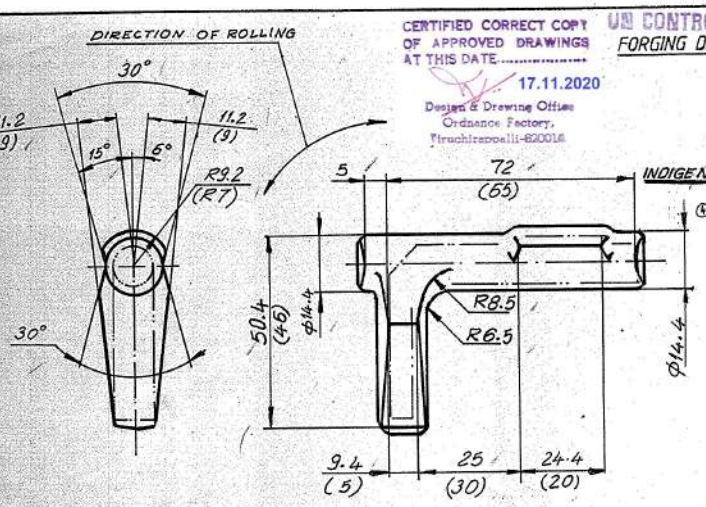
CERTIFIED CORRECT COPY OF APPROVED DRAWINGS AT THIS DATE 17.11.2020
Design & Drawing Office, Ordnance Factory, Tiruchirapalli-620016

UN CONTROLLED COPY

FORGING DRAWING

DIRECTION OF ROLLING



CHEMICAL COMPOSITION OF THE MATERIAL :- 30XH2MΦA-a			
C	0.27-0.34	Si	0.17-0.37
Mn	0.3-0.6	Cr	0.6-0.9
Ni	2.0-2.4	Mo	0.2 -0.3
V	0.10-1.8	P	0.025 MAX.
S	0.025 MAX.	Cu	0.3 MAX.

INDIGENOUS MATL.:-BS 970 Pt. ~~1-1983~~ 3-1991 (5) Gr.826 M31 CONDITION 'Z' OR IS: 5517-~~78~~ 93 DESIG.31 Ni10 Cr3 Mo6 WITH S&P 0.025 MAX. EACH (4) RS 63min UTS 1550 MPa MIN.

HEAT-TREATMENT PROCESS CHART

NOMENCLATURE AND IDT. NO:	STEEL GRADE	TYPE OF OPERATION	EQUIPMENT	TEMP. IN °C	TIME	COOLING MEDIUM	FIXTURE	HARDNESS INSPN. %
ARM C 1081	30XH2MΦA	NORMALIZATION HEATING	ELECTRIC CHAMBER FURNACE	850-870	4 HOURS	AIR	ON TRAY	5% OF LOT BUT NOT LESS THAN 3 PIECES
		HIGH TEMPERING HEATING	ELECTRIC CHAMBER FURNACE OR ELECTRIC SHAFT FURNACE	660-680	5 HOURS	WITH FURNACE UP TO 500°C AIR	ON TRAY	

1. DRESS THE PLACE FOR HARDNESS TESTING
2 TEST HARDNESS

1-2 PIECES FROM A BATCH ARE SUBJECTED TO GRAIN FLOW TEST BY THE METALLURGIST'S LABORATARY

1. MATERIAL :- 30XH2MΦA-a OST 3-98-80
2. HEAT-TREATMENT :- NORMALIZING WITH HIGH-TEMPERING--HARDNESS- HB 255 MAX.
3. DE-SCALING :- PICKLING OR SHOT BLASTING
4. DISPLACEMENT IN PARTING LINE SHOULD NOT BE MORE THAN 0.4 mm
5. FLASH REMAINDER ALONG DIE-PARTING LINE SHOULD NOT EXCEED 0.6 mm
6. DIMENSIONS ARE IN mm.
7. SURFACE TOLERANCE SHOULD NOT EXCEED 0.6 mm.
8. SCALE :- N T S
9. UN-SPECIFIED DRAFT ANGLE SHOULD NOT EXCEED 7°
10. UN-SPECIFIED RADII 1.5 mm
11. ALLOWANCES ARE AS PER II CLASS GOST 7505-74 'M'
12. TOLERANCES ARE AS PER II CLASS GOST 7505-74 'C' ARE AS FOLLOWS
    VERTICAL } + 0.9
    HORIZONTAL } -0.5
    DIE FORGING BY HAMMER
13. NUMBER OF PARTS OBTAINED FROM ONE DIE FORGING 1 PIECE
14. DIMENSIONS BETWEEN BRACKETS ARE FOR MACHINING
15. STAMPING WITH CONVENTIONAL STAMP OF BLACK SMITH 1105 GOST 2930-62
16. WEIGHT OF THE FORGING : 0.180 Kgs.
17. FIRST ANGLE PROJECTION
18. RAW MATERIAL SIZE:- 22Φx105-2 LONG (HOT ROLLED)

19. SURFACE DEFECTS: HAIR-LINE CRACKS, NICKS AND SCALE PITS SHOULD NOT EXCEED 50% OF ACTUAL ONE SIDED MACHINING ALLOWANCE AS PER GOST 8479-70

(3) THE FINISHED COMPONENT SHOULD ATTAIN A HARDNESS RANGE OF 43-5 TO 51-5 HRC AFTER FINAL HEAT TREATMENT

VETTED FOR MATERIAL ONLY
AS PER LAST DC (I) No. L829 I W
3.9.96
CMRL (Chief Metallurgist's Office)
Sr. Scientific Officer
Sr. Quality Assurance Estt (Armrs)
Tiruchirapalli-620016.

SL. NO	AMENDMENTS	S/G & DATE
⑤	DA.No. 005/16 Dt.26.05.16	(PP)
④	DA.006/98 Dt.24-4-98	
UP-dated	DA NO: 22/97 dt.23-3-97	
C ⑤	DA NO. 66/96 Dt.22/7/96	22/7/96
B ②	DA.No.53/92, Dt.27-10-92 AS PER NEW ALBUM NEW DRG. PREPARED	31/10/97
①	STORE DRG. NO ADDED	25/5/93

FOR COMPONENT NO 2A42-01-081 - ARM (D) (1)

DRAWN	CHECKED	APPROVED	I/C PROJ	DGM /PROJ
Sachin 27-10-92	27/10/92			29/4/97

ORDNANCE FACTORY TIRUCHIRAPALLI-16

DRG. NO: 64 C 1081 200 (B) D3

ALB.NO. 363/17