

UN CONTROLLED COPY

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

17.11.2020

Design & Drawing Office
Ordnance Factory,
Tiruchirappalli-620016

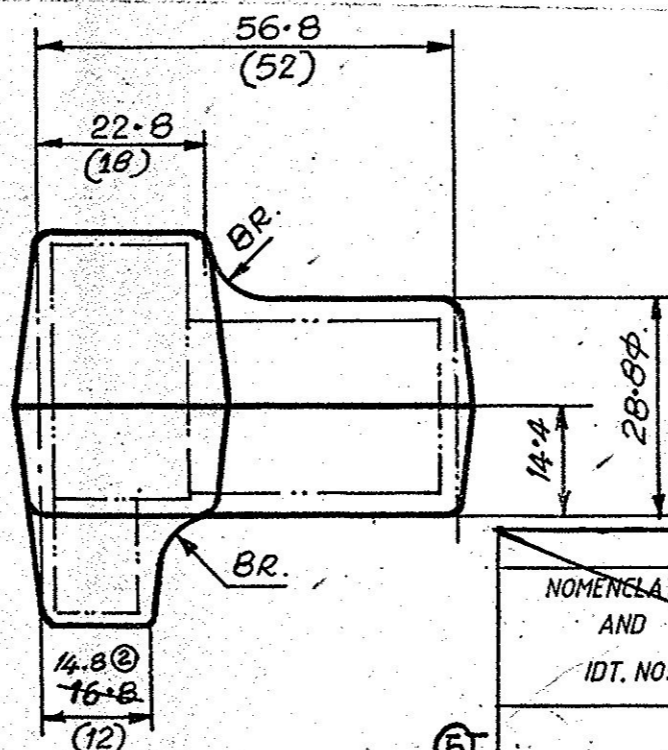
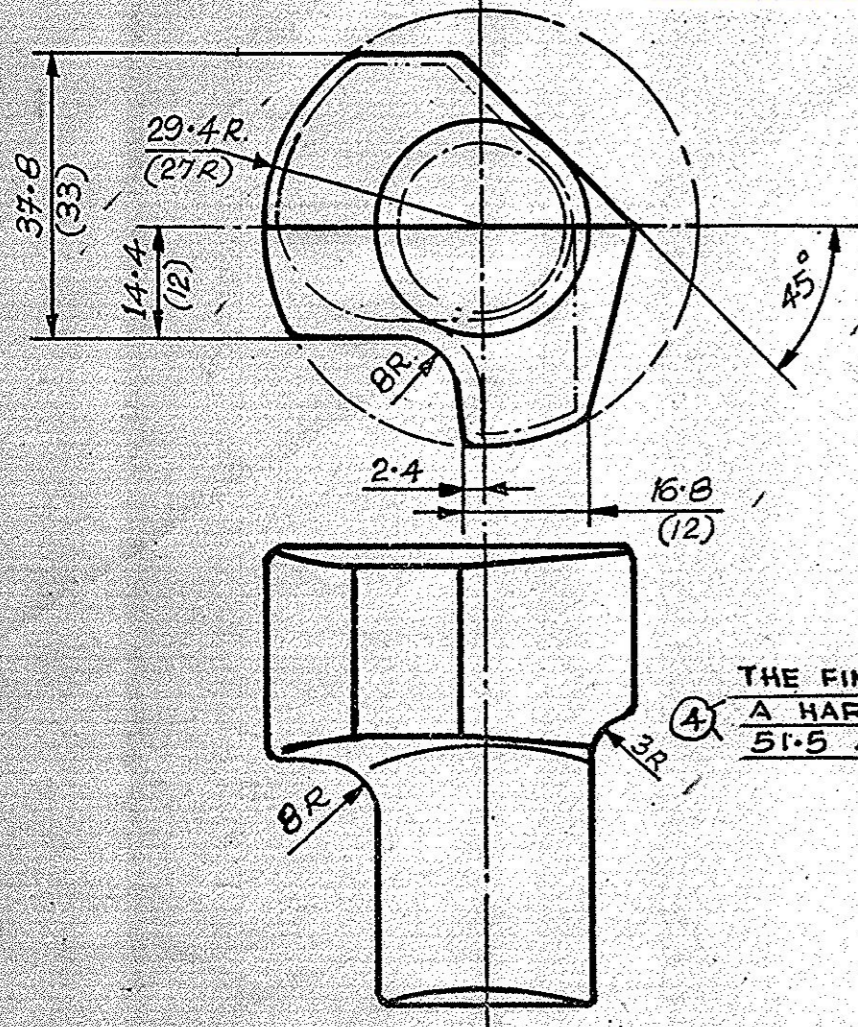
FORGING DRAWING

CHEMICAL COMPOSITION OF THE MATERIAL :- 30XPA

C	0.28 - 0.33	Si	0.17 - 0.37
Mn	0.50 - 0.80	Cr	1.0 - 1.3
Ni	0.25 - 0.50	S	0.025 MAX.
P	0.025 MAX.	Cu	0.20 MAX.

