FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 0-203-01-18106

BUSH HOUSING IT.NO-7 OF ASSY. DRG. NO. 02030118101

8 HOLES DRILL 30 DEEP AND TAP M20X2.5X26 DEEP ON PCD 430 (AT 20 SETS EQUISPACED ON CTR'S ON G.V PCD 5724 TOTAL 160 HOLES. HOLES TO BE MATCH MARK FROM BUSH HOUSING DRG. NO. 12030118103)

RADIAL LINE

ø5724 (G.V. PCD)

DETAIL-D
SCALE-1:7.5
ZONE-G9

12 HOLES EQUISPACED POSITION AS SHOWN DRILL THRO' AND TAP M48X5P (3 IN EACH QUADRANT) ON PCD 6850 FOR JACKING OUTER TOP COVER AGAINST STAY RING

16 RIBS EQUISPACED AS 20 RIBS AS SHOWN (OMITTING 4 RIBS AT JOINTS

8 HOLES M72X4P DRILL THRO' (2 IN EACH QUADRANT) ON PCD 6340 FOR LIFTING. (SEE SECTION-LL,ZONE L-12) FOR POSITION SEE KEY PLAN (ZONE L-1)

OTC QUADRANT-2

OTC QUADRANT-3

OTC QUADRANT-1

OTC QUADRANT-4

JOINT LINE

JOINT LINE OF STAY RING (FOR REF.)

FLOW

U/S

96 HOLES EQUISPACED DRILL THRO' ø117 ON PCD 6710 FOR BOLTING WITH STAY RING LOCATED AS SHOWN.

8 PILOT HOLES (2 IN EACH QUADRANT) EQUISPACED ON PCD 6710, DRILL THRO' ø16 FOR DOWELLING WITH STAY RING.
FOR POSITION SEE KEY PLAN (ZONE L-2)

80 HOLES EQUISPACED DRILL 133 DEEP & TAP M80X4PX125 DEEP ON PCD 5200 POSITIONED AS SHOWN

G.V PCD 5724

PCD5200

SEE SHT-2 ZONE-C10

SEE DETAIL-D

8 HOLES M72X4P (2 IN EACH QUADRANT) ON PCD 5320 FOR LIFTING. (SEE SECTION-LL,ZONE L-12) FOR POSITION SEE KEY PLAN (ZONE L-1)

USE STUDS/NUTS M56 (IT. NO. 30 & 31) OF DRG.NO. 02030118101

20 RIBS EQUISPACED EACH OF ITEMS 5 & 6 IN LINE WITH REDIAL OF BOSS ITEM-7 AS SHOWN

TOTAL 320 HOLES (IN GROUP OF 16 HOLES) AS SHOWN DRILL 35 DEEP AND TAP M16X30 DEEP TO BE MADE AFTER MATCH MARKING THROUGH SEAL RETAINER DRG. NO. 12030118104. (SEE T.R.9)

TYPICAL PLAN (WITHOUT FACING PLATE)

SECTION-A1A1
ZONE-F10,K3,

SECTION-LL
SCALE-1:5
ZONE-C6

FACING PLATE-1 (IT. NO. 1 OF DRG. 12030118105)
FACING PLATE-2 (IT. NO. 2 OF DRG. 12030118105) AT JOINTS
FACING PLATE-3 (IT. NO. 3 OF DRG. 12030118105) AT JOINTS

TYPICAL VIEW FROM BOTTOM SIDE
(WITH FACING PLATE)

KEY PLAN FOR LIFTING HOLES (TOTAL 8+8 HOLES)
SCALE-1:100

KEY PLAN FOR DOWELING HOLES (TOTAL 8 HOLES)
SCALE-1:100

4921

OUTER TOP COVER QUARDANT

1732

TRANSPORT DIMENSIONS
SCALE-1:80 (T.R.18)

