

## INSITU Machining Of Trunnion Journals

This is a process by which Raw Mill/Cement Mill Trunnion Journals can be repaired by INSITU machining at site. The scorings formed over a period of time, can be removed and the Trunnion Journal diameter will be undersized to standard diametrical tolerances as per OEM's specification. The Trunnion Journal will be stationary while our INSITU attachment will rotate around to effect grinding. This will generate true spherical surface. Using this state of art INSITU machine, any shafts upto 3200mm diameter can be INSITU machined/ground



RawMill Trunnion Journal (FLSmidth Make-Dia 1300mm) in a Thermal Power Plant -Before INSITU Grinding



Raw Mill Trunnion Journal (FLSmidth Make)-INSITU Grinding in Progress



RawMill Trunnion Journal (FLSmidth Make) -After INSITU Grinding



RawMill Trunnion Journal (KCP Make-Dia 1450mm) in a Cement Industry -Before INSITU Grinding



RawMill Trunnion Journal (KCP Make) -After INSITU Grinding

## INSITU Shaft Journal Tooling And Grinding

Any shaft journal from MG Cylinder Journal of Paper Machine to Axles of tracks of Bucket Wheel Excavators, ID fan Shaft Journals to Gear-Box Drive shaft journals to any Pump Shaft journals, can be INSITU Machined and Ground at site to required tolerances without dismantling or removal from position. We are equipped to machine shafts upto 2500mm diameter.



Bucket Wheel Excavator 1357 Hollow Axle (Dia 700 X 2000mm Length)-After INSITU Grinding in a Mining Industry



MG Cylinder Journal of Paper Machine-During INSITU Machining in a Paper Industry

## INSITU Boring – Tooling & Grinding

Any Bores or Housings from Vertical Raw Mill Rocker Arm co-axial Housing to Gyratory Crusher Top and Bottom shell Seats can be INSITU machined and ground to required tolerances. Bores upto 4000mm diameter can be INSITU machined/ground.



INSITU Boring-Vertical Raw Mill Rocker Arm co-axial Housing in a Cement Industry



INSITU Boring & Facing-Slew Drive Gear-box seating bore (Dia 1000mm) of Bucket Wheel Excavators.



INSITU Boring & Facing of Gyratory Crusher Taper Seat (Dia 2000mm) in Mining Industry

## INSITU Flange Facing & Tube Sheet Facing

The Gasket Seating Face of huge Flanges and Tube Sheet Flanges can be INSITU machined in position. INSITU Grinding of faces are also possible with an additional attachment, if required. We can handle flanges upto 7000mm in diameter.

INSITU Flange Facing of Dome End-Cover (Dia 1300mm) in progress at a petrochemical Industry



INSITU Flange Facing of Shell Flange(Dia 1300mm) in Progress in a Petrochemical Industry

INSITU Flange Facing of Ammonia Condenser in a Fertilizer Industry

INSITU Flange Facing (Dia400mm)-Manway flange-  
Petrochemical Industry

## INSITU Key-way Cutting

Any damaged or new Key-ways or Key-slots can be cut INSITU on any shafts. Key-ways upto 2000mm length can be cut. Internal key slots can also be machined, if required.



INSITU Machining of Key-way in MG cylinder  
Journal in a Paper Industry

INSITU Machining of Roller shafts in a Steel Industry

## INSITU Grinding of Turbine Rotor Thrust Disc/Collar

This is a specially designed INSITU Grinding Machine for Grinding of Thrust Collar Discs of Turbine Shafts of any size. The Thrust collar in Turbine shafts, if damaged can be corrected in position without dismantling / disturbing the turbine rotor.