FOR COMPONENT NO
2A42-05-012 - BELL CRANK

INDIGENOUS MATERIAL :- STEEL BS: 970: PT.1.1983 Gr. 817 M40
INDIGENOUS MATERIAL: IS 4367-91, 25Cr13MO 6'M OR IS 5517-98
25 Cr 13 MO 6 M. TEST SAMPLES SHALL BE HEAT TREATED AND TESTED TO LRS 63 mm. COMPONENT SHALL BE HEAT-TREATED TO HARDNESS. SHOW IN THE DRAWING
AUTHORITY: CQA (METALS) ICHAPUR LY.NO. MSA-3/TS/B Dt. 21-6-97



THE FINISHED COMPONENT SHOULD ATTAIN A HARDNESS RANGE OF HRC3 43.5 TO 51.5 AFTER FINAL HEAT-TREATMENT

HEAT-TREATMENT PROCESS CHART

NOMENCLATURE AND IDT. NO:	STEEL GRADE	TYPE OF OPERATION	EQUIPMENT	TEMP. IN °C	TIME	COOLING MEDIUM	FIXTURE	HARDNESS INSPN. %
BELL CRANK C 5012	30XPA	NORMALIZING HEATING	ELECTRIC CHAMBER FURNACE OR PUSHER FURNACE	850-870	3 HRS. PUSHING DURATION 15 MIN.	AIR	ON TRAY	3% BUT NOT LESS THAN 3 PIECES.

- 1. DRESSING OF PLACES FOR CHECKING HARDNESS
- 2. CHECKING OF HARDNESS

- DIMENSIONS ARE IN mm.
- SCALE :- 1:1
- FIRST ANGLE PROJECTION
- HEAT-TREATMENT :- NORMALIZING; HARDNESS HB 217 MAXIMUM
- DESCALING :- SHOT BLASTING
- DIS PLACEMENT OF THE PARTING PLANE SHOULD NOT EXCEED 0.5 mm.
- REMAINDER OF FLASH ON DIE PARTING LINE SHOULD NOT EXCEED 0.7mm.
- SURFACE DEFECTS SHOULD NOT EXCEED 0.5 mm IN DEPTH.
- UN-SPECIFIED DRAFT ANGLE 7°
- UN-SPECIFIED RADII 1.5mm.
- ALLOWANCES ARE AS PER II CLASS GOST 7505-74 M1.
- TOLERANCES ARE AS PER II CLASS GOST 7505-74. C 3 AND AS FOLLOWS

- NUMBER OF PARTS OBTAINED FROM ONE DIE FORGING : ONE PIECE.
- DIMENSIONS GIVEN IN BRACKET ARE FOR MACHINING.
- WEIGHT OF THE PARTS 0.500 Kg
- RAW MATERIAL SIZE :- 350^{+0.4}/_{-0.2} x 60 LONG (HOT ROLLED) φ45^{+0.4}/_{-0.7} x 60 ± 2
- MATERIAL :- 30XPA OST-3-98-80
- STAMPING OF CONVENTIONAL STAMP OF BLACK SMITH LETTERING 110:5 GOST. 2930-62

TESTED FOR MATERIAL ONLY AS PER LAST DC.(I) No. LETTER M

MQA-3/TS/B dt. 21.6.97

Signature and stamp of the Quality Control Officer.

VERTICAL +11/-0.5

HORIZONTAL +12/-0.6

DIE FORGING BY HAMMER

DRAWING PROVISIONAL

F 5	D.A NO. 044197 Dt. 30/6/97	C 2	DIM. 14.8 WAS 16.8. D.A NO. 61/92 Dt. 25-10-92
UPDATED.	D.A NO. 008/97 Dt. 4/2/97	1	STORE DRG. NO ADDED
E 4	D.A NO. 058/96 Dt. 27/6/96	B	DIMENSION 16.8 WAS 14.8
D. 3	D.A No. 25/95 Dt. 13-4-95	AMENDMENTS	DESCRIPTIONS/DETAILS

Sadhi 30-01-90

Checked 3/11/92

REDRAWN

CHECKED

APPROVED

I/C. PROJ:

DGM/PROJ

ORDNANCE FACTORY
TIRUCHIRAPALLI-16

DRG NO:
64 C 5012 200 F3