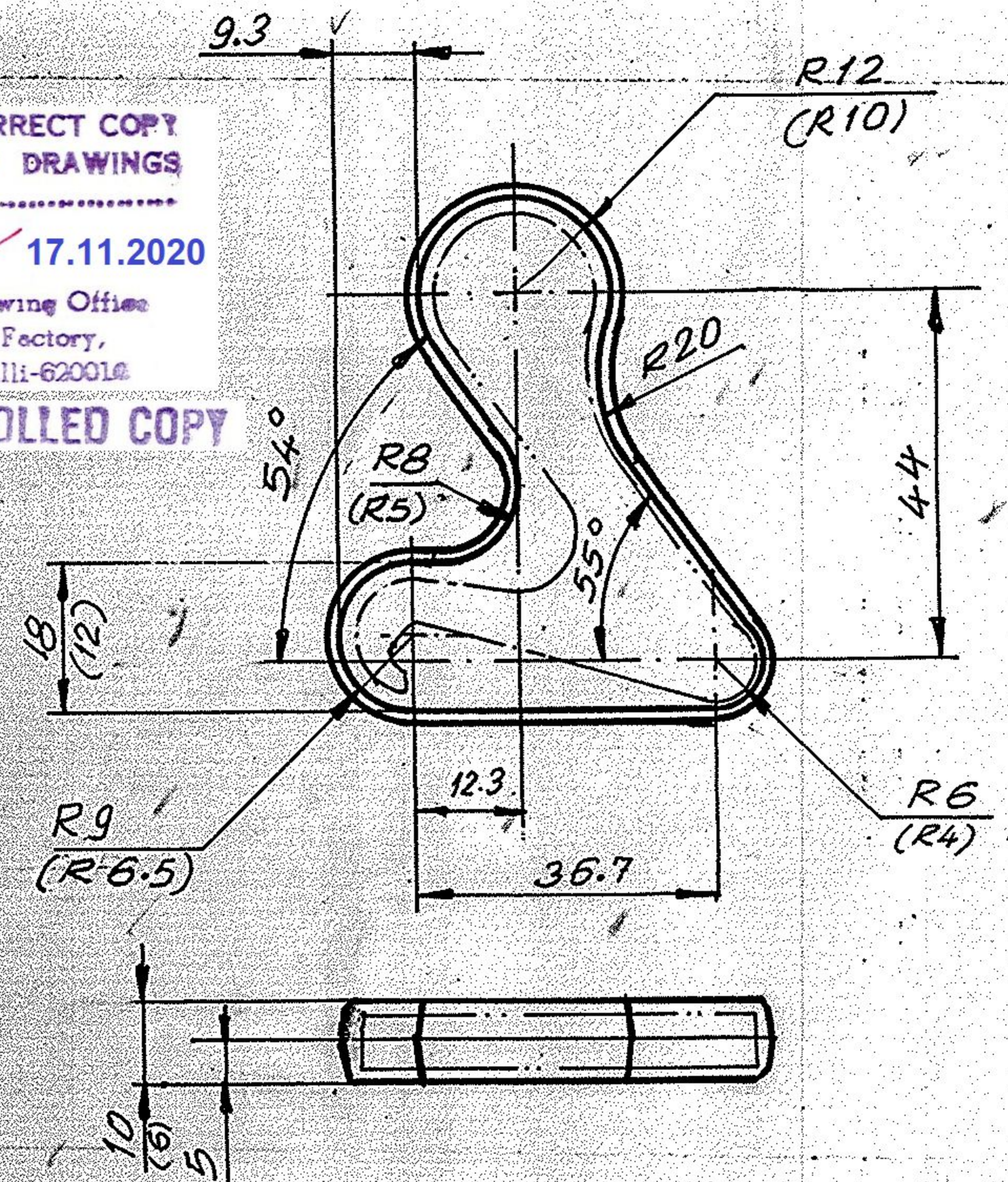


FORGING DRAWING

CHEMICAL COMPOSITION OF THE MATERIAL :- 30X12MΦA-a

C	0.27 - 0.34	Si	0.17 - 0.37
Mn	0.30 - 0.60	Cr	0.6 - 0.9
Ni	2.0 - 2.40	Mo	0.2 - 0.3
V	0.10 - 0.18	P	0.025 MAX.
S	0.025 MAX.	Cu	0.30 MAX.

