

DRG. NO. 1-332-08-04982

FIGURE-A

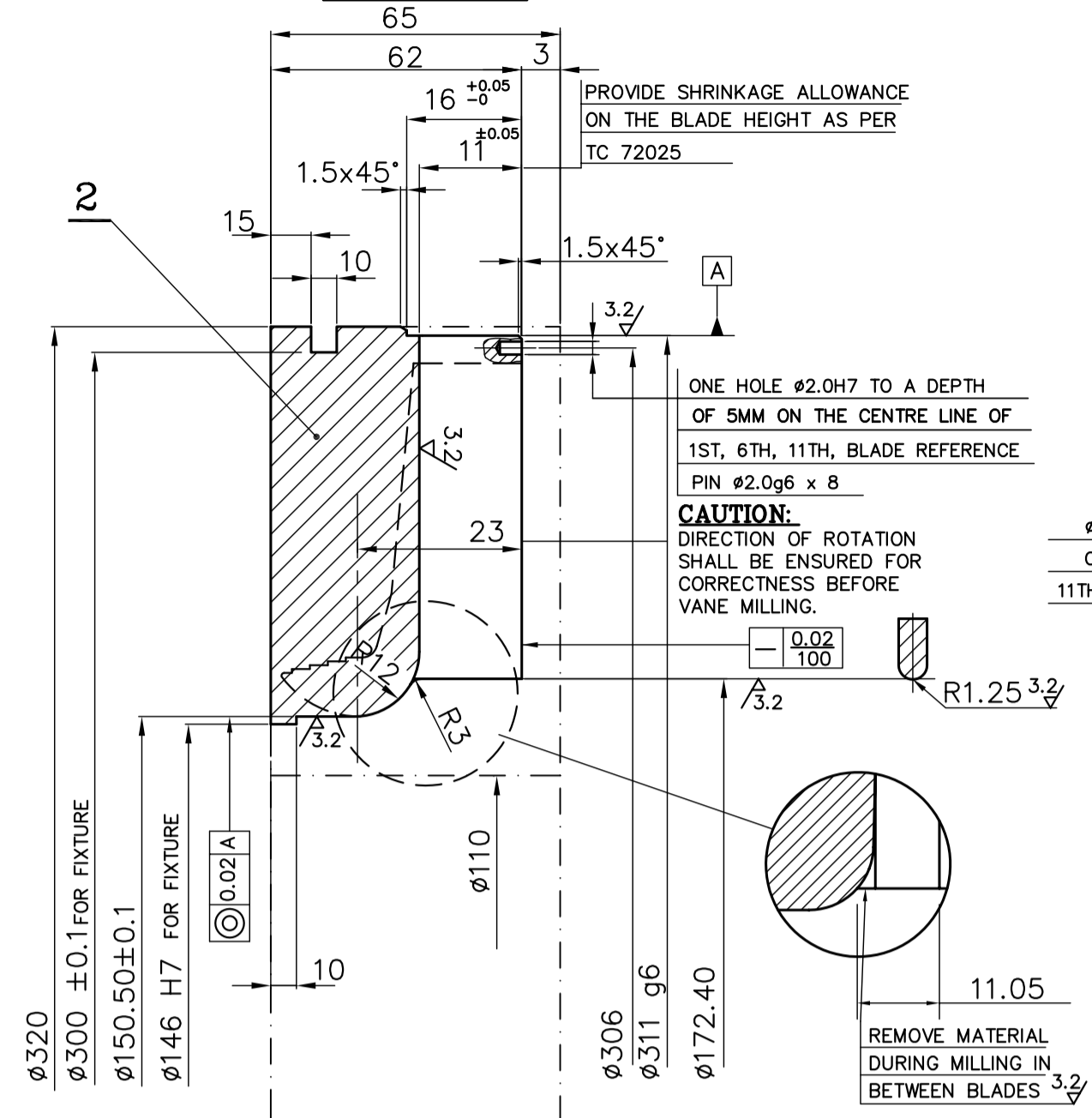