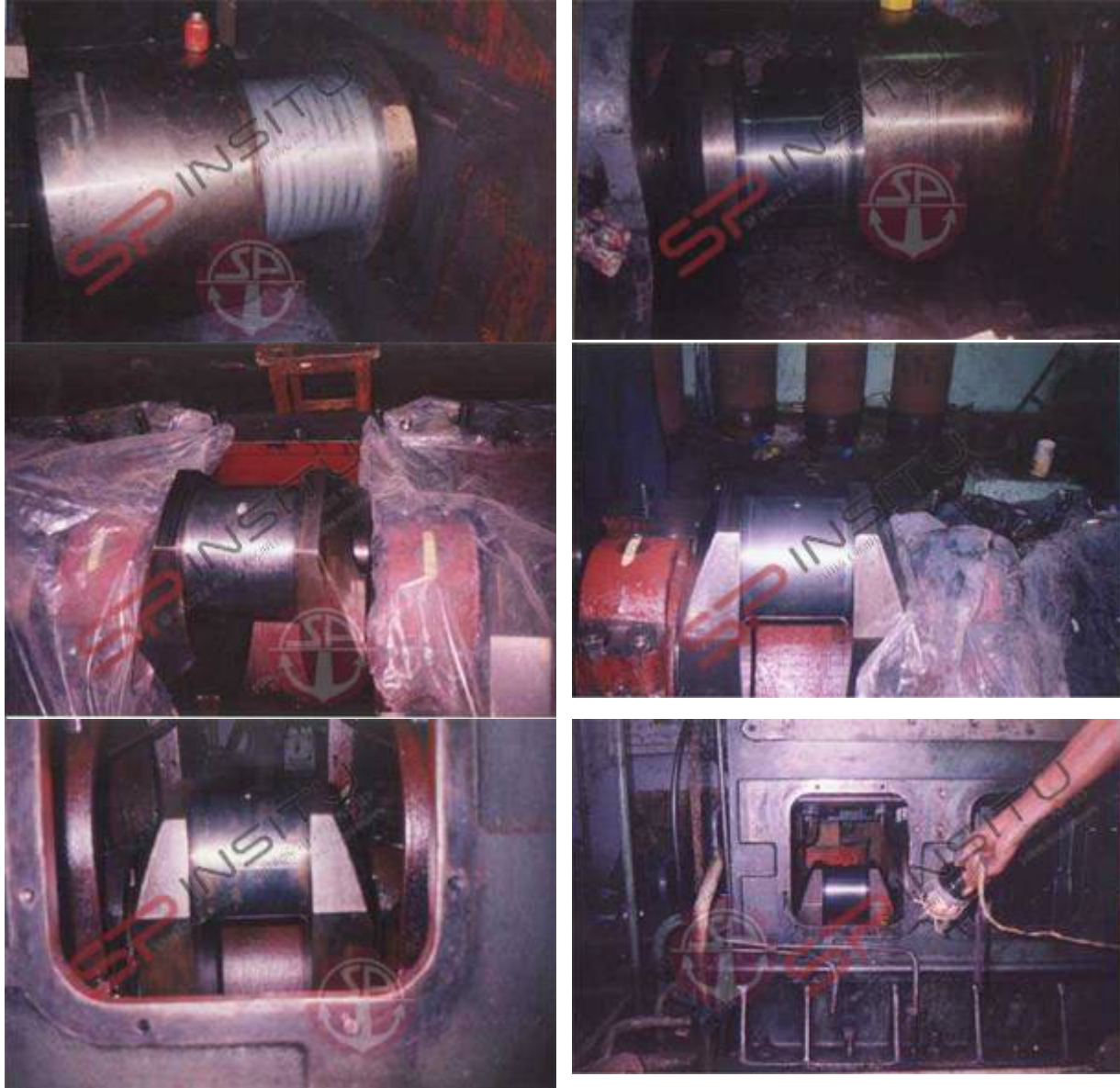
INSITU Grinding of 60MW Turbine Rotor Thrust  
Collar in a Thermal Power Plant of TNEB

INSITU Grinding of 110MW Turbine Rotor Thrust  
Collar-at a Thermal Power Plant of PSEB



## INSITU Crank-pin Grinding

Any damaged Crank-pins of Diesel Engines can be repaired INSITU without dismantling the crank-shaft from the crank-case. Grinding will be done to the next undersize and suitable undersize bearings may be used further.



INSITU Crank-pin Grinding – Before & After

## INSITU Line Boring of Diesel Engines

Any damaged Main Housing of crack-case in Diesel Engines can be repaired using this equipment. Also, any co-axial bores like VRM Mill Rocker Arm co-axial housings can also be INSITU machined at site. INSITU Line-Boring to any length can be carried out to standard tolerances.



INSITU Line-Boring of Main Housing of SKL 1100KVA Diesel Engine

## INSITU Liner Honing

Liners of Marine and Land based Diesel engines can be honed INSITU.



INSITU Honing of Marine Main Engine Liner- Before & After

## INSITU Shaft Thread Cutting

The Damaged Threads on Large Shafts of any pitch can be repaired and as well, new threads too can be machined. The shaft will be stationary while our Shaft Turning machine with Threading attachment will be mounted on the shaft to cut new threads. Threads can be cut on shafts upto 2000mm diameter.



INSITU Repair of damaged Threads of Super Heavy Duty Crusher in a Mining Industry

## **INSITU Bore Thread Cutting**

The Damaged Threads on Bores or large stud holes of any pitch can be repaired INSITU and new threads if required can be cut too.



INSITU Thread Cutting in Stud-hole of Ammonia Reactor in a Fertilizer Industry

## **INSITU Kiln Support Roller/Tyre Grinding**

Kiln tyres and support rollers can be ground in position while in operation. The In-let and out-let seal seat areas too can be INSITU machined



INSITU Machining of seal face location areas in a Cement Industry

## **INSITU Drilling / Deep Hole Drilling**

Deep Hole drilling in any plane and any length can be carried out INSITU.



INSITU Deep Drilling/Boring in Progress



INSITU Deep Drilling/Boring in Progress



## METAL-STITCH Of Cracked Cast-Iron, Cast Steel And Aluminium Bodies

Complete and reliable solution for cracked or broken casings made of cast iron and aluminium casings. METAL-STITCH is an innovative and highly skilled process of repair for cracked or broken cast-iron, cast-steel and aluminium bodies and housings.



Cracked Cummins 380 KVA Engine block, damaged due to Con-rod failure, before repairs.



Cracked Cummins Engine block after repairs by METAL-STITCH



Skoda 2270 KVA Inlet casings repaired by METALSTITCH



DP Crack test Shows crack in liver collar seating area in SKL 1100 KVA Engine Block



The liver collar seating area of SKL 1100 KVA Engine Block after METAL-STITCH.



The METAL-STITCHED areas are being machined finally to facilitate perfect seating of Liner Collar



Crack in SKL 1100 KVA



Cylinder heads repaired by METAL-STITCH



Cummins 380 KVA Engine block damaged due to con-rod failure shown.



The damage was repaired by fixing a new C.I. plate, followed by METAL-STITCH and D.P. Test





A marine Aux. Engine of Daihatsu 625 KVA Crank-Case was damaged due to con-rod failure, is shown. The damage is rectified by METAL-STITCH