



CHEMICAL COMPOSITION (%)			MECHANICAL PROPERTIES		
ELEMENT	STEEL 38XC GOST 4543-71	STEEL 817M40 (EN-24) BS: 970-83	DESCRIPTION	STEEL 38XC GOST 4543-71	STEEL 817M40 (EN-24) BS: 970-83
C	0.34 - 0.42	0.36 - 0.44	LIMITING RULING SECTION	-----	100 mm
Si	1.00 - 1.40	-----	HEAT TREATMENT CONDITION	-----	U
Mn	0.30 - 0.60	0.45 - 0.70	TENSILE STRENGTH	95 Kgf/mm <sup>2</sup> MIN.	925 - 1075 MPa
Cr	1.30 - 1.60	1.00 - 1.40	YIELD STRENGTH	75 Kgf/mm <sup>2</sup> MIN.	755 MPa MIN.
Ni	0.30 MAX	1.30 - 1.70	RELATIVE ELONGATION	12 % MIN.	12 % MIN.
Mo	-----	0.20 - 0.35	RELATIVE COMPRESSION	-----	-----
Cu	0.30 MAX.	0.025 MAX	REDUCTION OF AREA	50 % MIN.	-----
S	0.035 MAX.	0.040 MAX.	HARDNESS BHN	269 - 321	269 - 321
P	0.035 MAX.	0.035 MAX.	IMPACT STRENGTH	7 Kgf.m/cm <sup>2</sup> MIN.	-----
			IZOD	-----	35 MIN.
			KCV (CHARPY)	-----	42 MIN.
			0.2% PROOF STRESS	-----	740 MPa MIN.

**NOTES :**

- HEAT TREAT. DIA OF IND 3.4-3.7 (BHN 269-321)
- FORGING RIDGES TO BE TRIMMED CLEAR & SMOOTH FINISH ALL OVER.
- FORGING TO BE SHOT BLASTED.
- SAMPLE TO BE APPROVED BEFORE BULK SUPPLY.
- STEEL SHOULD BE FREE FROM CENTRE SEGREGATION PIPING, FLANK ETC.
- FORGING TO BE COATED WITH RED OXIDE PRIMER TO JSS-3-47-13. BY BRUSHING OR SPRAYING.
- GRAIN SIZE ASTM 5 OR FINER.
- INCLUSION RATING - 3A B C D THIN SERIES OR FINER AS PER IS: 4163 - 1967. STEEL SHOULD NOT HAVE ANY LARGE INCLUSION OR A CONGLOMERATION OF INCLUSION.

**ALTERNATE MATERIAL :** STEEL 817M40 (EN24) TO BS: 970-83.

**AUTHORITY :** CQA(HV) LETTER No. 091/IFD/IND-V/MTPF/OE DATED 17-03-2005

**MICROSTRUCTURE :-**

UNIFORMLY DISTRIBUTED PEARLITE AND FINE FERRITE WITHOUT ANY FERRITE BANDING. NO BAINITE SHOULD BE PRESENT.

**VETTED**  
 07 MAR 2006  
 JWM/STD-CELL

INTERMEDIATE GEAR SPINDLE		STEEL 38XC	GOST 4543-71	MASS=5.64 Kg.		
संख्या NO OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
<b>सामान्य सहिष्णुता</b> GENERAL TOLERANCE						
<b>रेखिक परिमाण</b> LINEAR DIMENSION						
0-6	±0.1					
6-30	±0.2					
30-120	±0.3					
120-315	±0.5					
315-1000	±0.8					
1000-2000	±1.2					
<b>कोणिक परिमाण</b> ANGULAR DIMENSION						
1-10	±1'					
10-50	±30'					
50-100	±20'					
>100	±10'					
<b>मापक 'म्यू एम' में</b> VALUE IN 'μm'						
∇	±25					
∇∇	±25					
∇∇∇	±16.8					
∇∇∇∇	±0.025-1.6					
∇∇∇∇∇	±0.025					
<b>मापमान</b> SCALE 1:1						
<b>आरेखित</b> DRAWN 02-03 VML						
<b>जाँचा</b> CHECKED 7.03						
<b>अनुमोदित</b> APPROVED 7.03						
<b>द्वारा बदला</b> REPLACED BY						
<b>हेतु बदला</b> REPLACED FOR						
<b>आरेखण क्र.</b> DRAWING NO. 172-45-033/F						

इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन  
NOMINAL SIZE & FIT

विचलन  
DEVIATION

मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ  
MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

कार्यालय  
OFFICE  
D.O

FORGING DEVELOPED FROM CQA (HV) DRG.