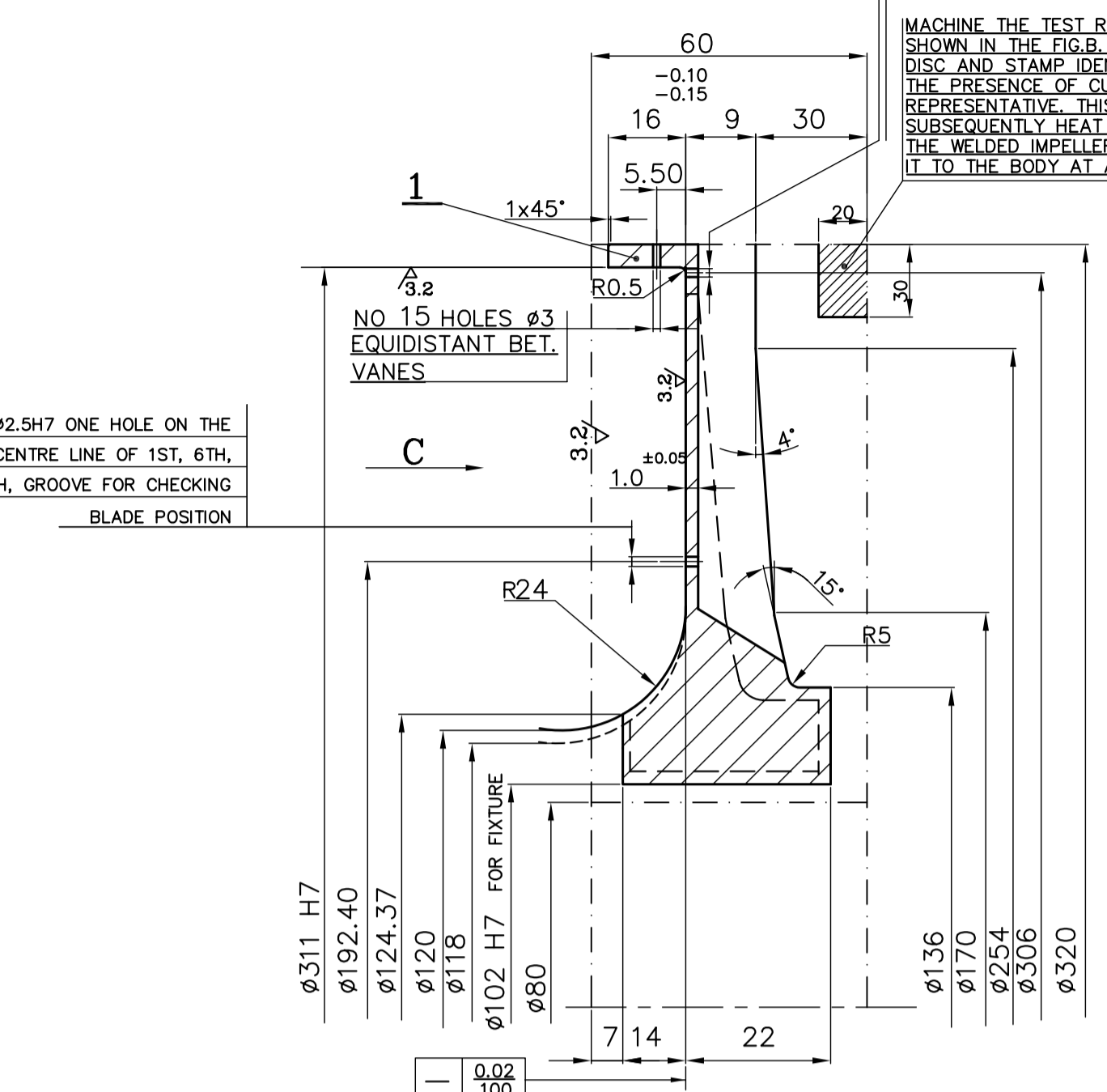
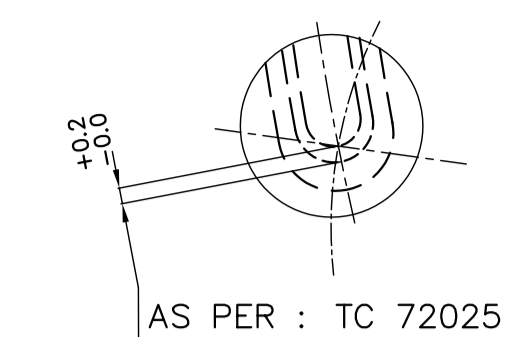


