



Crankpin and main bearing journal  
diameter machining

## QUALITY PROCEDURES

OSM WI/001

### CRANKPIN JOURNAL MACHINING

**Typical Worksopce**

1. Visual inspection of condition of fillet radii.
2. Concentricity checks from journal to radii using dial indicator.
3. Surface hardness tests of crankpin journal at one inch intervals every 45 and plot results.
4. Plug oil feed holes to prevent ingress of foreign particles.
5. Hand dress hardspots to establish depth.
6. Dimensional check and record.
7. Consult with customer to establish target final dimensions to suit available bearings.
8. Assemble crankpin machining equipment.
9. Set machine concentric and parallel.
10. Take proving cut to clean up damaged surface.
11. Repeat surface hardness tests.
12. Crack detection test of surface by magnetic particle inspection.
13. Dimensional checks.
14. Consult with customer.
15. Machine to full journal to agreed size plus polishing allowance.
16. Final surface hardness test.
17. Final crack detection test.
18. Blend radii to re-establish form.
19. Polish radii and oil holes.
20. Hone and polish journal to finished size.  
 Checking for:  
 Straightness using straight edge and engineers blue.  
 Ovality and parallelism using micrometer.
21. Final inspection.
22. Remove plugs in oil feed holes.
23. Provide customer with copies of inspection reports.
