

Inspection & Test Plan

C4510 - Eraring Boiler Overhauls

Unit 4 Major Outage March 2005



ITP 37

A FD Fan

Rev: A, 16/02/2005

Job: 37 FD Fans General A FD Fan

No.	Item to be Checked	Type of Check	HP/WP	Record	NWP Inspection	Client Inspection
1	Fan Internals <i>Carry out survey report in accordance with specified scope of work.</i>	Survey Report		Survey Report		
3	Blade Pitch Components <i>Ensure plant is match-marked to facilitate correct reassembly: Mark external limit switch positions before removing. Mark 3 hoses for correct location on rotary union before removing. Match mark rotary union to cylinder. Match mark cylinder to hub.</i>	Marking & Identification				
4	Fan Blade Bolts <i>Replace all blade retaining bolts with new items (on 4B Fan Only), and progressively torque up bolts to specified torque (41 Nm) using torque wrench. Either remove and replace blades one at a time, or number all blades and hub position before removal</i>	Bolt Torque	WP			
5	Teflon Ring Orientation <i>On reassembly, the split in the teflon sealing ring on each blade boss must go downstream, as shown in Fitter Instruction 63.</i>	Visual Inspection	WP			
6	Blade Pitch Bearing Orientation <i>On reassembly, the thrust bearings on each blade shaft must go in the correct way, as shown in Fitter Instruction 56.</i>	Visual Inspection	WP			
7	Blade retaining nut tension <i>On reassembly of the blades, each blade nut is to be correctly tensioned as follows: 1. Tighten the nut firmly. 2. Check the blade has no radial play. 3. Back the nut off 2 flats.</i>	Surveillance				
8	Impeller Tip Clearances <i>Record blade tip clearances as per checksheet</i>	Dimensional Check	HP	123-06		
9	Fan hub concentricity <i>Check cylinder run-out after reassembly. Check air seal clearance after reassembly.</i>	Dimensional Check		123-07		

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10	Rotary Union Spin Check <i>After bolting rotary union to cylinder, but before hoses are connected: Spin the rotary union by hand to ensure it rotates freely.</i>	Visual Inspection		123-10		
11	Power Oil System <i>After overhaul, operate the power oil system and visually check for signs of leakage, including in the fan tunnel. Check and record the lift pressure of the power oil relief valve (6 Mpa). Check and record the blade pitch angle at full open and full close position.</i>	Commissioning Test	WP	G020		
12	Fan Casing <i>Ensure item is clear of materials, tools and personnel immediately prior to closing access doors. Check the suction sides especially carefully, including up under the silencers. Remove everything except dust!</i>	Box-up Check	HP			
13	Fan Test Operation <i>Check operation of equipment after reassembly is complete.</i>	Commissioning Test		G020		
14	Power Oil Cubicle Inspection <i>Client to inspect power oil cubicle after external inspection.</i>	Visual Inspection	HP			
15	Power Oil Tank Painting <i>Ensure external paintwork is visually satisfactory.</i>	Surface Coating	WP			
16	Outlet Expansion Joint <i>Carry out survey report in accordance with specified scope of work.</i>	Survey Report		Survey Report		

General Comment