad on the drum face and Drilling of 08 nos new bolt holes for flange fitment.
- Gear Box assembled, drive shafts from both sides fitted in place, complete alignment was done as per the system drawing.
- The crane was commissioned and tested by the customer with all satisfactory results.

RESULTS:

The total job was completed in 6 days. The fast response and ability to complete the job in-situ resulted in a savings of roughly 30 days of avoided downtime.

PROJECT FACTS: Coal Handling Crane

CAPACITY:	40 Tonne
GRAB CAPACITY:	35M ³
RATED CAPACITY:	2,000 Tonne / Hour
DRUM DRIVE HOUSING ALITUDE:	150 FEET

