



- TECHNICAL REQUIREMENTS
- A) FOR FABRICATION:
- DIMENSIONS GIVEN IN DRAWING DO NOT INCLUDE ANY TECHNOLOGICAL ALLOWANCES FOR FABRICATION.
  - MATERIAL FOR ITEM-1 TO 4, 6 TO 12, 19 AND 23 IS ASTM A516 Gr-70, THEREFORE NECESSARY PRECAUTIONS ARE TO BE TAKEN BY FGM FOR PRE-HEATING, WELDING ELECTRODES FOR WELDING.
  - WELDING TO CORPORATE STD. A06622101 TO GRADES AS SPECIFIED BELOW AND NDT TO BE CARRIED OUT BEFORE STRESS RELIEVING.
    - WELD JOINTS BETWEEN ANY TWO ITEMS ARE TO BE STAGGERED WITH WELD JOINTS BETWEEN SEGMENTS TO AVOID CROSS POINT FORMATION.
    - WELDING OF SEGMENTS OF RINGS AND CYLINDERS & WELDING BETWEEN ITEMS - 01&02, 02&11, 11&4, 04&19, 19&03, 07&09 AND 08&09 TO GRADE-II WITH 100% MCD.
    - WELDING BETWEEN ITEMS - 03&12, 01&10, 10&06, AND 09&23 TO GRADE-II WITH 100% MCD.
    - THE REST OF THE WELDS EXCEPT THE FILLET WELDS TO GRADE-II. EXTENT OF EXAMINATION BY UT FOR THESE WELDS SHALL BE WELD SIZE - 5mm.
    - ALL FILLET WELDS TO GRADE-III WITH 100% MCD.
  - STRESS RELIEVING IS TO BE CARRIED OUT BEFORE MACHINING AS PER BP0640299 AND SUBSEQUENT SHOT / SAND BLASTING IS TO BE CARRIED OUT.
  - HOLES (FLAME CUT) OF Ø215 IN ITEM-01 TO BE DONE ON G.V. PCD4130 SUCH THAT HOLES DON'T FALL ON WELD JOINTS OF SEGMENTS. VARIATION IN PITCH OF EACH PAIR OF ADJACENT HOLES SHALL NOT BE MORE THAN 2mm.
  - AFTER SHOT BLASTING, PAINT AS PER HT00005 WITH ONE COAT OF PRIMING PAINT.
  - FOR LIFTING / TURNING SUITABLE LIFTING LUGS TO BE WELDED.
  - FAB. WEIGHT = 30150 KG (APPROX.)
- B) FOR MACHINING:
- 20 G.V. HOLES SHALL BE MACHINED IN SUCH A WAY THAT THESE ARE CONCENTRIC W.R.T. CORRESPONDING HOLES IN PIVOT RING M/Cg (DRG. NO. 02030119703) WITHIN 0.03.
  - FIXING HOLES OF LINER PLATE TO BE MADE ON CNC MACHINE TO MAINTAIN INTERCHANGEABILITY.
  - FINAL MACHINING OF LINER PLATES ARE TO BE CARRIED OUT AFTER ASSEMBLY WITH TOP COVER.
  - \* MARKED DIAMETERS ARE TO BE CONCENTRIC WITHIN 0.02.
    - # MARKED DIAMETERS ARE TO BE PERPENDICULAR TO FACE-'TT' WITHIN 0.03.
    - # MARKED DIAMETERS ARE TO BE CONCENTRIC WITHIN 0.02.
  - a. SURFACES S1, S2, S3, S4, S5, TT, U & W ARE TO BE PERPENDICULAR TO TURBINE AXIS WITHIN 0.03.
  - b. SURFACE 'TT' (SURFACE OF TOP COVER BEFORE PLACEMENT OF LINER PLATE) TO BE PARALLEL W.R.T. DATUM SURFACE 'W' WITHIN 0.03. THIS IS ESSENTIAL IN ORDER TO ENSURE INTERCHANGEABILITY OF LINER PLATES (SPARES).
  - a. OUT OF FLATNESS OF SURFACE 'U' AFTER FINAL MACHINING SHOULD BE WITHIN 0.03.
  - b. SURFACE 'U' OF LINER PLATE AFTER MACHINING SHALL BE PARALLEL W.R.T. DATUM SURFACE 'W' WITHIN 0.03.
  - DIMENSIONS MARKED Ⓢ ARE TO BE MAINTAINED AS PER DRAWING FOR INTERCHANGEABILITY OF GUIDE VANES, LINER PLATES & STATIONARY LABYRINTH.
  - DIMENSIONS MARKED Ⓢ ARE CRITICAL FOR INSPECTION REVALIDATION DURING DURING MEASUREMENT IN SHOP.
