



FORGED BLOCK

DP/SPEC/358

REV.0

1. ENQUIRY ITEM

ITEM : FORGED BLOCK
MATERIAL : AISI8630 / AISI4130
DRAWING NO. : 3SK0560
QUANTITY :
ESTIMATED WEIGHT :
SPECIFICATION NO. :

2. CHEMICAL COMPOSITION (wt%)

	<u>specification</u>	<u>Proposal</u>
carbon		
silicon		
Manganese		
Phosphorous		
Sulphur		
Nickel		
Chromium		
Molybdenum		
Vanadium		
Copper		

3. MECHANICAL PROPERTIES

Tensile strength(N/mm^2) 655 Min
Yield Strength(N/mm^2) 517 Min
Elongation in (%) 18 Min
Reduction of Area in % 35 Min
Impact value in J at 50 Min
23°C

		PREP BY <i>ml</i>	APPD BY <i>sl</i>	SHEET NO 1
		DATE 27-12-15	DATE 27-12-15	SHEETS 4
MARK	REVISION			



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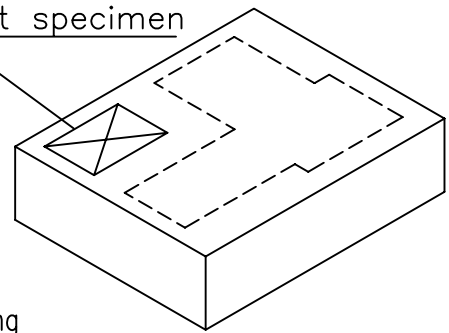
4. LOCATION OF TEST PIECE

Test specimens shall be taken from a 4"x4"x12" test coupon of same forging. The test shall be performed per heat, furnace load and size.

Tensile test shall be carried out in accordance with the requirements of ASTM A370.

Test specimens should be taken from same forging as shown.

Test specimen



5. MELTING & INGOT MAKING

Steel shall be melt by electric arc furnace and vacuum degassed before pouring.

6. FORGING PROCESS

The ingot shall be hot forged by forging press or hammer.

Forging ratio 3:1

Ingot redeiving → Rough forging → Finish forging.

7. HEAT TREATMENT

Suitably to achieve Mech. Properties as mentioned at sheet 1 of 4.

8. CHEMICAL AND MECHANICAL TEST

9. MACHINING



Rough machining before NDT

10. ULTRASONIC EXAMINATION

11. MAGNETIC PARTICLE EXAMINATION

12. FINAL MACHINING

Forged Block shall be machined as per BPCL drg. no. 3SK0560 maintaining all dimensions and tolerances as specified.

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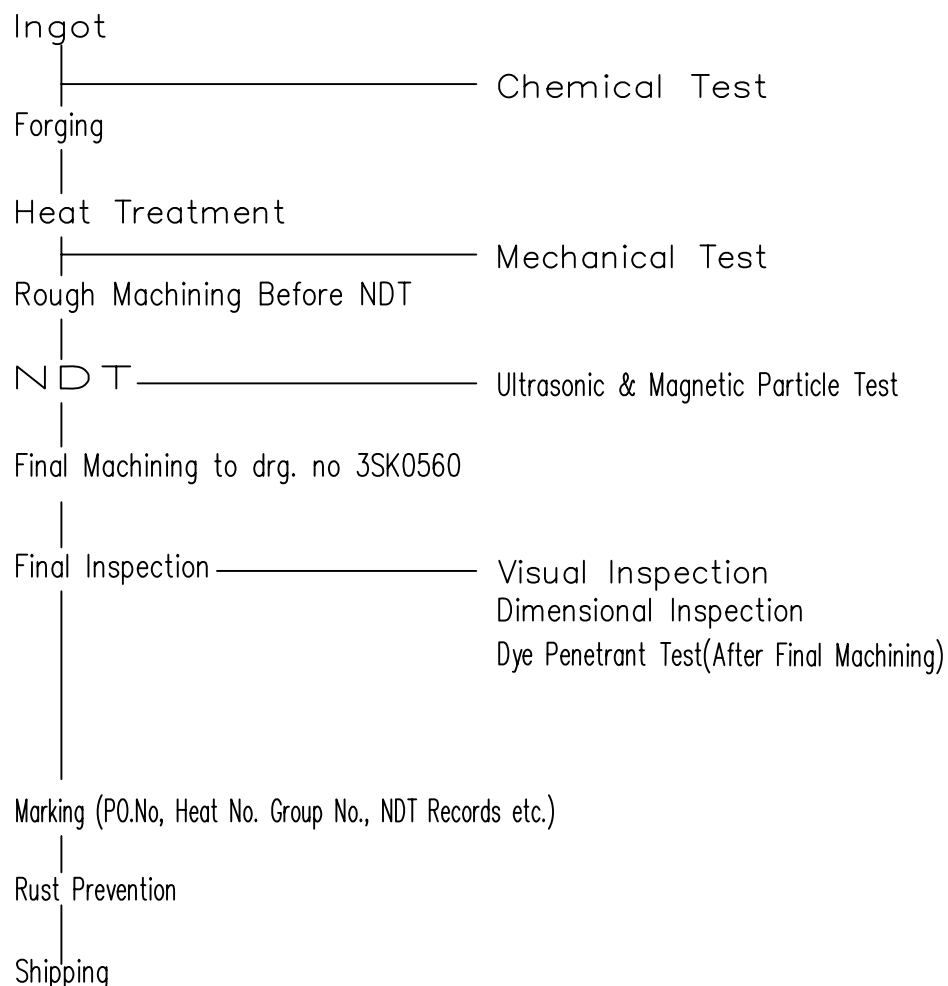
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13. FINAL INSPECTION

