

CASTING DRAWING (ALTERNATE DESIGN)

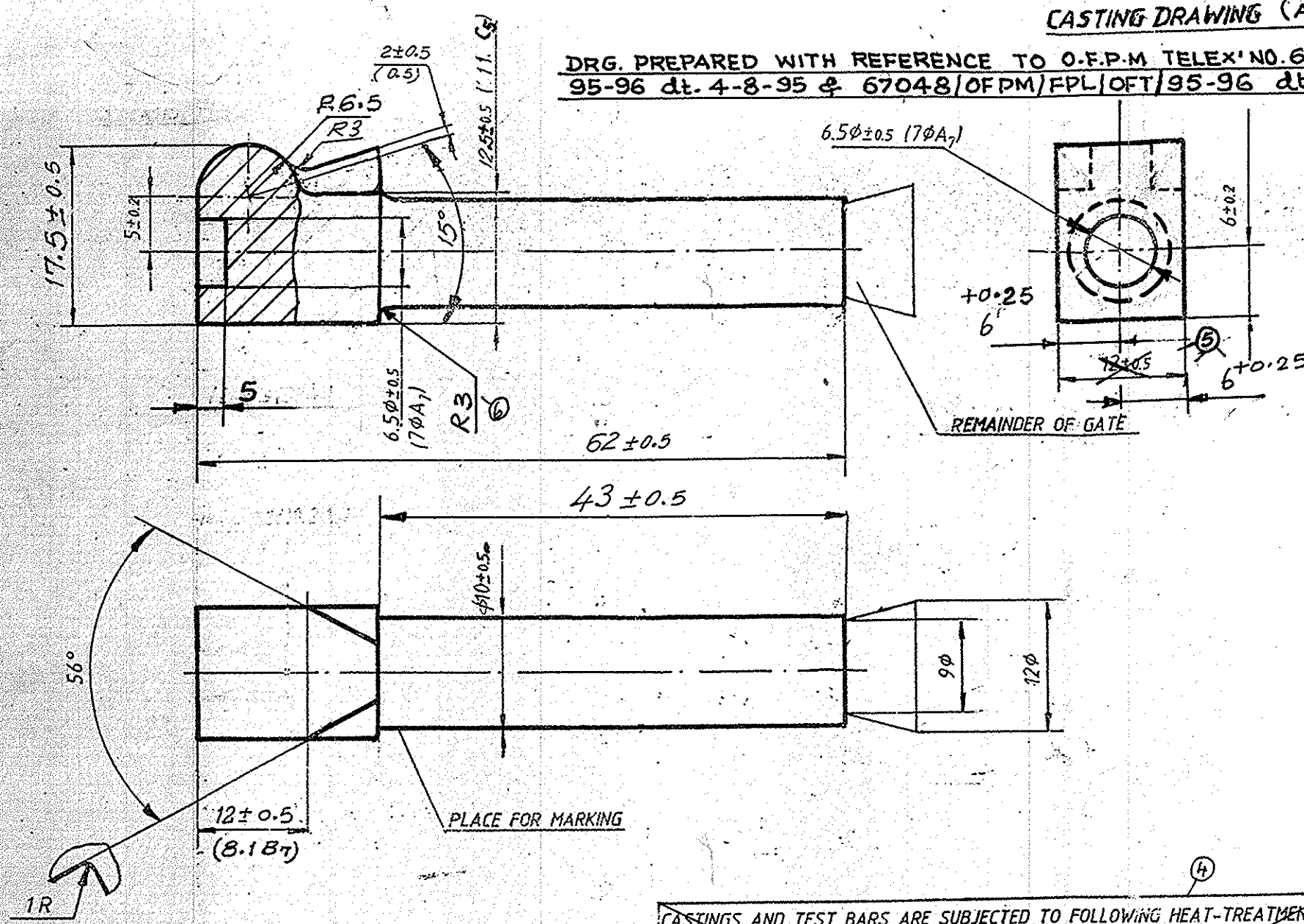
DRG. PREPARED WITH REFERENCE TO O.F.P.M TELEX NO. 67048/OFPM/FPL/O.F.T./95-96 dt. 4-8-95 & 67048/OFPM/FPL/OFT/95-96 dt. 23-8-95

CHEMICAL COMPOSITION OF THE MATERIAL			
23XC2MΦNY			
C	0.20 - 0.24	Si	1.80 - 2.0
Mn	0.50 - 0.80	Cr	0.60 - 0.90
Mo	0.25 - 0.30	V	0.10 - 0.15
Ni	1.0 Max.	S	0.025 Max.
P	0.025 Max.		

MECHANICAL PROPERTIES OF THE MATERIAL	
23XC2MΦNY (V200P20)	
ULTIMATE STRENGTH	140 Kgf/mm ²
YIELD STRENGTH	120 Kgf/mm ²
RELATIVE ELONGATION	6%
IMPACT STRENGTH	4 Kgf.M/cm ²

FOR COMPONENT NO 2A42-05-111 - HANDLE

TITLED FOR MATERIAL ONLY
 AS PER LAST DC (I) NO. 18225.W
 Dt. 26.9.96
 (JAGADISH)
 Sr. Scientific Officer
 Sr. Quality Assurance Engg (Arms)
 Tiruchirapalli-620016.



