

INDIGENOUS MATERIAL

19:10343 Gr. 4D OR BS: 3146 Pt I - 74 TYPE GLA-5 G1 B
 IS: 10343 Gr. 4D, CASTING TO BE HEAT-TREATED TO ACHIEVE 41.5-51.5 HRC
 SEPARATELY CAST TEST BARS SHALL MEET THE SPECIFIED MECH. PROPERTIES
 INCLUDING IZOD IMPACT VALUE 14J MIN.

OR

~~BS: 3146 Pt I: 1974, TYPE GLA-5 GRADE 'B'~~

RADIOGRAPHIC TEST

(a) RADIOGRAPHIC ACCEPTANCE STANDARD OF THE CASTING SHOULD BE AS PER ASTM-E-192, GRADE A

(b) 100% OF THE ADVANCE SAMPLE (NOT LESS THAN 5) WILL BE SUBJECTED TO RADIOGRAPHIC TEST.

(c) RADIOGRAPHIC TEST OF ADVANCE SAMPLE WILL BE CARRIED OUT BY CQA(MET) ICHAPUR.

OR

THE AREA QUALITY ASSURANCE OFFICER CONCERNED WOULD GET THE RADIOGRAPHIC TEST DONE IN HIS PRESENCE AND FORWARD THE PLATES TO TO CQA (MET) ICHAPUR FOR SENTENCE AND APPROVAL OF THE MOULD.

(d) BULK PRODUCTION WOULD COMMENCE ONLY AFTER MOULD AND MATERIAL HAS BEEN APPROVED BY CQA(MET) ICHAPUR.

(e) 5% OF THE CASTING SELECTED AT RANDOM FROM ^{THE} BULK WOULD BE SUBJECTED TO RADIOGRAPHIC TEST. THIS MAY BE DONE UNDER THE ARRANGEMENT OF THE AREA QUALITY ASSURANCE OFFICER AND SENTENCE MAY BE AWARDED BY HIM BASED ON THE STANDARD OF THE ADVANCE SAMPLES CLEARED BY CQA(MET) ICHAPUR.

REF: - CONTROLERATE OF QUALITY ASSU(W) JABALPUR LETTER NO. 50431/CQAIV/QA-11 DATED 15 MARCH 95.

CONTROLLERATE OF QUALITY ASSU(M) ICHAPUR, NO. MQA-3(LW)/JW DATED 03 MAY 1995.

CERTIFIED CORRECT COPY OF APPROVED DRAWINGS AT THIS DATE.....