24. Clean work area.

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Setting a false ring to re-machine the fillet radi

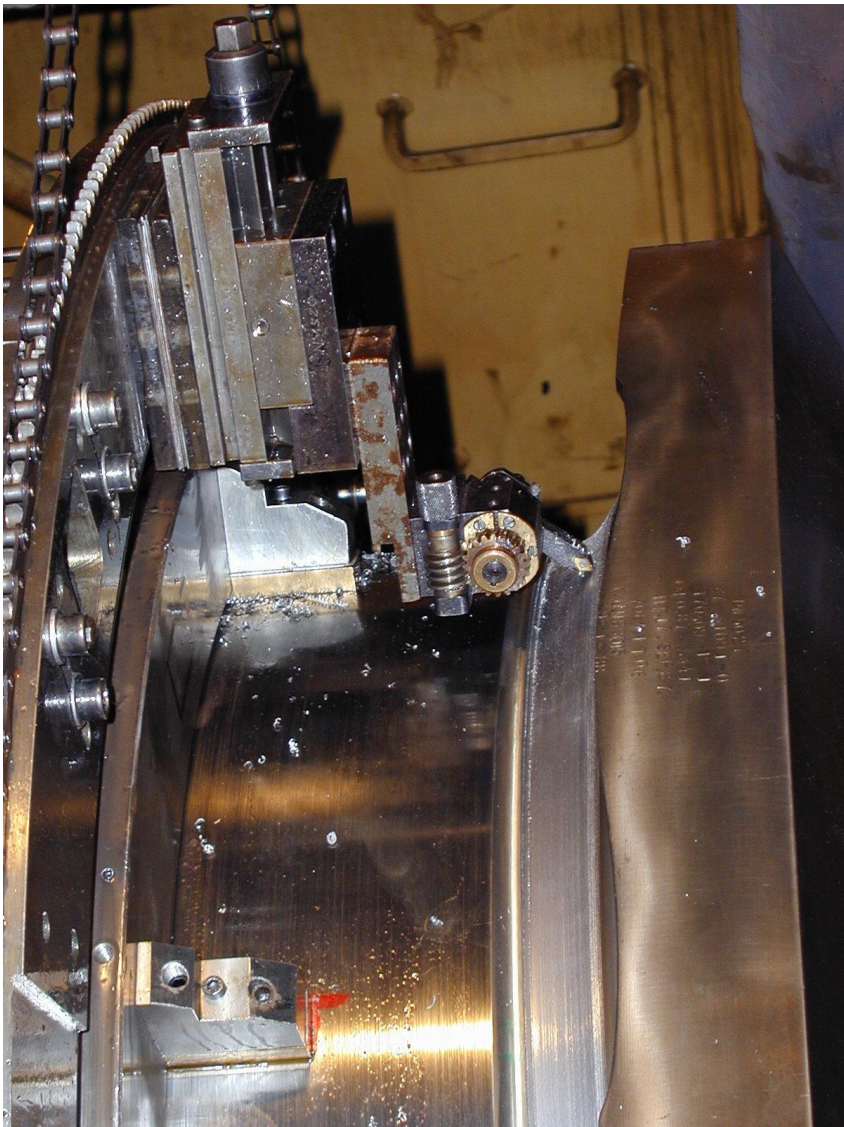
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Re machining fillet radii

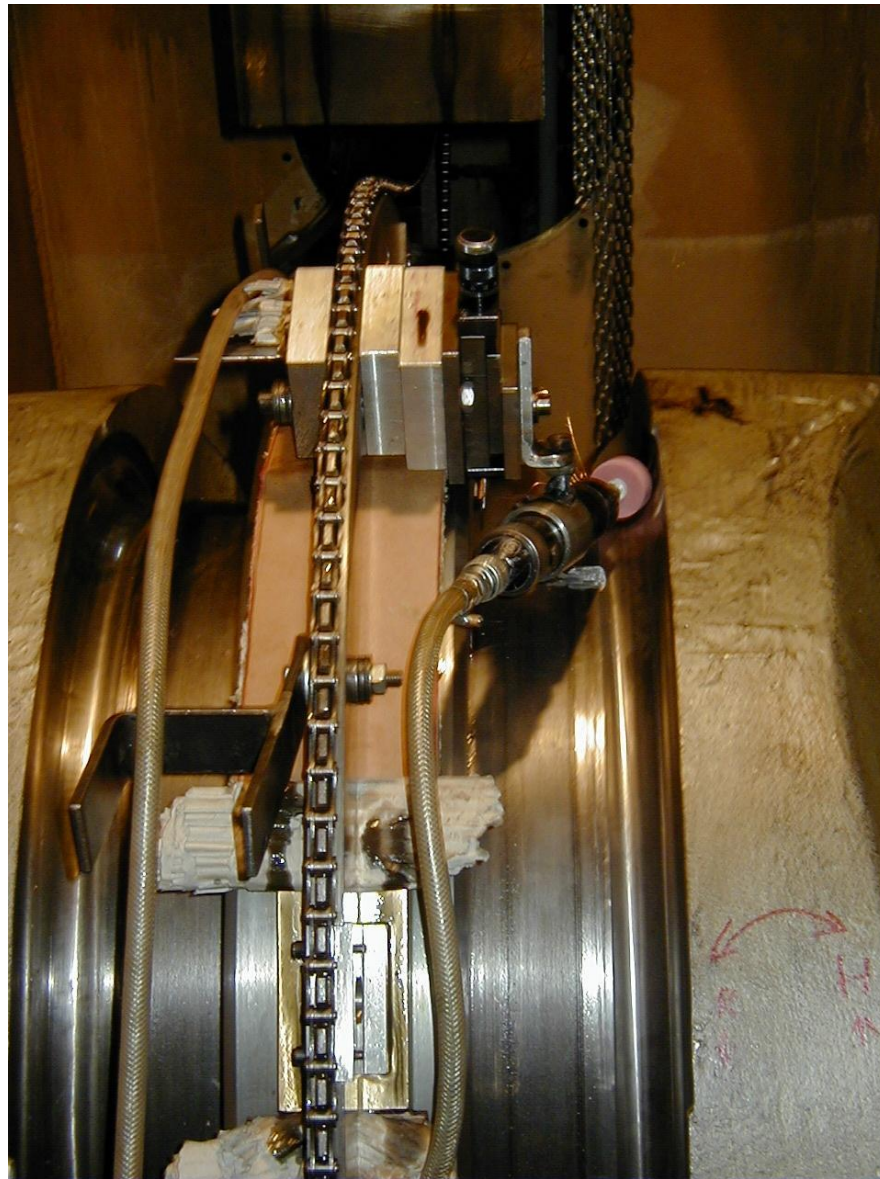
