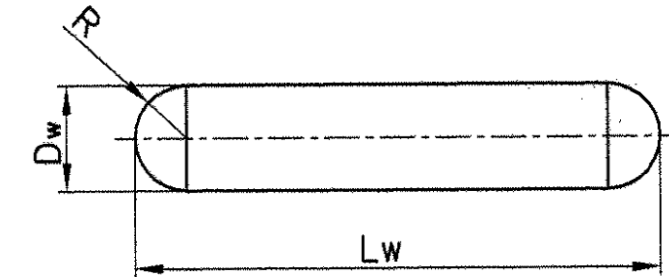


| SL. NO. | NEEDLE ROLLER DESIGNATION | Dw | Lw | DEVIATION LIMITS OF SHAPE, IN MICRONS | | | | SURFACE FINISH OF CYLINDRICAL SURFACE |
|---------|---------------------------|---------------------------------|------------------------------------|---------------------------------------|---------|-------|---------|---------------------------------------|
| | | | | INCONSISTENCY | LOBBING | TAPER | OVALITY | |
| 1 | 3X19.8 III | 3 ⁰ _{-0.01} | 19.8 ⁰ _{-0.20} | 1.5 | 1.5 | 1.5 | 1.5 | 0.16 Ra |
| 2 | 5X10 AΠIII | 5 ⁰ _{-0.01} | 10 ⁰ _{-0.20} | 1.5 | 1.5 | 1.5 | 1.5 | 0.16 Ra |



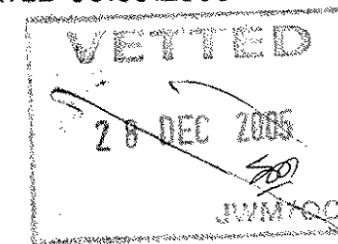
| ELEMENT | CHEMICAL COMPOSITION | |
|---------|----------------------|-------------|
| | STEEL 3 X 15 | SAE 52100 |
| % C | 0.95 - 1.05 | 0.95 - 1.10 |
| % Si | 0.17 - 0.37 | 0.20 - 0.35 |
| % Mn | 0.20 - 0.40 | 0.25 - 0.45 |
| % Cr | 1.30 - 1.65 | 1.30 - 1.60 |
| % S | 0.02 MAX | 0.025 MAX |
| % P | 0.027 MAX | 0.025 MAX |
| % Ni | 0.30 MAX | ---- |
| % Cu | 0.25 MAX. | ---- |
| % Ni+Cu | 0.50 MAX | ---- |

NOTES:-

- 'R' SHOULD BE NOT LESS THAN Dw/2 AND NOT MORE THAN Lw/2. IN THE SHAPE OF SPOTS OF SECONDARY HARDENING AND SECONDARY TEMPERING.
- HARDNESS VARIATION IN A BATCH SHOULD NOT MORE THAN 3 HRC UNITS.
- MICROSTRUCTURE OF ROLLERS AFTER HARDENING AND TEMPERING SHOULD CONSIST OF CRYPTOCRYSTALLINE MARTENSITE AND FINE CARBIDES.
- TOLERANCES ON DIAMETERS MENTIONED IN TABLE AND DEVIATIONS FROM SHAPE EXCEPT FOR TAPER AND OVALITY ARE GIVEN FOR THE MEAN CROSS SECTION OF ROLLER.
- ROLLERS SHOULD NOT HAVE ANY CRACKS, CAVITIES OF CORROSION MARKS. THE FOLLOWING FEATURES ARE NOT PERMITTED ON THE CYLINDRICAL SURFACE OF ROLLERS.
 - NICKS AND DENTS VISIBLE TO THE NAKED EYE.
 - BURNS IN THE FORM OF SPOTS OF SECONDARY HARDENING AND SECONDARY TEMPERING.
 - TRACES OF DECARBURISATION.
 - OTHER DEFECTS REVEALED BY COLD ETCHING OR BY A FLAW DETECTOR.
- ROLLERS SHOULD BE DEMAGNETISED.
- SADDLE SHAPE IN ROLLERS IS NOT ALLOWED.
- PILOT SHAMPLE SHOULD BE APPROVED BEFORE BULK SUPPLY.

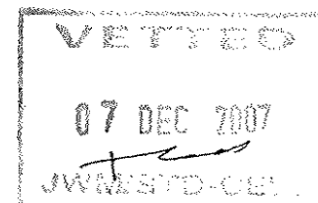
ALTERNATE MATERIAL:- SAE 52100

AUTHORITY:- CQA(HV) LETTER NO. 98704/04/ID-CO-ORD/ALT COM DATED 03.05.2005



HARDNESS: RC 61-65

| NEEDLE ROLLERS | | 3 X 15 | GOST 801-78 | | | | |
|---|-------------------------------------|--|-----------------|--------------------------------|--------------------|-------------------------------------|------------------------|
| संख्या NO.OFF | विवरण DESCRIPTION | पुर्जा क्र. PART NO. | पदार्थ MATERIAL | मानक STANDARD | परिमाणु DIMENSIONS | अभ्यक्ति REMARKS | |
| | सामान्य सहिष्णुता GENERAL TOLERANCE | | @ | Note added and dsg. no changed | | 28/12/05 scale | |
| | रेखिक परिमाण 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 | | | | | | |
| कोणिक परिमाण ANGULAR DIMENSION | संख्या NO.OFF | संबंधित पुर्जा का आरेखण क्र. DRG. NO. OF ASSOCIATED PART | सूचक INDEX | संशोधन ALTERATION | 2005 | दिनांक DATE | नाम NAME |
| 1-10 ±1' | | | | | | | |
| 10-50 ±30' | | | | | | | |
| 50-100 ±20' | | | | | | | |
| >100 ±10' | | | | | | | |
| मापक 'न्यू एम' में VALUE IN 'um' | | | | | | | |
| - | >25 | | | | | | |
| ▽ | 8-25 | | | | | | |
| ▽▽ | 1.6-8 | | | | | | |
| ▽▽▽ | 0.025-1.6 | | | | | | |
| ▽▽▽▽ | <0.025 | | | | | | |
| NEEDLE ROLLERS TRANSMISSION GEAR UNIT (188-45-001 CD-3) CODE-45 / T-72 & T-90 | | | | GOST 6870-81 | | मापमान SCALE | अरेखित DRAWN 28.12.05 |
| Mशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH | | | | कार्यालय OFFICE | | जाँचा CHECKED 29.12 | अनुमोदित APPROVED |
| D.O. | | | | D.O. | | द्वारा बदला REPLACED BY | हेतु बदला REPLACED FOR |
| मूलमाप व अन्वायोजन NOMINAL SIZE & FIT | | | | विचलन DEVIATION | | आरेखण क्र. DRAWING NO. MPF/IGB/6870 | |



This sketch alongwith all details is an abstract of GOST 6870-71

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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