  - ALL THE TAPPINGS ARE TO BE CHECKED BY RELEVANT R.H. PLUG GAUGES.
  - PAINT & PROTECT TO HT00005 AS FOLLOWS:
    - ALL UNMACHINED SURFACES TO CAT-C.
    - ALL MACHINED SURFACES WITHOUT HV0F COATING TO CAT-G.
    - c. 250 - 300 MICRON HV0F COATING TO BE CARRIED OUT ON LINER PLATE AS SHOWN IN SHEET-2.

ITEM NO.	ITEM	DESCRIPTION	DRAWING NO.	DATE	REV.	ITEM NO.	ITEM	DESCRIPTION	DRAWING NO.	DATE	REV.
36TK	029	FLANGE 100 NB CL-300	42030119717			36TK	029	FLANGE 100 NB CL-300	42030119717		
20TK	028	FLANGE 20 NB	SEE DETAIL			20TK	028	FLANGE 20 NB	SEE DETAIL		
40TK	027	RIB-6 40TKx160x520LG.				40TK	027	RIB-6 40TKx160x520LG.			
25TK	026	PLATE-2 25TKx32x535LG.				25TK	026	PLATE-2 25TKx32x535LG.			
	025	PIPE ASSY.	3 203 01 19723				025	PIPE ASSY.	3 203 01 19723		
Ø50 BAR	024	BLANK Ø50 X 10				Ø50 BAR	024	BLANK Ø50 X 10			
80TK	023	BEARING RING	SEE DETAIL			80TK	023	BEARING RING	SEE DETAIL		
	022	FLANGE	4 203 01 19708				022	FLANGE	4 203 01 19708		
20TK	021	S.S. RING IN 10 PARTS	SEE DETAIL			20TK	021	S.S. RING IN 10 PARTS	SEE DETAIL		
20TK	020	S.S. CYLINDER IN 8 PARTS	SEE DETAIL			20TK	020	S.S. CYLINDER IN 8 PARTS	SEE DETAIL		
80TK	019	BOTTOM MIDDLE CYLINDER	SEE DETAIL			80TK	019	BOTTOM MIDDLE CYLINDER	SEE DETAIL		
32TK	018	PLATE-1	SEE DETAIL			32TK	018	PLATE-1	SEE DETAIL		
25TK	017	RIB-5 25TKx35x650LG.				25TK	017	RIB-5 25TKx35x650LG.			
20TK	016	RIB-4 20TKx150x410LG.				20TK	016	RIB-4 20TKx150x410LG.			
40TK	015	RIB-3	SEE DETAIL			40TK	015	RIB-3	SEE DETAIL		
40TK	014	RIB-2	SEE DETAIL			40TK	014	RIB-2	SEE DETAIL		
40TK	013	RIB-1	SEE DETAIL			40TK	013	RIB-1	SEE DETAIL		
63TK	012	BOTTOM INNER CYLINDER	SEE DETAIL			63TK	012	BOTTOM INNER CYLINDER	SEE DETAIL		
80TK	011	BOTTOM OUTER CYLINDER	SEE DETAIL			80TK	011	BOTTOM OUTER CYLINDER	SEE DETAIL		
40TK	010	MIDDLE OUTER CYLINDER	SEE DETAIL			40TK	010	MIDDLE OUTER CYLINDER	SEE DETAIL		
40TK	009	TOP CYLINDER	SEE DETAIL			40TK	009	TOP CYLINDER	SEE DETAIL		
80TK	008	TOP RING	SEE DETAIL			80TK	008	TOP RING	SEE DETAIL		
110TK	007	MIDDLE RING-4	SEE DETAIL			110TK	007	MIDDLE RING-4	SEE DETAIL		
63TK	006	MIDDLE RING-3	SEE DETAIL			63TK	006	MIDDLE RING-3	SEE DETAIL		
20TK	005	MIDDLE RING-2 (IN 10 PARTS)	SEE DETAIL			20TK	005	MIDDLE RING-2 (IN 10 PARTS)	SEE DETAIL		
80TK	004	MIDDLE RING-1	SEE DETAIL			80TK	004	MIDDLE RING-1	SEE DETAIL		
80TK	003	BOTTOM INNER RING	SEE DETAIL			80TK	003	BOTTOM INNER RING	SEE DETAIL		
80TK	002	BOTTOM MIDDLE RING	SEE DETAIL			80TK	002	BOTTOM MIDDLE RING	SEE DETAIL		
180TK	001	BOTTOM OUTER RING	SEE DETAIL			180TK	001	BOTTOM OUTER RING	SEE DETAIL		