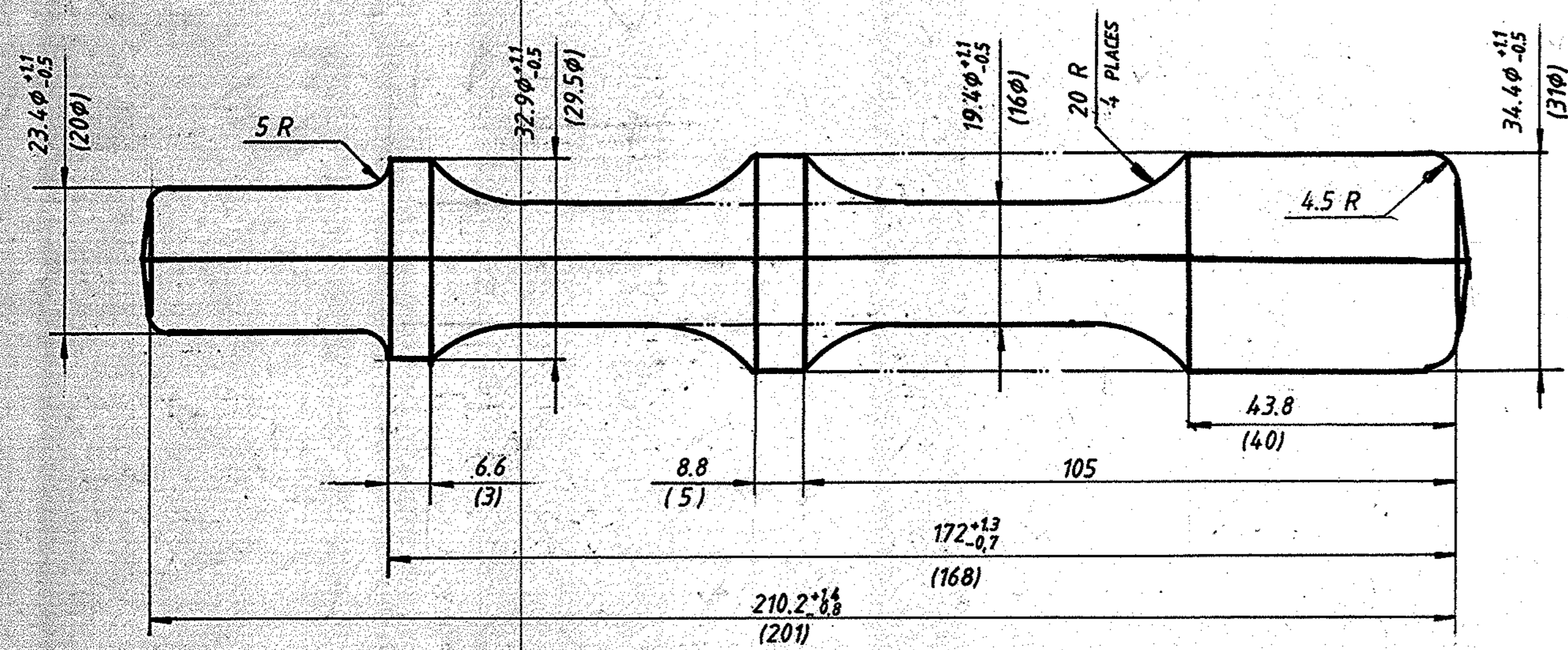


FORGING DRAWING



CHEMICAL COMPOSITION OF MATERIAL :- 30XPA

C	0.28 - 0.33	Si	0.17 - 0.37
Mn	0.50 - 0.80	Cr	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 1.0 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 OTHE 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 PUSHING INTERVAL 15 MINUTES	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 63mm  
AUTHORITY : CQA (METALS) ICHAPUR, LY. NO. MQA-3/TS/BI/2 Dt. 6/11-6-97

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 Pt. 1-1983 Gr. 817) IN CONDITION 'Y'  
OR IS 5517-78 DE 16.30 Ni 6 Cr 4 Mo 3 WITH S&P 0.025 MAX EACH  
LRS 30mm UTS 1200-1350 MPa

THE FINISHED COMPONENT SHOULD ATTAIN A HARDNESS RANGE OF 37.5 TO 42.5 HRC AFTER FINAL HEAT TREATMENT.

UP-dated	DA No. 22/97 Dt-23-3-97	22/23/97
ALT. MATL. ADDED		
STORE DRG. NO ADDED		
SL. NO	AMENDMENTS	SIG & DATE
	IND. MATL. ADDED AS PER LATEST STORE DRG (19325-W DL21.01.12)	
	DANO.	

Sachin 18/6/88 REDRAWN  
S. Thiruvannu CHECKED  
6/88 APPROVED  
V/C. PROJ  
23/6/88 WM/PROJ

ORDNANCE FACTORY  
TIRUCHIRAPALLI-16

FOR COMPONENT NO  
2A42-03-009 -GAS PISTON  
DRG NO:  
64 C 3009 200 E 3

VETTED FOR MATERIAL ONLY  
AS PER LAST DC (I) No. LETTER No.  
MQA-3/TS/BI/2 dt. 6/11-6-97  
CMRO JAGADISH  
Sr. Scientific Officer  
Sr. Quality Assurance Engt (Arms)  
Tiruchirappalli-620016