REGULATION & PROTECTION COLUMN REGULATION COLUMN REGULATION COLUMN REGULATION BOUGHT OUT ITEMS WORKS MANUFACTURED SUB-CONTRACT ITEMS COMPONENTS SECTIONAL STEELS ROUNDS, FLATS & INDUSTRIL TURBINES DIAPHRAGMS - THE STREET CASING RATUR QUALITY CONTROL AT SUPPLIER'S WORKS Chemical analysis, Mechanical properties, Non-destructive tests. Dimensional inspection. Chemical, Mechanicle Ultrasonic & Hydraulic tests. Spectroscopic test, Crack detection test. Dimensional inspection. Chemical & Mechanicle tests etc. important items Pre—inspected at supplier's works by third party inspections. Non-destructive tests. Chemical & Mechanicle tests. Mechanical properties, Chemical analysis of melt. Chemical analysis, Mechanical properties, Dimensional inspection. Mechanical properties, Non-destructive tests. fabricated Wheels. Crack detection tests for Dimensional inspection. Chemical analysis of melt. Castings, Mechanicle tests. Dimensional & visual inspection of Grey iron QUALITY ASSURANCE CHECKS Chemical and Mechanicle tests. Chemical analysis, Mechanicle properties, → Mechanicle tests. ASSURANCE CHECKS Chemicals & Mechanicle tests. Dimensional inspection. UPON RECEIPT Visual and . Dimensional inspection. Chemical and Dimensional Dimensional Ultrasonic testing. Dimensional inspection, inspection. Chemical analysis, Dimensional inspection. inspection. Chemical analysis Dimensional inspection. ⇒ Dimensional inspection during and after Dimensional inspection Dimensional inspection during and after detection test and Hydraulic manufacture, Crack test after manufacture. →Dimensional inspection QUALITY CONTROL DURING Visual & Dimensional Inspection. Non-destructive critical alloy components Spectroscopic test for manufacture. Ultrasonic test/Dye Penetrant test. manufacture. during and after manufacture, Spectroscope test, crack detection test. during and after Sub-Contractor works. Dimensional inspection after manufacture at MANUFACTURE Z interference checks for moving Wheels and rotor shafts. Frequency tests. Runout checks & Stactic balancing of moving wheels. ROTOR ASSEMBLY ROTOR & MOVING WHEEL BLADING checks for blade edges, inspection fin assembly inspection. Checking for rediality & fit. Shrouding inspection, labyrinth sliding and mating surfaces. of matching of Key ways & Fitting Guide blades, Coplanarity PRE-ASSEMBLY KESSELS QUALITY CONTROL IN ASSEMBLY OPERATION STEAM TURBINE ¥ A Chambers. Assembly inspection of ● Valves. Hydraulic testing of Valve → Functional tests, adjustments determination of performances. linkage components. Seating test of Stop and Governing ▶ Dynamic balancing, adjustment STOP & GOVERNING VALVES Leveling of casings, Alignment Checks for bearing housings. Turbine casings. Rotors & Glands. Axil blade clearances labyrinth clearances and TEST BED governor. and functional test of Emergency BALANCING ERECTION ON TEST BED MAIN ASSEMBLY AND bearing clearances. Adjustment of safety devices of value Mechanisms. Visual inspection of bearings, Rotor blading Guide bladings Glands. Alignment checks. INSPECTION AFTER TESTING Dynamic balancing of rotors. TURBINE READY FOR DESPATCH measurement at the bearing housings in several Planes & at various speeds. Over speed testing Centrifuging Measurement of NO LOAD TEST speed after constant bearing temperatures have been reached Test run at maximum operating mechanisms. Vibration Test safety devices & control Valv TURBINE TEST RUN