Visual, Dimensional And Dye Penetration.

14. PRODUCTION SEQUENCE



15. NON DESTRUCTIVE TEST

TEST ITEM

SPEC. NO.

Ultrasonic Test	6080003/S REV. 4
Magnetic Particle Test	DP/SPEC 4DSD0341 REV.0
Dye Penetrant Test	DP/SPEC 4DSD0340 REV. 0
Sulphur Print Test	—
Radiographic Test	—

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16. RUST PREVENTION AND MARKING

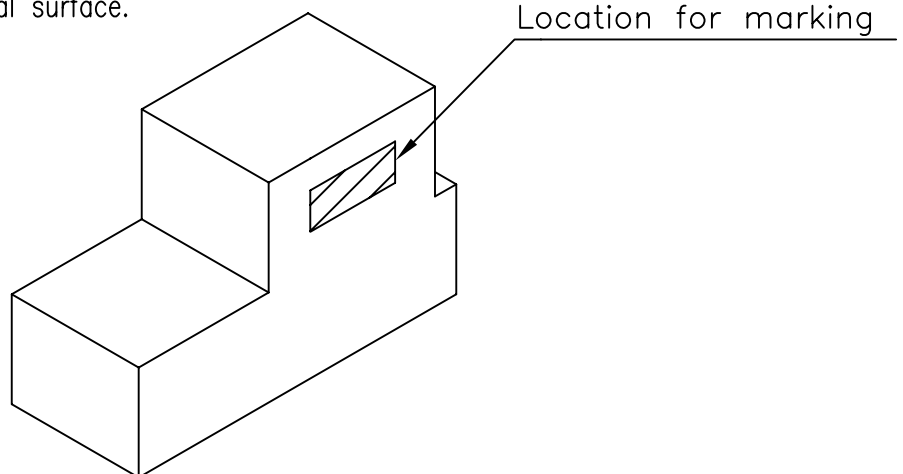
- (I) Outer surface shall be coated by light oil.
Inner surface shall not be coated by any rust prevention.

(II) Marking items

The following items shall be clearly marked on
each P/M Forged Block by stamping.

- (a) Manufacturer's symbol mark
- (b) Heat no. & group no.
- (c) P.O. No.
- (d) All NDT Test (UT, MP & DP) records.
- (e) Stamp of BPC representative

Marking shall be made on the following location
of external surface.



17. RECORDS

Following inspection records (3 copies) shall be submitted
alongwith supply-

- (1) Chemical composition
- (2) Mechanical test
- (3) Heat treatment Chart
- (4) Ultrasonic Test results.
- (5) Dye Penetrant & Magnetic Particle Test results.
- (6) Final Dimensional inspection results.

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