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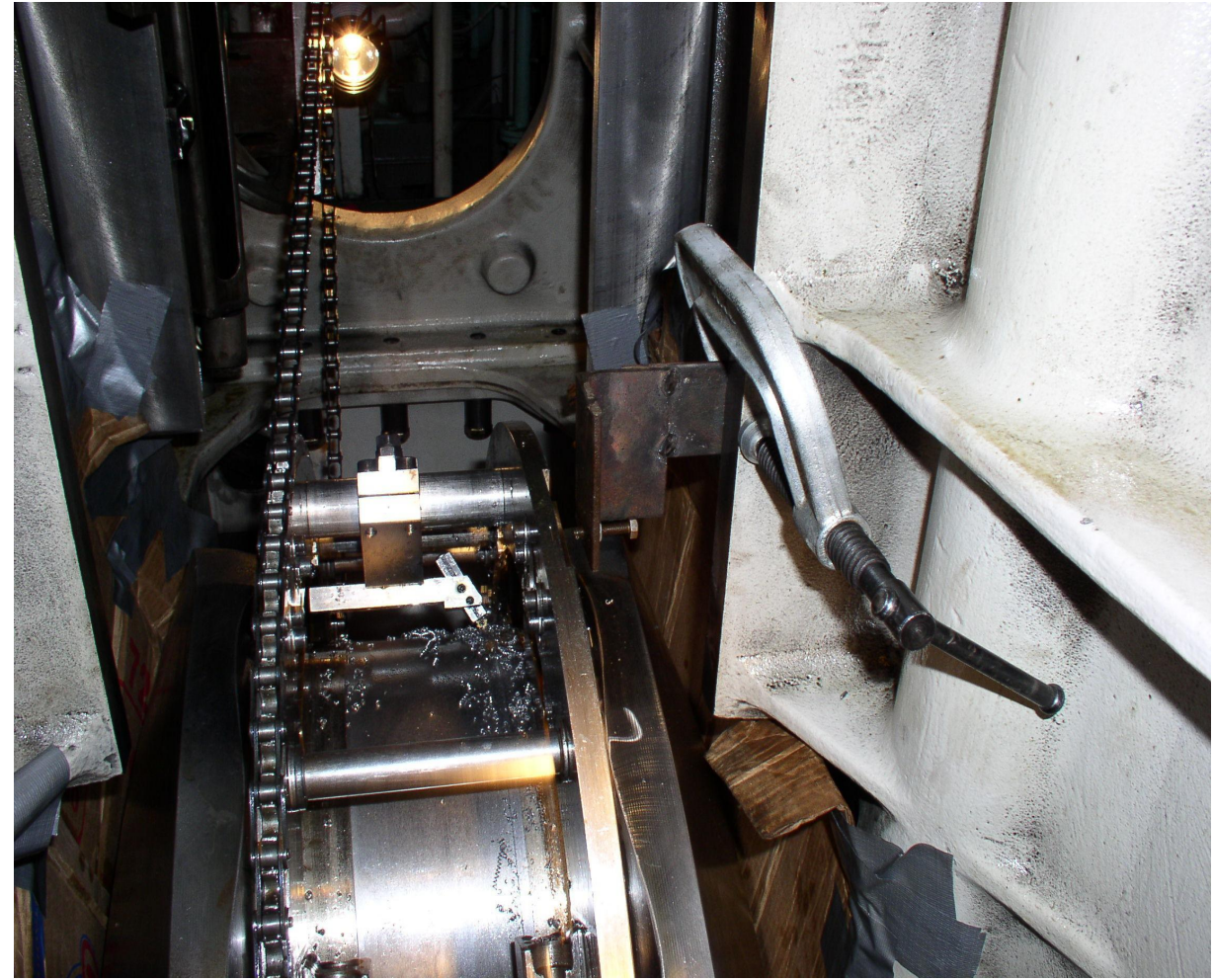
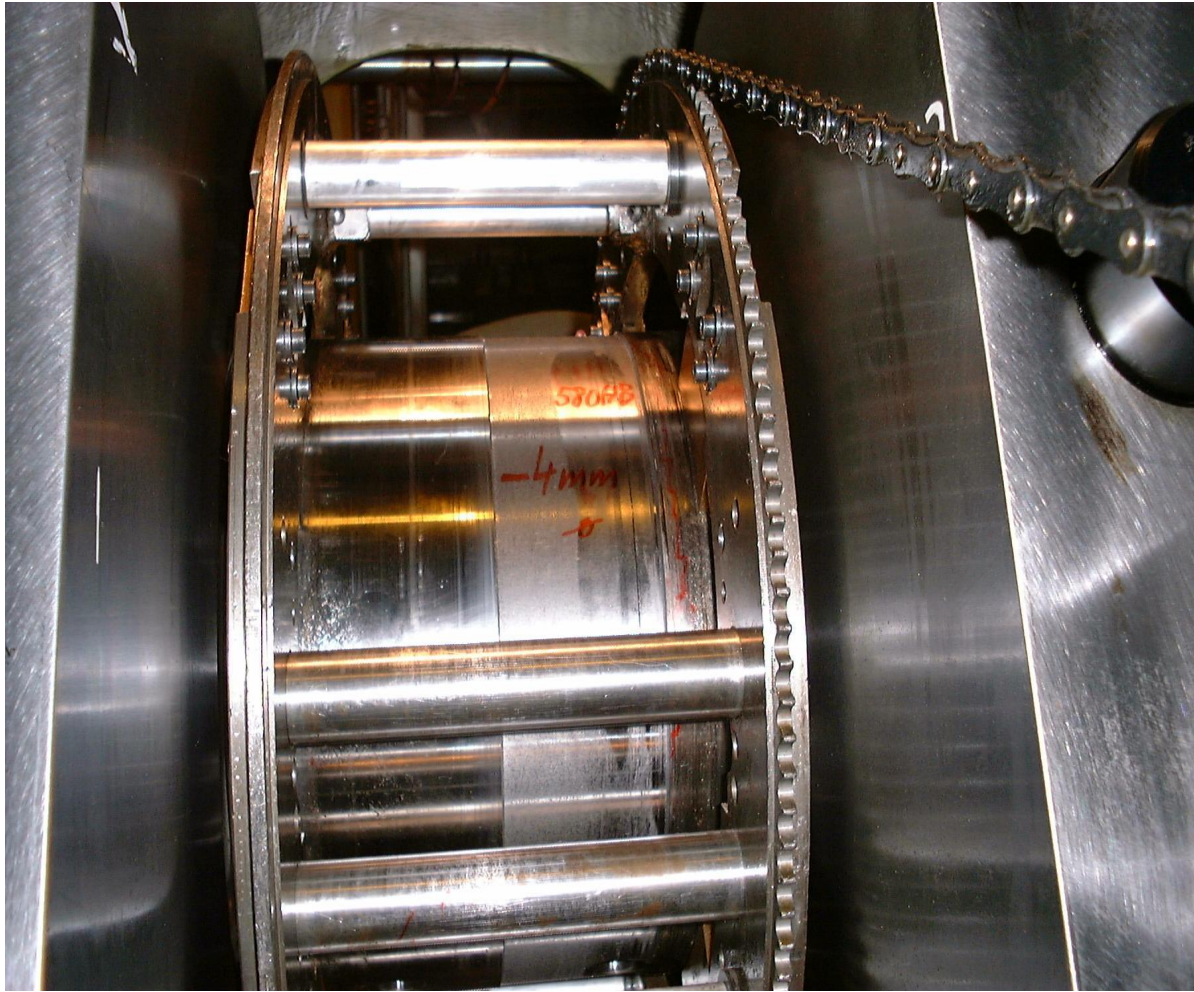
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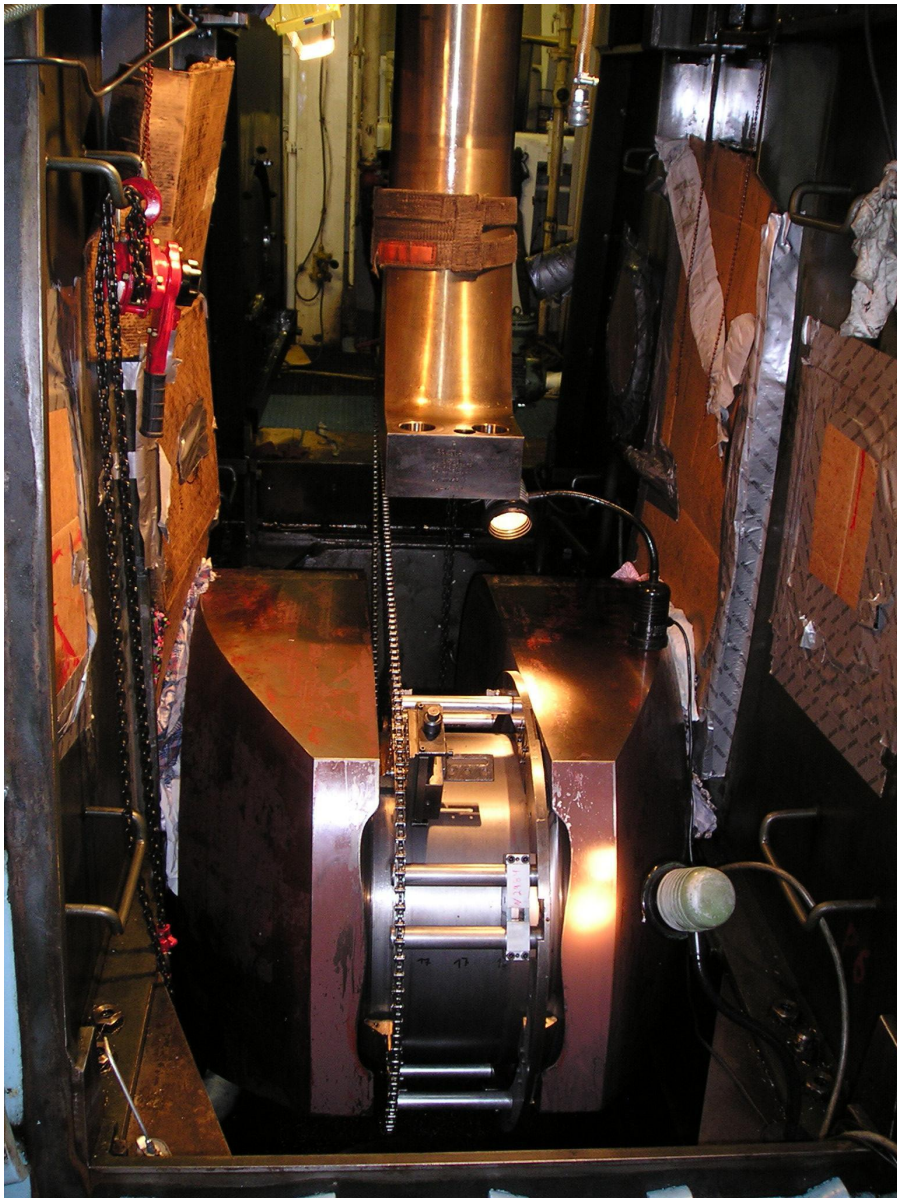




Re machining hard bearing journal diameter