TOTAL 460 HOLES (IN GROUP OF 23 HOLES PER FACING PLATE)SPACED AS SHOWN DRILL 45 DEEP AND TAP M20x40 DEEP TO BE MADE AFTER MATCH MARKING THROUGH UPPER FACING PLATE DRG.NO.12030118101. (SEE T.R. 8)

VIEW ON ARROW-W
ZONE-C-8, SHT-1
(WITH FACING PLATE)

TECHNICAL REQUIREMENTS:-

1. DIMENSIONS GIVEN IN DRAWING DO NOT INCLUDE ANY TECHNOLOGICAL ALLOWANCE FOR FABRICATION. *DIMENSIONS IN () ARE FOR WELDED ASSEMBLY/BEFORE MACHINING.*
2. MATERIAL:- AA10119, IS2062. GRADE-E250 GR.BR FOR IT.NO. 01 AND 02. THEREFORE NECESSARY PRECAUTION FOR PRE-HEATING AND WELDING ELECTRODES ARE TO BE TAKEN BY FBM.
3. WELDING TO CORPORATE STD. AA0622101 TO GRADES AS SPECIFIED BELOW AND NDT TO BE CARRIED OUT BEFORE STRESS RELIEVING.
   a) ALL RADIAL JOINTS BETWEEN PARTS OF IT.NO.01 & 02 SHALL BE GRADE-II WITH 100% U.T., MCD AND D.P.TESTING.
   b) WELDS OF JOINT FLANGES (IT.NO.03) WITH OTHER ITEMS TO BE GRADE-II WITH 100% U.T., MCD AND D.P.TESTING.
   c) WELD OF JOINTS BETWEEN IT.NO.01 AND IT.NO.02 AND 07 TO BE GRADE-II WITH 100% U.T., MCD AND D.P.TESTING.
   d) ALL FILLET WELDS TO GRADE-III WITH 100% D.P. TESTING.
   e) EXTENT OF EXAMINATION BY U.T. FOR PARTIAL PENETRATION WELD SHALL BE WELD SIZE-5mm.
4. STRESS RELIEVING TO BE CARRIED OUT AS PER PROCESS SPCN. BP640299 AND SUBSEQUENT SHOT BLASTING TO BE DONE.
5. DURING FABRICATION BORES ø320 IN IT.NO. 01AND ø310 IN IT. NO. 02 & ø315 IN ITEM-7 ON GV PCD 5724 TO BE KEPT ALIGNED. ALLOWABLE NONALIGNMENT 3mm. VARIATION IN PITCH OF EACH PAIR OF ADJACENT HOLES IN PLATES IT.NO.01 AND 02 NOT TO BE MORE THAN ± 3mm DURING FABRICATION.
6. PRELIMINARY MACHINING OF OUTER TOP COVER TO BE CARRIED OUT FOR WELDING OF S.S. LINER IT.NO. 09. REFER STAGE-I, STAGE-II & STAGE-III.
7. 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. 0 20301 18104) WITHIN 0.05mm.
8. HOLES FOR FIXING OF UPPER FACING PLATE TO BE MADE AT LOCATIONS MATCH MARKED FROM UPPER FACING PLATE.
9. HOLES FOR FIXING OF SEAL RETAINER TO BE MADE AT LOCATIONS MATCH MARKED FROM SEAL RETAINER.
10. FINAL MACHINING OF UPPER FACING PLATES ARE TO BE CARRIED OUT AFTER ASSEMBLY WITH OUTER TOP COVER. ENSURE FINAL MACHINING OF FACE SEAL GROOVE IN FACING PLATE TO BE CARRIED OUT ON ASSEMBLY.