FIGURE-B

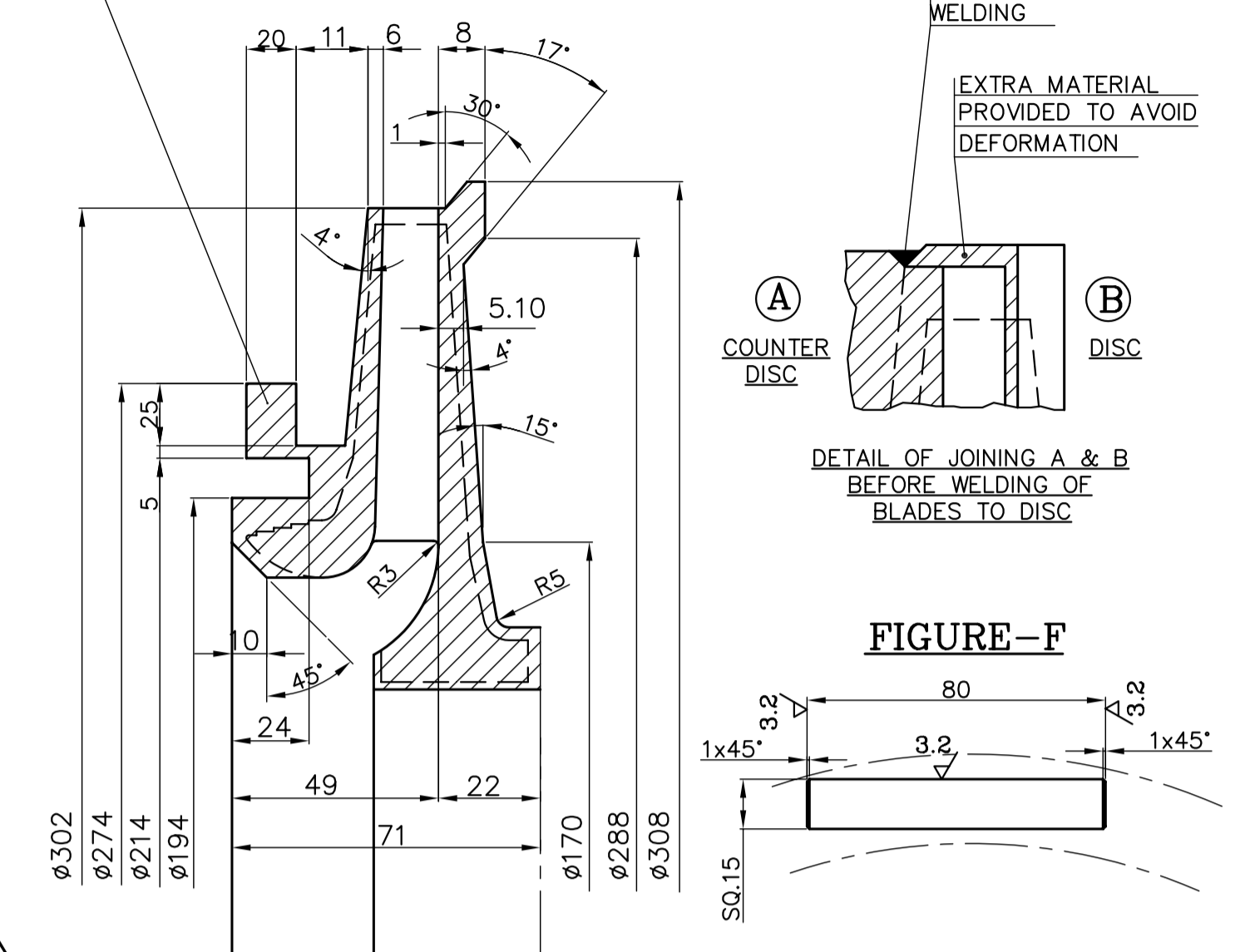


DETAIL V

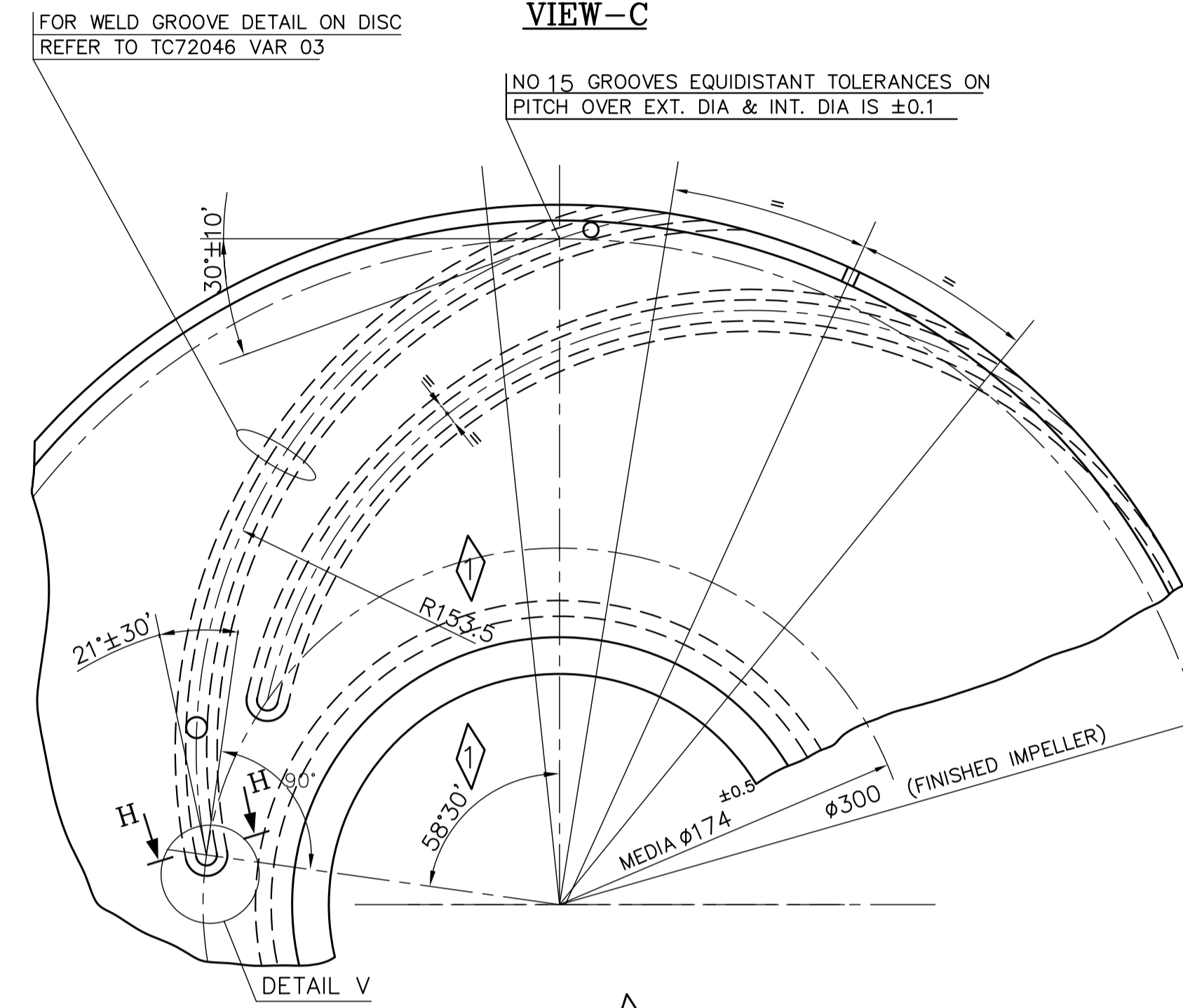


RECOVER FROM THIS RING A TEST PIECE ACCORDING TO FIG. F AND RESERVE THE REMAINING MATERIAL FOR FURTHER TESTS

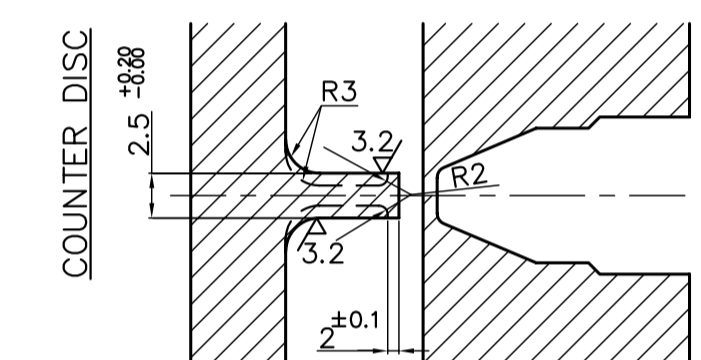
FIGURE-D



VIEW-C