17.11.2020

Design & Drawing Office
 Ordnance Factory,
 Tiruchirappalli-620016

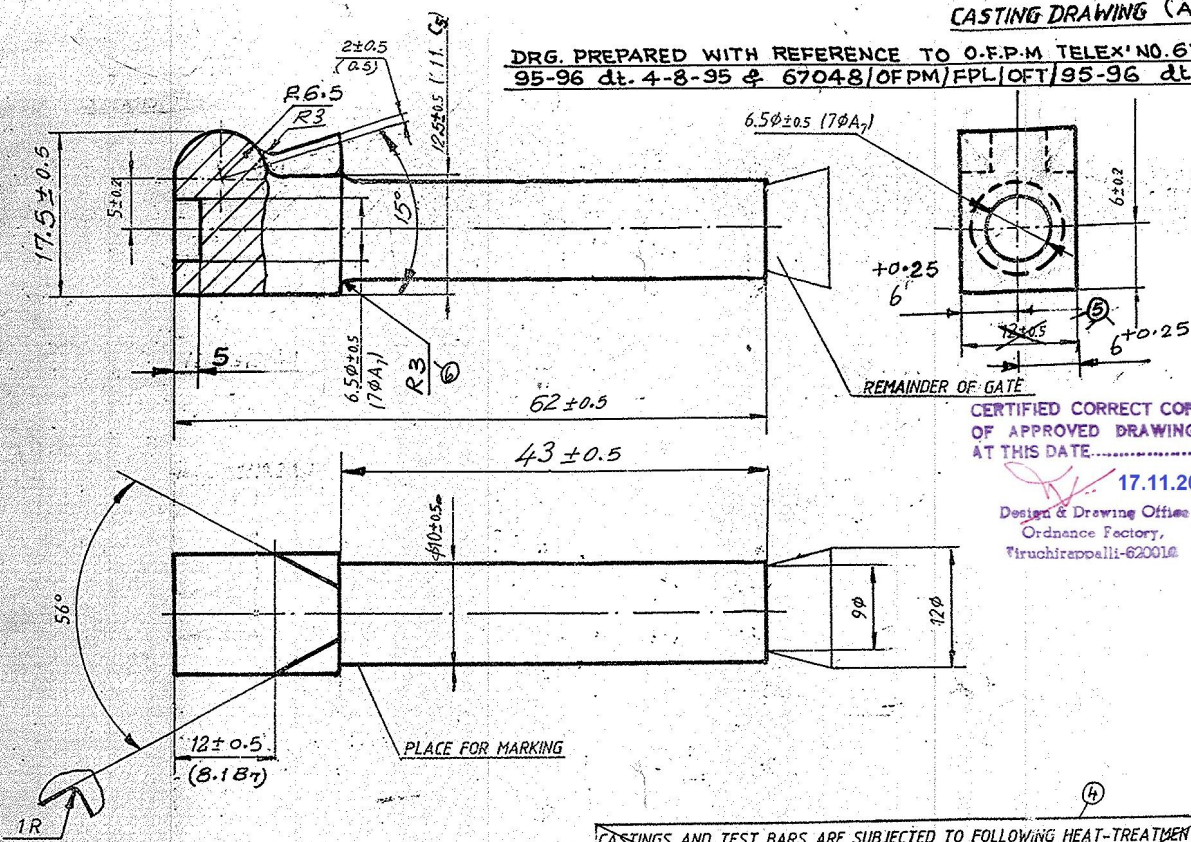
UN CONTROLLED COPY

⑦	DA-NO. 005/10 26-03-07/2510	S. Venkatesh
④	DA-NO. 006/98 DT. 24-4-98	S. Venkatesh
UPDATED	DA-NO. 012/97 DT. 22-02-97	S. Venkatesh
G③	DA-NO 70/95 26-7-9-95	Sadhvi
F②	DA-NO 010/95 06-11-4-95	Sadhvi
AMENDMENTS	DESCRIPTIONS	SIG. & DATE

SHEETS 2/2	9/95 APPROVED	WM/PROJ 2019	ORDNANCE FACTORY	COMPONENT NO. 2A42-05-111
DRAWN	CHECKED	JWM/PROJ 2019	TIRUCHIRAPALLI	HANDLE
				DRG. NO. 64C 5111 250 K3
				ALT.

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



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

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
P	0.025 - 0.30	S	0.10 - 0.15
NI	1.0 Max.		0.025 Max.
P	0.025 Max.		

MECHANICAL PROPERTIES OF THE MATERIAL	
23XC2MΦNY (min)	
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

UN CONTROLLED COPY

CERTIFIED CORRECT COPY
 OF APPROVED DRAWINGS
 AT THIS DATE.....
 17.11.2020
 Design & Drawing Office
 Ordnance Factory,
 Tiruchirapalli-620016.

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

- ACCEPTANCE OF CASTING IS CARRIED OUT AS PER GOST 977-75 (PARAGRAPH 2 AND 3) BUT WHILE MANUFACTURING CASTING 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.

⑤ H	Dim. 12±0.5 cancelled. &	Yes
DA.NO.	Dim. 6±0.25 Both sides included	Total
01/02		
⑥ J	R3 Added	Yes
DA.NO.	DA.NO. 02/04	13/04

- 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 \checkmark 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 SUBJECT TO FOLLOWING HEAT-TREATMENT

- 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 BAR 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 AAV 116-78

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

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

SHEETS: 1/2

DE	DA. NO. 007/35, dt. 2-2-95	
	NEW NEGATIVE PREPARED	
D	DA. NO. 140/24 dt. 11-11-94	
AMENDMENTS	DESCRIPTIONS/DETAILS	DATE

DRWN	CHECKED	APPROVED	JWM/PROJ	WJM/PROJ	ORDNANCE FACTORY TIRUCHIRAPALLI-16	DRG NO: 64 C 5111 250 K3 ALT.
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