

| QUALITY MONITORING INSTRUCTION FOR INSPECTION | | Issue No : 01 Rev No : |
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| C 5028 (CONNECTING LINK RIGID) | | Date of Issue 09/10/2023 |
| | | OFT/MI/30mm/C 5028 |
| Rev.No | Amendment | Date |
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MATERIAL : 23ХГС2МФПУ ТУ АДИ 116-78
INDIGENOUS MATERIAL : IS: 10343:1999 Gr.19Q WITH CARBON 0.45-0.50 % ✓
CONDITION OF SUPPLY : FULL FINISHED THROUGH CASTING ROUTE
END USE : 30mm CANNON.

INSPECTION CHECK TO BE CARRIED OUT

| SL NO | CHARACTERISTICS | SPECIFICATION / REQUIREMENT | Table 'A' SAMPLE SIZE |
|-------|--------------------------|--|--------------------------|
| 1. | Visual | The Casting shall be free from defects such as rust, scale, burrs and any other harmful defects. | 100% |
| 2. | Dimension | 100% Dimension check as per store drawing. | |
| 3. | Chemical Composition (%) | <p><u>23ХГС2МФПУ ТУ АДИ 116-78</u></p> <p>C = 0.20-0.24 Mo = 0.25-0.30 Si = 1.80-2.00 V = 0.10-0.15 Mn = 0.50-0.80 S = 0.025(Max) Cr = 0.60-0.90 P = 0.025(Max)</p> <p><u>IS: 10343,1999 GR.19Q</u></p> <p>C = 0.45-0.50 (as per drawing) Mn = 0.65-0.95 Ni = 0.40 (Max) Si = 0.20 - 0.80 Mo = 0.10 (Max) Cr = 0.80 - 1.10 Cu = 0.30 (Max) V = 0.15 (Min) S = 0.045(Max) P = 0.040(Max)</p> <p>Total Content of the Unspecified Elements = 0.80 (Max)</p> <p>(Permissible variations in value as per specification standard)</p> | One sample per Heat |


Note:

1. The Raw material / component to be tested by the firm on selection of the sample by the firm itself for chemical composition and mechanical properties in NABL accredited approved Lab as per Table 'A'.
2. The Firm has to check for the dimensions, visual defects, packing and marking as per Table 'A'. After completion of tests as per Note-1 as above, the Firm has to submit the following documents to OFT.
 - I. The Raw material certificate from the original manufacturer, Heat number, and quantity purchased and number of bars is to be mentioned in the inspection letter to OFT.
 - II. The Chemical and Mechanical test certificates from NABL accredited approved lab as per Table 'A'.
 - III. Dimensional reports including visual as per Table 'A'.
 - IV. Guarantee / Warrantee certificate of supplier against the supply.
3. All the above Documents mentioned at Note No.2 above are to be forwarded to ED/OFT along with supply.
4. OFT shall verify all the documents as above and accord clearance to the firm for dispatch of the material to OFT if all documents are in order.
5. OFT/Trichy shall verify all the parameters as per Table 'A' and after satisfactory results, the material will be accepted /cleared accordingly.
6. Material has to be replaced 100% by the firm in case of non conformity to specification as per Table-A, during inspection at OFT, Trichy.

VERIFICATION OF INSPECTION DOCUMENTS

| SL_NO | INSPECTION DOCUMENTS |
|-------|---|
| 1 | The Raw material original Manufacturer's certificate, Details of Heat Number, Quantity purchased and number of Bars etc., |
| 2 | The Chemical and Mechanical test certificates from NABL accredited approved Lab. |
| 3 | Dimension report including visual. |
| 4 | Packing slip details. |

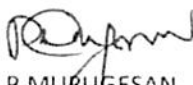

P.MURUGESAN
HoS/QCM
CHECKED

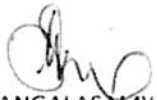

U.MANGALASHAMY
HoS/STD.CELL
PREPARED


M.GIRISH KUMAR REDDY
WM/QCM



SUKESH GEHLAUT
Jt.GM(QCM)
(APPROVED)

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| 4. | Mechanical Properties | <p>23ХГС2МФПУ ТУ АДИ 116-78 UTS = 130 Kgf/mm² (Min) Yield Strength = 110 Kgf/mm² (Min) (as per drawing) Elongation = 6% (Min) Impact Strength = 4 Kgf.m/cm² (Min)</p> <p>IS: 10343,1999 GR.190 Tensile Strength = 1310 MPa (Min). Yield Strength = 1172 MPa (Min) Elongation = 4% (Min)</p> | One sample Per Heat |
| 5. | Hardness | 41.5-51.5 HRC (as per drawing). | 100% |
| 6. | Radiographic Test | (i) Radiographic test as per ASTM-E-446-84, LEVEL-II ✓ (ii) Radiography using Gamma-ray shall not be permitted at all up to the thickness range of 25mm (Test report to be submitted). | 5% per Heat ✓ |
| 7. | Other Tests | (i) Decarburization Test : 3% per Heat of the casting shall be subjected to decarburization test as its maximum thickness region. Depth of decarburization shall not exceed 2% of the thickness (Test report to be submitted). | 3% per Heat ✓ |
| | | (ii) Magnetic Particle Inspection (MPI) Test to be carried out on a sampling basis, inspection level -III at AQL 0.65 as per IS:2500 Pt.1, 1992 | AS per Specification |
| 8. | Protective Finish | As per Drawing | 100% |
| 9. | Packing | The Packing of the Material shall be done in such a manner to avoid corrosion and damage in handling and transit. | ✓ |
| 10. | Marking | <p><u>Details to be marked on the tag</u> Sl.No of Tag, Batch No, No of Component in the Batch, Inspection mark of mould check, Inspection mark of Component.</p> | Each Consignment |


P.MURUGESAN
HoS / QCM,
CHECKED BY


U.MANGALASHAMY
HoS/STD.CELL
PREPARED BY


M.GIRISH KUMAR REDDY,
WM(QCM)


SUKESH GEHLAUT,
Jt.GM (QCM)
APPROVED