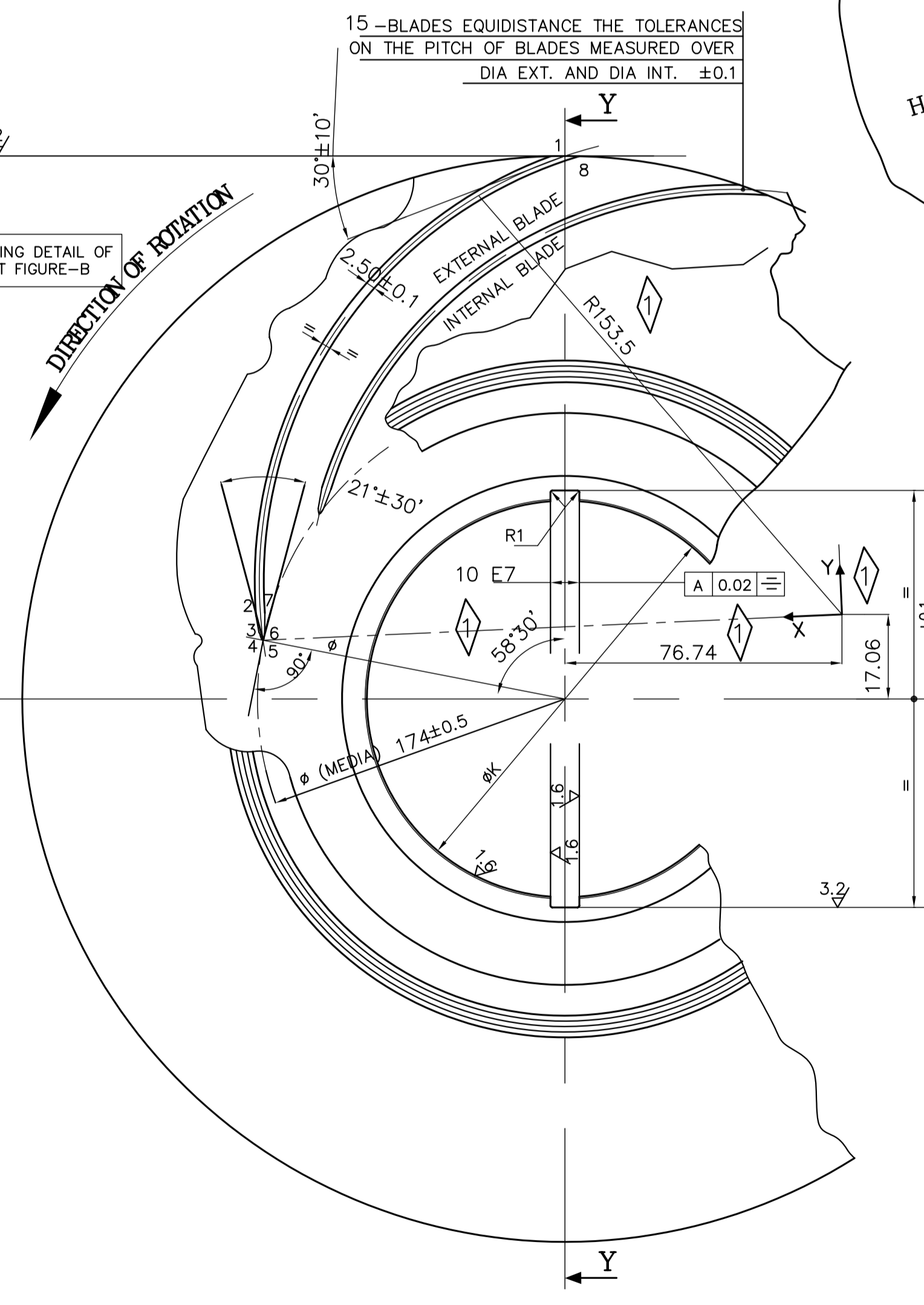


SECTION H-H



ROUGH MACHINING DETAIL OF COUNTER DISC SHOWN AT FIGURE-A

ROUGH MACHINING DETAIL OF DISC SHOWN AT FIGURE-B



BLADE PROFILE ARCS AND CIRCLE OF TANGENTS

ARC	X	Y	RADIUS	POINT	X	Y
1-2	0.00	0.00	154.75	2	0	0
2-3	81.36	7.44	73.05	2	154.11	14.09
3-4	151.20	1.16	2.93	3	154.12	0.90
4-5	153.74	0.21	0.22	4	153.94	0.13
5-6	156.31	1.38	3.05	5	153.54	0.12
6-7	330.15	30.47	179.30	6	153.31	0.88
7-8	0.00	0.00	152.25	7	151.61	13.99

CHECK THE POINTS 2,3,6,7 ON 3 BLADES 1,6 & 12 AFTER BLADE MILLING.

