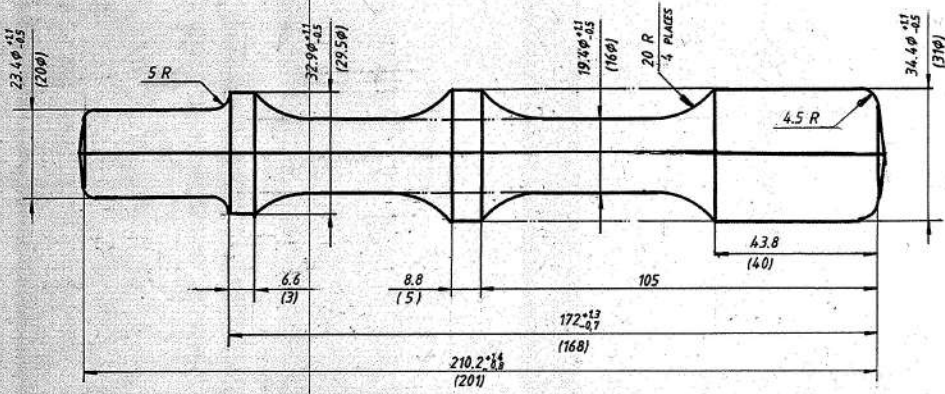


FORGING DRAWING



CHEMICAL COMPOSITION OF MATERIAL :- 30XPA

C	0.28 - 0.32	Si	0.12 - 0.37
Mn	0.50 - 0.80	S	1.0 - 1.30
Ni	0.25 - 0.50	S	0.025 MAXIMUM
P	0.025 MAXIMUM	Cu	0.20 MAXIMUM

1. DIMENSIONS ARE IN mm.
2. SCALE :- 1:1
3. FIRST ANGLE PROJECTION.
4. HEAT-TREATMENT :- NORMALIZING WITH HIGH TEMPERING HARDNESS HB 217 MAX.
5. SURFACE DEFECTS SHOULD NOT BE MORE THAN 0.5 IN DEPTH OF THE ALLOWANCE TO MACHINING.
6. BURR REMAINDER ON THE JOINT LINE OF THE (DIES) STAMPS SHOULD NOT EXCEED 0.7 mm.
7. SHIFT IN THE DIE PARTING LINE SHOULD NOT EXCEED 0.5 mm.
8. BENDING SHOULD NOT EXCEED 10 mm.
9. DRAFT ANGLE 7°.
10. NON-SPECIFIED RADII 15 mm.
11. DIMENSIONS WITH IN BRACKETS ARE FOR MACHINING
12. TOLERANCES FOR FREE DIMENSIONS AS PER GOST 7505-74; GROUP II
13. THE OTH REQUIRMENTS AS PER GROUP II; GOST 8479-70 STAMPING BY THE HAMMER
14. WEIGHT OF THE FORGING 0.800 Kgs.
15. RAW MATERIAL SIZE :- 35φ x 142 LONG
16. MATERIAL :- STEEL 30 x PA, OCT 3-98-80.

HEAT-TREATMENT PROCESS CHART

NOMENCLATURE AND IDT. NO.	STEEL GRADE	TYPE OF OPERATION	EQUIPMENT	TEMP. IN °C	TIME	COOLING MEDIUM	FIXTURE	HARDNESS INSPN. %
GAS PISTON C 3009	30XPA	NORMALIZING HEATING	ELECTRIC CHAMBER FURNACE OR PUSHER TYPE FURNACE	850-870	3 HOURS	AIR	ON TRAY ON TRAY	3 % ; BUT NOT LESS THAN 3 PIECES.

DRESSING OF PLACES FOR CHECKING HARDNESS
CHECKING OF HARDNESS

INDIGENOUS MATERIAL IS 4367-91, 25 CY 13 MO 6 M' OR IS 5517, 25 CY 13 MO 6 M' TEST SAMPLE SHALL BE HEAT TREATED AND TESTED TO LRS 83mm
AUTHORITY : CQA (METALS) ICHAPUR, LY. NO. MSA-3/TS/BJJ Dt. 6/11-8-87

OR
IS 5517-93, DESIGN 40 Ni 6 Cr 4 Mo 3 WITH S & P CONTENT 0.025% MAX EACH, LRS 30mm UTS 1200-1350 MPa
INDIGENOUS MATL. BS 970 PL 1-1983 G-817/NO CONDITION Y
OR IS 5517-78 OR 4330/15.5/4 Mo 3 WITH SEP 0.025 MAX EACH
LRS 500mm UTS 1100-1250 MPa
THE FINISHED COMPONENT SHOULD ATTAIN A HARDNESS RANGE OF 37.5 TO 42.5 HRC AFTER FINAL HEAT TREATMENT.

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

17.11.2020
Design & Drawing Office
Ordnance Factory,
Tiruchirappalli-620016

UN CONTROLLED COPY

VEITED FOR MATERIAL ONLY
AS PER LAST DC (1) No. LETTER No
MAA-2/TS/BJJ dt 6/11-8-97

CMRO (MAGADISH)
Sr. Scientific Officer
Sr. Quality Assurance Eng. (Arms)
Tiruchirappalli-620016
28/7/88

DA No. 22/97 DT-23-3-79	IND. MATL. ADDED
ALT. MATL. ADDED	IND. MATL. ADDED
STORE DRG. NO ADDED	IND. MATL. ADDED
SL. NO. AMENDMENTS	IND. MATL. ADDED

FOR COMPONENT NO
2A42-03-009 -GAS PISTON

6/88	6/88	ORDNANCE FACTORY	DRG NO:
L/C PROJ	WM/PROJ	TIRUCHIRAPALLI-16	64 C 3009 200 E 3

Alt. No. 347, SHT. 27