11. (a) ∗MARKED DIAMETERS ARE TO BE CONCENTRIC WITHIN 0.03.
   (b) SURFACES A, X, Y AND Z SHALL BE BE PERPENDICULAR TO AXIS OF * MARKED DIAMETERS WITHIN 0.05.
   (c) DIMENSIONS MARKED Ⓜ ARE TO BE MAINTAINED AS PER DRAWING FOR INTERCHANGEABILITY OF BUSH HOUSING, GUIDE VANE FACE SEAL AND FACE SEAL RETAINERS.
   (d) DIMENSIONS MARKED (CTQ) ARE CRITICAL FOR INSPECTION REVALIDATION DURING MEASUREMENT IN SHOP.
12. FACE SEAL AND SEAL RETAINERS ARE TO BE PROOF ASSEMBLED WITH OUTER TOP COVER AT BHEL WORKS BEFORE DISPATCH.
13. U/S TO BE MARKED ACCURETLY IN QUADRANT-4 AT ø6960 FOR LOCATING AND INSTALLATION AT SITE.
14. PAINT AND PROTECT TO PROCESS SPECIFICATION NO. HT00005 AS FOLLOWS:
   a. ALL MACHINED SURFACES TO CAT-G.
   b. ALL UNMACHINED SURFACES TO CAT-C.
15. USE 48 STUDS AND 96 NUTS (IT.NO.30 AND IT.NO.31) OF DRG.NO. 02030118101 FOR JOINING QUADRANTS.
16. ALL TAPPED HOLES ARE TO BE CHECKED BY USING RELEVANT R.H. PLUG GAUGES.
17. FABRICATION WEIGHT OF OUTER TOP COVER QUADRANT=10830 KG
18. DIMENSIONS OF OUTER TOP COVER QUADRANT = 4921 x 1732 x 900

		010	DOWEL ø40X45 LG.	42030118402		0.35	012
	12 TK	009	S.S. LINER	SEE DETAIL	UNS 41500 ASTM A240	6.5	024
CUT TO SUIT	25 TK	008	STRIP 25TKX50WX20mtr		AA1010312405 AA10112	196.0	001
		007	BOSS CASTING	32030118116		85.0	020
	56 TK	006	RIB-3	SEE DETAIL	AA1011819228 AA10119	26.0	020
	56 TK	005	RIB-2	SEE DETAIL	AA1011819228 AA10119	36.0	020
	56 TK	004	RIB-1 687X600X56TK	SEE DETAIL	AA1011819228 AA10119	181.0	16
	80 TK	003	JOINT FLANGE	SEE DETAIL	AA1011819260 AA10119	259.0	08
	150 TK	002	BOTTOM RING (IN QUADRANT)	SEE DETAIL	AA10119 IS2062,Gr.BR	3736	04
	150 TK	001	TOP RING (IN QUADRANT)	SEE DETAIL	AA10119 IS2062,Gr.BR	5020	04

28 — CARD TYPE-3 | 28 — CARD TYPE-1 | 28 — CARD TYPE-2

ADDITIONAL INFORMATION

STATUS OF DRAWING U

DISTRIBUTION OF PRINTS
HTE-2, WTM(P)-1, WTM(S)-4
FGM-7, THX-1

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: PRANAHITA -VIII LIS

BHARAT HEAVY ELECTRICALS LTD. BHOPAL

	NAME	SIGN	DATE
DRN	RABI		31.03.16
CKD	R.P.S		31.03.16
APPD	R.RAWAL		31.03.16

REV.	DATE	ALTERED	
		CHECKED	
ZONE		APPD.	

REV.	DATE	ALTERED	
		CHECKED	
ZONE		APPD.	

REV.	DATE	ALTERED	
01	30.04.16	CHECKED	SLG
		APPD.	RPS / R.RAWAL
ZONE		SEE SHEET-1	

DEPT.	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO	NO.OF ITEM
M.T.E.	AS PER DRG. 3200004901	1:10	36128	02030118101	001	010
CODE 402						

TITLE: OUTER TOP COVER (FAB & M/CING) (IN QUADRANTS)

DRAWING NO. 0 203-01-18106 REV. 01

SHT. NO. 02 NO. OF SHT. 02

AO SIZE

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INVENTORY NO. | SIGN. & DATE | REF. DRG. NO.