WELDING DETAIL FOR THE DETAILS OF EDGE PREPARATION AND WELDING SEE RELEVANT WPS

VAR NO	MATERIAL SPECIFICATION	HEAT TREATMENT CYCLE YS IN Kg /mm <sup>2</sup>	WPS NO	øW	øK
01	HY 19377 (KMN COGNE)	55 TO 65	WE-364	ø129.81	ø112 +0.08
02		65 TO 75	WE-358	ø129.81	ø112 +0.08
03		85 TO 95	WE-359	ø129.78	ø112 -0.03
04		100 TO 110	WE-365	ø129.78	ø112 -0.03
05		60 TO 65	WE-364	ø129.81	ø112 +0.08
06		70 TO 75	WE-358	ø129.81	ø112 +0.08
07	HY 19391 (X12 Cr13)	55 TO 65	WE/EL/370	ø129.81	ø112 +0.08
08		65 TO 75	WE/EL/371	ø129.81	ø112 +0.08
09		60 TO 65	WE/EL/370	ø129.81	ø112 +0.08
10		70 TO 75	WE/EL/371	ø129.81	ø112 +0.08
11	HY 19395 (FV 520 B)	55 TO 63	WE/EL/370	ø129.81	ø112 +0.08
12		85 TO 105	WE-347-H	ø129.78	ø112 -0.03
13		> 105	WE-	ø129.78	ø112 -0.03
14		68 TO 80	WE-347-GS	ø129.78	ø112 -0.03
15		80 TO 95	WE-414	ø129.78	ø112 -0.03
16					

CAUTION: INTERCHANGEABLE JOB NO DEVIATION PERMITTED

- NOTE:
- PERFORM OVERSPEED TEST OF THE IMPELLER AT \*\* RPM AND CHECK THE DIAMETERS BEFORE AND AFTER THE TEST. THE OVER SPEED TEST HAS TO BE WITNESSED BY THE CUSTOMER M/S\*\*
  - HEAT TREAT THE MATERIAL SO AS TO ATTAIN AN YIELD STRENGTH OF \*\* Kg/mm<sup>2</sup> AND AN IMPACT STRENGTH OF \*\* Kg/mm<sup>2</sup> AT \*\* °C.
  - DYE PENETRANT TEST SHALL BE CONDUCTED AT SPECIFIED STAGES OF MANUFACTURE AS PER TECHNOLOGICAL PROCESS.
  - DYNAMIC BALANCING OF IMPELLER TO BE PERFORMED.
  - SEQUENCE OF OPERATION FOR PRODUCTION AND INSPECTION OF THE IMPELLER AS PER TECHNOLOGICAL PROCESS.
  - AS PER INSPECTION AND TESTING REQUIREMENTS INDICATED IN THE PARTLIST.
  - BLADE HEIGHTS SHALL BE VERIFIED AT 4 LOCATIONS
    - EXTERNAL DIAMETER
    - INTERNAL DIAMETER
    - AT A DEPTH OF 10% OF DIAMETER FROM OUTER AND INNER DIAMETER OF BLADE.
 THE ABOVE CHECKS ARE TO BE CARRIED OUT BEFORE WELDING. AFTER WELDING, BLADE HEIGHT SHALL BE MEASURED AT THE EXTERNAL DIAMETER AND 10% OF DIAMETER FROM OUTER DIAMETER OF BLADE. THIS DATA SHALL BE RECORDED IN THE LOG SHEET.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD. HYDERABAD

DRN. KKG  
CHD. SUGUNA  
APPD. YVRL

NAME: SUGUNA  
SIGNATURE: YVRL  
DATE: 16.09.08  
DATE: 19.09.08  
DATE: 20.09.08

DEPT. CODE: 420  
SCALE: NTS  
WEIGHT (KG): 7.71

TITLE: IMPELLER ø300 L10 - CCW

DRAWING NO. 1-332-08-04982 02

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GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE	REV.	DATE	CHD/APPD	ZONE							
1				2				3				4				5				6			7				8				9				10				11				12			