



- NOTE TO SUPPLIER:**
- CASTING SHALL BE SUPPLIED IN ROUGH MACHINED CONDITION AS PER THIS DRAWING DIMENSIONS. THE FINISHING ALLOWANCE IS ABOUT 2MM.
 - SURFACE ROUGHNESS OF MACHINED SURFACES SHALL BE NOT OVER 6.3 MICRONS. SURFACE ROUGHNESS OF VANE&FLOW PASSAGE SHALL BE NOT OVER 5 MICRONS.
 - BEWARE OF THE MISALIGNMENT OF THE BLADE PITCH AND DIMENSIONS AND CAST THE IMPELLER SO THAT THE CENTER OF MASS SHALL BE CLOSE TO THE CENTER OF FIGURE, IN ORDER TO MAKE THE RESIDUAL UNBALANCE SMALLER.
 - MANUFACTURE THIS IMPELLER BY PRECISION CASTING WITH THE GIVEN 3D-DATA.
 - 100% MPI ON CASTING SHALL BE DONE AS PER STD AA0850134 AND ACCEPTANCE AS PER AA0850134 LEVEL-II.
 - RADIOGRAPHY TEST SHALL BE CONDUCTED AS PER ASTM E142 AND ACCEPTANCE NORMS AS PER ASTM E446 LEVEL-II.
 - MATL SPECN SHALL BE AS PER HY19593.
 - ADDITIONAL QUALITY REQUIREMENTS SHALL BE AS PER FP60288.

RADIUS RADIAL COORDINATE (AT FRONT SIDE OF BLADE)

SECTION	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	INLET
ANGLE	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	
a-a'	166.73	154.95	146.46	138.92	133.26	128.08	123.01	118.65	114.76	111.70	108.16	105.34	103.995
b-b'	166.73	154.95	145.51	136.68	130.19	124.31	119.00	114.29	110.17	106.05	101.92	98.97	96.62
c-c'	166.73	154.95	144.93	135.50	127.84	121.95	116.06	110.76	106.05	101.92	97.20	93.08	89.55

ITEM NO.	DESCRIPTION	DRAWING NO.	VAR. NO.	RAW MATERIAL SIZE OR CASTING DRG. NO. OR FORGING DRG. NO.	MATERIAL CODE	NET WT. (GROSS WT.)	QUANTITY
					HY19593	30.9	

THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED

1. REF TO HY0230261 FOR UNSURFACED TOLERANCES.

2. CHAMFER W/CD SHARP EDGE 1.2 TO 1.0 AT 45°.

3. INTERNAL W/CD CORNER RADIUS 1 TO 0.7.

4. THE SURFACE ROUGHNESS WHEREVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE BACK SLASHES GIVEN AT THE TOP MOST RIGHT CORNER OF THE DRG.

TYPE OF PRODUCT: MDG406
 NAME OF CUSTOMER/PROJECT: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD

DEPT. PUMPS
 SCALE: NTS
 WEIGHT (KG): NA
 REF. TO ASSY DRG.: NA
 ITEM NO.: NA
 NO. OF ITEMS: NA

TITLE: IMPELLER 1st STAGE (CASTING)
 DRAWING NO.: 0 180 40 2 4677 00
 SHEET NO. 01 NO OF SHEETS 01