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



④ 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	EQUIPMENTS	TEMP. IN °C	TIME	COOLING MEDIUM	FIXTURE	HARDNESS INSPN. %
TIE ROD	30X12MΦA	NORMALIZATION HEATING	ELECTRIC CHAMBER FURNACE	850-870	3 HOURS	AIR	ON TRAY	HARDNESS NOT LESS THAN 3%, BUT NOT MORE THAN 3 PIECES.
C 5056		HIGH TEMPERING HEATING	ELECTRIC CHAMBER FURNACE OR ELECTRIC SHAFT FURNACE	660-680	5 HOURS	WITH FURNACE UPTO 500°C AIR	ON TRAY	

- NOTES :-
- DIMENSIONS ARE IN mm.
  - FIRST ANGLE PROJECTION
  - SCALE :- 1:1
  - HEAT-TREATMENT :- NORMALIZING & HIGH-TEMPERING HARDNESS HB 255 MAX.
  - DE-SCALING :- PICKLING OR SHOT BLASTING
  - DISPLACEMENT IN PARTING LINE SHOULD NOT BE MORE THAN 0.5 mm.
  - REMAINDER FLASH ALONG DIE PARTING LINE SHOULD NOT BE EXCEED 0.5 mm.
  - ROD CURVATURE SHOULD NOT EXCEED 0.6 mm.
  - SURFACE DEFECTS :- SHOULD NOT EXCEED 0.6 mm IN DEPTH.
  - UN-SPECIFIED DRAFT ANGLE SHOULD NOT BE MORE THAN 7°.
  - UN-SPECIFIED RADII 2 mm.
  - ALLOWANCES ARE AS PER II CLASS GOST 7505-74 M2
  - TOLERANCES ARE AS PER II CLASS GOST 7505-74 C2 AND AS FOLLOWS
- VERTICAL  $\pm 0.05$  } +0.9  
 HORIZONTAL  $\pm 0.05$  } -0.5  
 DIE FORGING BY HAMMER
- NUMBER OF PARTS OBTAINED FROM ONE DIE FORGING: ONE PIECE.
  - DIMENSION BETWEEN BRACKETS ARE FOR MACHINING.
  - DIMENSIONS MARKED THUS \* ARE FOR REFERENCE.
  - WEIGHT OF THE FORGING 0.160 Kgs.

- RAW MATERIAL SIZE :-  $26\phi^{+0.4}_{-0.7} \times 45$  LONG (HOT ROLLED)
- MATERIAL :- 30X12MΦA-a OST 3-98-80
- STAMP CONVENTIONAL STAMP OF BLACK SMITH 1105 GOST 2930-62

④ 1-83 ~~3-91~~  
 INDIGENOUS MATERIAL: BS 970 Pt 4 ~~83~~ Gde 826 M31 IN "2" COND.(OR)  
 IS:5517-93 DESIGN 31 N10.CY3 M06 LRS 63 mm (TENSILE STRENGTH 1550 MPa)  
 A SEPARATE TEST SAMPLE IS TO BE HEAT TREATED AND TESTED IN "2"  
 ⑤ CONDITION. AUTHY. COAM. Ly. No. MQA-3/TS/B Dt. 2-5-97.

VETTED FOR MATERIAL ONLY AS PER LAST DC (1) No. 18225.W  
 DT. 26-2-96  
 M. S. JAGADISH  
 Sr. Scientific Officer  
 Sr. Quality Assurance Engr (Arms)  
 Tiruchirappalli-620016.

F3 ⑥ DA No.005/16, Dt.04.05.16 PP

⑤	DA No. 006/98 Dt. 24-4-98	24/4/98
UPDATED	DA No. 022/97 Dt. 23-3-97	23/3/97
D④	DA NO. 058/96 Dt. 28-6-96	27/6/96
C ③	DA NO. 029/95 Dt. 15-4-95	15/4/95
B ②	DA NO. 75/92 Dt. 3-11-92	11/11/92
①	STORE DRG. NO ADDED	11/11/92
SL NO	AMENDMENTS	SIG & DATE

FOR COMPONENT NO 2A42-05-056 - CONNECTING LINK, RIGID ①

REDRAWN: Sachi 3-11-92  
 CHECKED: [Signature]  
 APPROVED: [Signature]  
 I/C PROJ: [Signature]  
 DGM/PROJ: [Signature]  
 ORDNANCE FACTORY TIRUCHIRAPALLI-16  
 DRG NO: 64 C 5056 200 E3 F3  
 Ref. Alb. 364 Sheet no. 43