Engineering Controls Required for Equipment Reliability		
Component	**Equip Type**	**Requirements to Quality Control**
Roller Bearing	Gearbox	Oil Cleanliness, Dimensional Tolerance, Shaft Alignment, Housing Distortion, Base-plate Flatness, Oil Contamination, Oil Chemistry
Fan Mounting Hub	Centrifugal fan	Dimensional Tolerance, Shaft Alignment, Structure Distortion, Base-plate Flatness, Mounting Position Accuracy
Fan Blade	Centrifugal fan	
Plain Bearing		
Centrifugal Pump		
Steam Turbine		
Hazardous Area Instrument	Flammable Goods Storage	
Process Logic Computer (PLC)		
Conveyor Belt Roller	20 km long overland conveyor	
Drive Gearbox	Dusty, hot production location	
45kW AC 4-pole electric motor	Pump drive motor in building wet area	

Set 3T Quality Standards for Machinery			
Item	**Description**	**3T Quality Criteria 1**	**3T Quality Criteria 2**
1	Accurate Fits and Tolerance at Operating Temperature	Target: IT5 Tolerance: IT7 Test: Micrometre	
2	Impeccably Clean, Contaminant-Free Lubricant Life-long	Target: ISO 4406 12/9/_ Tolerance: 14/11/ Test: ISO 11500	Target: 0 ppm free water Tolerance: 100 ppm Test: Karl Fisher Titration
3	Distortion-Free Equipment for its Entire Lifetime	Target: Tolerance: Test:	
4	Shafts, Couplings and Bearings Running True to Centre	Target: Tolerance: Test:	
5	Forces and Loads into Rigid Mounts and Supports	Target: Tolerance: Test:	
6	Collinear Alignment of Shafts at Operating Temperature	Target: Tolerance: Test:	
7	High Quality Balancing of Rotating Parts	Target: Tolerance: Test:	
8	Low Total Machine Vibration	Target: Tolerance: Test:	
9	Correct Torques and Tensions in all Components	Target: Tolerance: Test:	
10	Correct Tools in the Condition to do the Task Precisely	Target: Tolerance: Test:	
11	Only In-specification Parts	Target: Tolerance: Test:	