MATERIAL 23XC2MΦNY
 MECHANICAL PROPERTIES :-
 ULTIMATE STRENGTH 130 Kgf/mm² AND
 YIELD STRENGTH 110 Kgf/mm² ARE ALSO
 BE ACCEPTABLE.

- ACCEPTANCE OF CASTING IS CARRIED OUT AS PER GOST 977-75 (PARAGRAPH 2 AND 3) BUT WHILE MANUFACTURING CASTINGS AS PER MELTED MODELS AS PER OST 3-4365-79
- MECHANICAL PROPERTIES OF STEEL IS DETERMINED ON THE SPECIMENS CUT FROM THE TEST BARS AS PER GOST 977-75 AFTER CARRYING OUT COMPLETE HEAT-TREATMENT PROCESS
- TENSILE TEST IS CARRIED OUT AS PER GOST 1497-73 ON CYLINDRICAL SPECIMEN WITH DIAMETER 10mm. WITH LENGTH 50mm. TESTS ON SPECIMENS (SAMPLES) ON 5mm DIAMETER WITH 25mm LENGTH IS PERMITTED
- DETERMINATION OF IMPACT STRENGTH IS CARRIED OUT AS PER GOST 9454-78 ON THE SPECIMEN OF TYPE I AT NORMAL TEMPERATURE AND AS PER GOST 9454-78 AT LOW TEMPERATURE.

- DIMENSIONS ARE IN mm.
- SCALE :- 2:1
- FIRST ANGLE PROJECTION
- HARDNESS AFTER PRELIMINARY HEAT-TREATMENT HB 255 MAX.
- UN-SPECIFIED RADII 2.0 mm. 1.6 mm (2)
- DRAFT ANGLE AS PER GOST 3212-80
- TECHNICAL REQUIREMENTS TO CAST PARTS AS PER OST 3-4365-79.
- CHECKING UP OF IMPACT STRENGTH SHOULD BE ADDITIONALLY CARRIED OUT IN ACCORDANCE WITH PARA NO. 3.5 AND 3.6 GOST 977-75
- SURFACE FINISH Rz 80 MAX.
- SPECIAL TEST :- MAGNETIC FLAW DETECTION.
- CLEANING :- SAND BLASTING.
- CASTING BELONGS TO GROUP II, OST 3-4365-79 (SPECIAL PURPOSE CASTING)

CASTINGS AND TEST BARS ARE SUBJECTED TO FOLLOWING HEAT-TREATMENT

a) PRELIMINARY HEAT-TREATMENT (PRIOR TO MACHINING)

- NORMALIZING AT TEMPERATURE 1000° ± 20° C FOR 1-2 HOURS.
- TEMPERING AT TEMPERATURE 720° ± 20° C FOR 4 HOURS.

FINAL HEAT-TREATMENT (AFTER MACHINING) FOR TEST BARS ONLY AS PER FOLLOWING SEQUENCE OF OPERATION

- HARDENING AT TEMPERATURE 1000° ± 20° C SOAKING TIME IS ONE HOUR COOLING IN OIL... TEMPERING AT TEMP. 200° ± 20° C FOR 4 HOURS.
- HEATING FOR NORMALIZING AND HARDENING IS TO BE CARRIED OUT WITH PROTECTION OF CASTINGS FROM DECARBURIZATION AND OXIDATION.

- WEIGHT OF THE CASTING 0.050 Kgs.
- MATERIAL :- 23XC2MΦNY, TY AFM 116-78

GUIDELINES FOR PROCUREMENT AND INSPECTION OF INVESTMENT CASTING REF. CONTROLLERATE OF QUALITY ASSURANCE (METALS) ICHAPUR LETTER NO. MQA-1/QA/1.2 DE. 05 MAY '94.

INDI. MATL. AND RADIOGRAPHIC TEST ADDED IN SHEET NO. 2

SHEETS: 1/2

(5) H	DIM. 12±0.5 cancelled. &	Yed
DA NO. 01/02	DIM. 6±0.25 Both sides included	Total
(6) J	R3 Added	Yed
DA NO. 02/04		13/9/04

AMENDMENTS	DESCRIPTIONS/DETAILS	DATE
(DE)	DA NO. 007/95, dt. 9-2-95	
	NEW NEGATIVE PREPARED	
(D)	DA NO. 140/94, dt. 11-11-94	

<i>Prasanna</i> DRAWN	<i>Prasanna</i> CHECKED	9/95 APPROVED	<i>Uday</i> JWM/PROJ	<i>Prasanna</i> WM/PROJ	ORDNANCE FACTORY TIRUCHIRAPALLI-16	DRG NO: 64 C 5111 250 K 3 ALT.
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