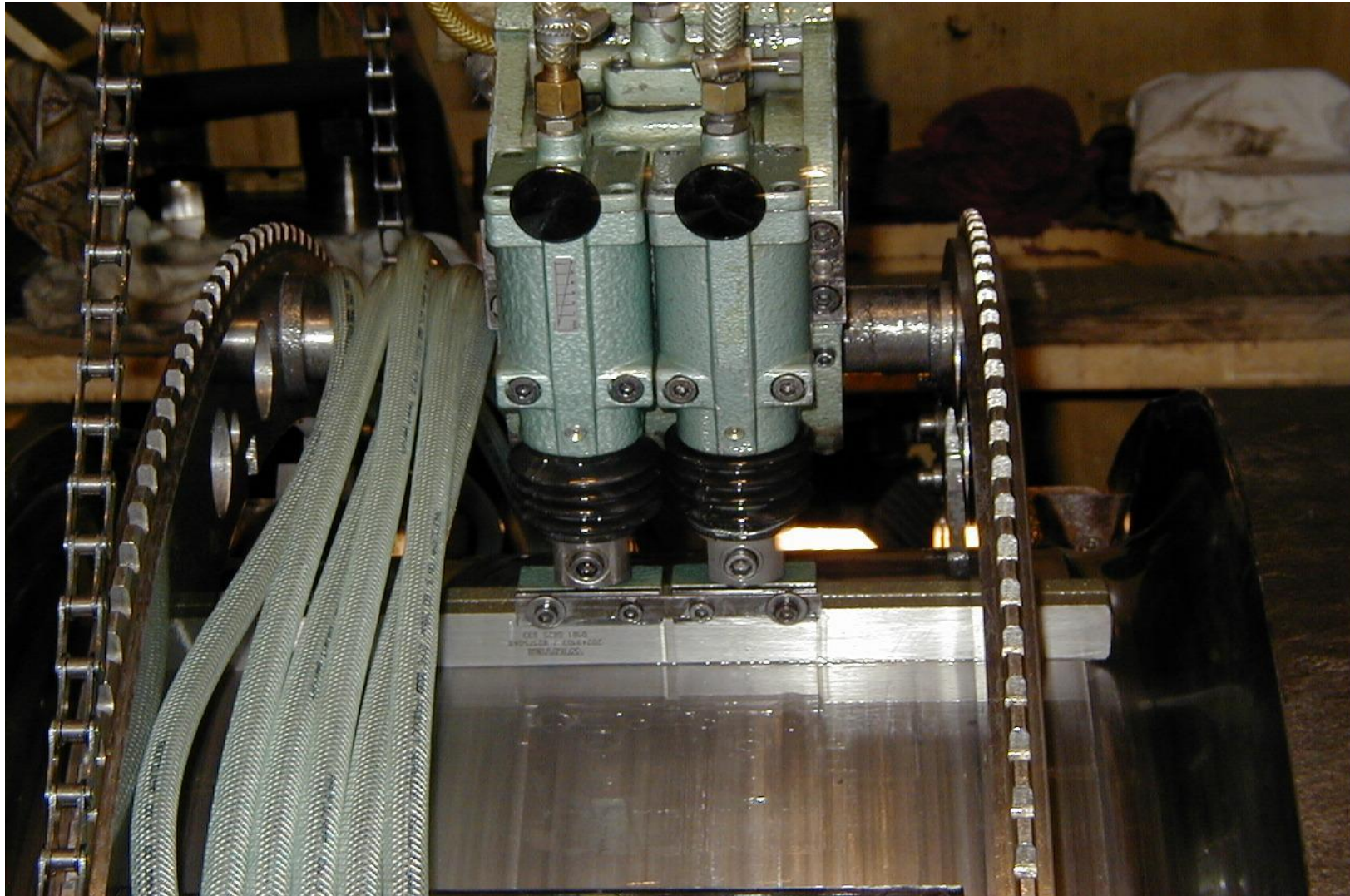
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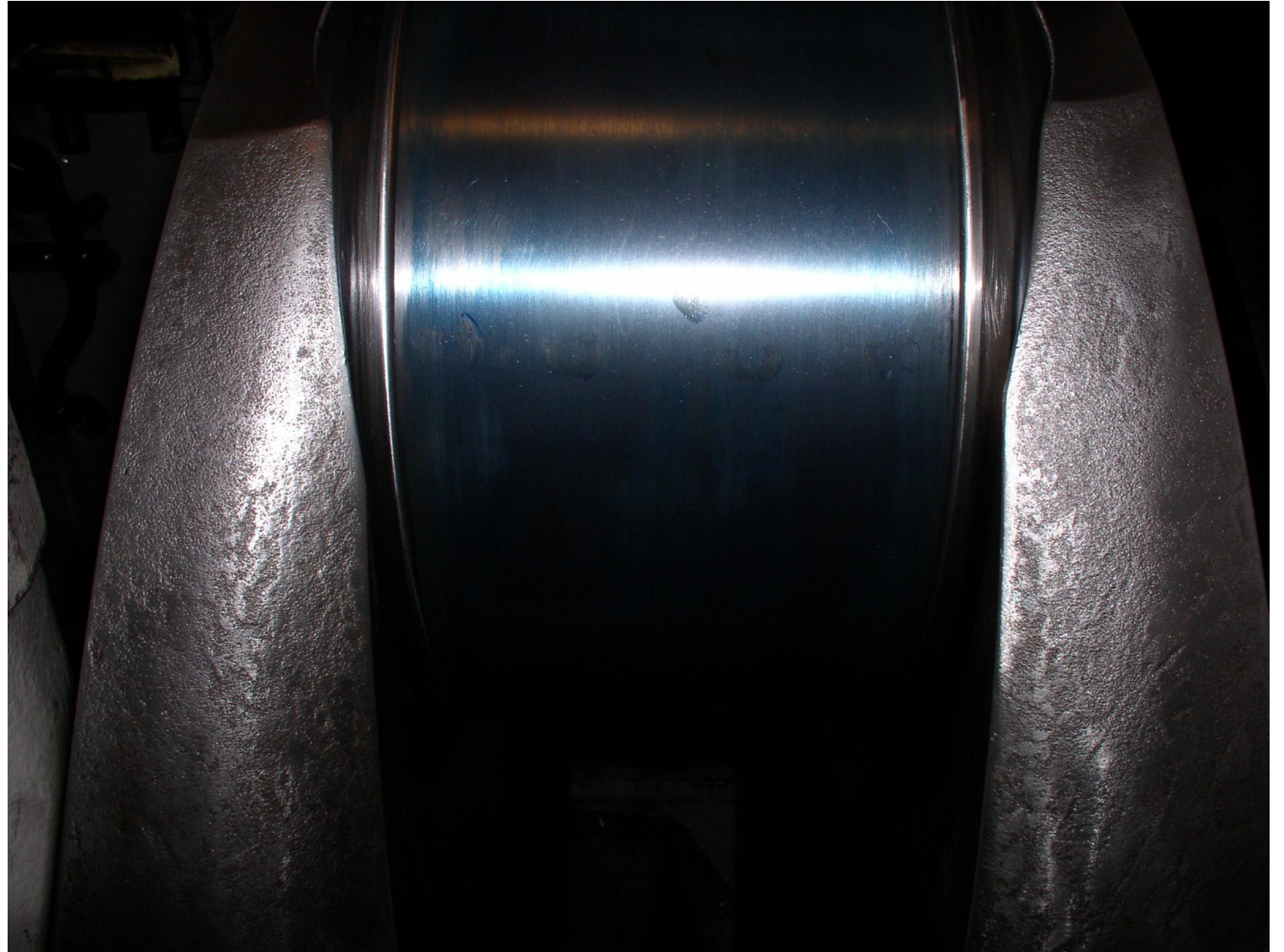




Superfinishing journal diameter

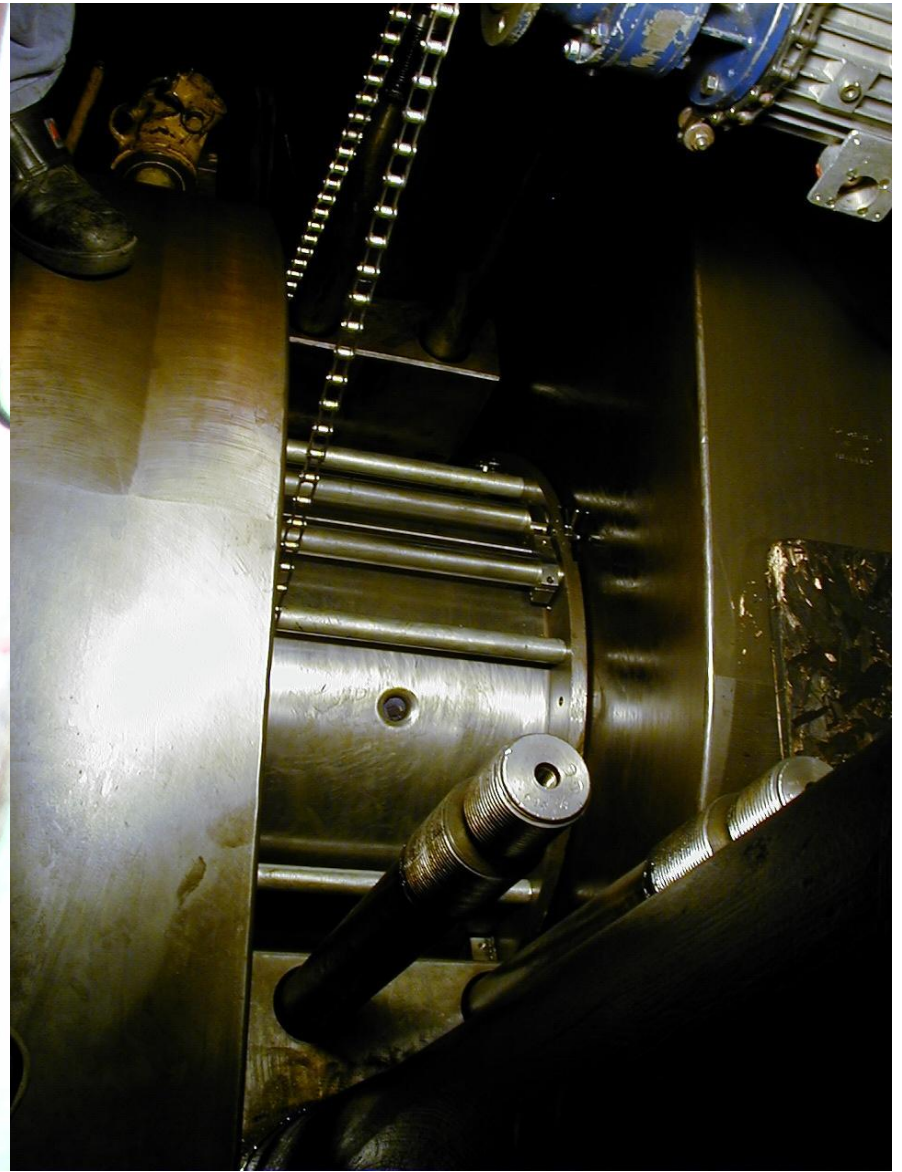
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