Planning, Machinery Inspection, & Pre-alignment Checklist

Planning

#	Item	Notes
1	If instrumentation is available and plant safety procedures permit, perform a running soft foot check prior to shutting down the machine.	
2	Before starting work, perform all lock-out, tagging and equipment isolation procedures. This may include closing suction, discharge, and isolation valves, dampers, etc.	
3	Review recent machine history information.	
4	Check equipment history files to determine whether or not the machine is subject to dynamic movement (due to thermal growth, pipe strain, etc.) If so, determine required offsets to compensate for dynamic movement.	
5	Determine the precision alignment method to be used, gather all tools and equipment, and ensure proper working condition.	
6	Determine final alignment tolerances for the machine.	
7	Determine permissible axial and radial movement of both machines.	
8	Determine the specified coupling gap.	

Machinery Inspection

#	Item	Notes
1	Clean and inspect machine base, foundation, and feet for cracks, warped surfaces, corrosion, foreign material, burrs, etc. Repair as necessary.	
2	Inspect and note the thickness of existing shim packs. • Replace shims that are bent, corroded or handcut. • The total # of shims per foot should be <= four (4).	
3	Inspect hold down bolts and washers. • Replace bolts that are the wrong grade, are bent, or have bad threads. • Replace cupped washers.	
4	Inspect movable machine(s) for dowel or taper pins. If present or possibly improperly installed, remove.	
5	Check to ensure bearings are properly lubricated.	
6	Slowly rotate shafts feeling for binding or rubs. If present, determine source and repair as necessary.	
7	Check both shafts for excessive radial and axial movement.	

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Pre-Alignment Checks

#	Item	Notes
1	Ensure all hold-down bolts are properly lubricated and torqued. • Proper amount of torque • Proper torque sequence	
2	Check for excessive pipe and electrical connection strain.	
3	Check both shafts for excessive runout.	
4	Inspect couplings for the following: • Proper shaft fit • Rim and face runout • Worn teeth, elastomers, grid members • Correct type and amount of lubricant • Correct set screw length and tightness • Proper bolts and washers • Correct key length	
5	Properly set the coupling gap. • Note: For motors with plane bearings, ensure motor shaft has been set to its magnetic center.	
6	Correct gross soft foot (prior to rough alignment.)	
7	Perform precision soft check and correction (after rough alignment.)	