

QUALITY MONITORING INSTRUCTION FOR INSPECTION		Issue No : 01
		Rev No :
		Date of Issue 26/03/2021
44P 05103*2 (FORWARD MOUNTING BLOCK)		OFT/MI/AMR/44P 05103
Rev.No	Amendment	Date

MATERIAL SPECIFICATION : EN19, Hardness 260-300 HB.
 ALTERNATE MATERIAL : BS 970 PT.1 1983 GR.709 M40 (OR)
 IS: 5517 - 1993 DESIGNATION 42 Cr4 Mo2, LRS-63mm
 CONDITION OF SUPPLY : FULL FINISHED WITH FIRM'S MATERIAL.
 END USE : 14.5 /20mm AMR.

INSPECTION CHECK TO BE CARRIED OUT

Table 'A'

SL NO	CHARACTERISTICS	SPECIFICATION / REQUIREMENT	SAMPLE SIZE
1.	Visual	The Component shall be free from defects such as rust, scale, burrs and any other harmful defects.	100%
2.	Dimension	100% Dimension to check as per drawing.	
3.	Chemical Composition (%)	<p>EN-19</p> <p>C = 0.35-0.45 Mo = 0.20-0.40 Si = 0.10-0.35 V = 0.05 (Max) Mn = 0.50-0.80 S = 0.050 (Max) Cr = 0.90-1.50 P = 0.050 (Max) Ni = 0.40 (Max)</p> <p>BS:970 Pt.1, 1983 GR.709 M40</p> <p>C = 0.36-0.44 Mo = 0.25-0.35 Si = 0.10-0.35 S = 0.040 (Max) Mn = 0.70-1.00 P = 0.035 (Max) Cr = 0.90-1.20 Ni = 0.40(Max)</p> <p>IS: 5517-1993, Design 42Cr4 Mo2</p> <p>C = 0.38 – 0.45 Mn = 0.60 – 0.90 Si = 0.10 – 0.35 S = 0.035 (Max) Cr = 0.90 – 1.20 P = 0.035 (Max) Mo = 0.15 – 0.30 Ni = 0.25 (Max) Cu = 0.35 (Max) V = 0.05 (Max) B = 0.0003 (Max) Tin = 0.05 (Max) %Cu + 10times (%tin) = 0.60% (Max).</p> <p>(Permissible variations in value as per specification standard)</p>	One Sample Per Heat

4.	Mechanical Properties	EN-19 ('T' Condition)	One Sample Per Heat	
		Tensile Strength		55 Tonns/Sq.In (Min)
		Yield Stress		44 Tonns/Sq.In (Min)
		Elongation		18% (Min.)
		BS:970 Pt.1, 1983 GR.709 M40 ('T' Condition)		
		Tensile Strength	850-1000 N/mm ²	
		Yield Strength	680 N/mm ² (Min)	
		Elongation	13% (Min.)	
		Impact (Izod)	40 ft.lb (Min).	
		IS: 5517-1993, Design 42Cr4 Mo2 (LRS 63mm)		
		Tensile Strength	900-1050 MPa	
		0.2% Proof Stress	650 MPa (Min)	
		Elongation	11% (Min.)	
		Impact (Izod)	50 Joules (Min)	
5.	Hardness	34-41 RC (as per drawing).		
6.	Packing	The Packing of the Material shall be done in such a manner to avoid corrosion and damage in handling and transit.		
7.	Marking	Each Packing shall be legibly marked with manufacturer's identity , Qty, Heat No, OFT Supply order No etc.,		



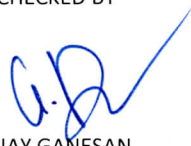
U.MANGALASAMY.
HOS/QCM
CHECKED BY



P.MURUGESAN
HOS / STD.CELL
CHECKED BY



V.RAVEENDAR
JWM/STD.CELL
PREPARED BY



VIJAY GANESAN
JT.GM(RP&QCIM)



C.D RAJARAM
AGM / (MM&EO)
APPROVED



G.ASHOK KUMAR
WM/QC

Note:

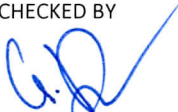
1. The Raw material/component/forging/casting to be tested by the firm on selection of the sample by the firm itself for chemical composition and mechanical properties in NABL accredited approved Lab as per Table 'A'.
2. The Firm has to check for the dimensions, visual defects, packing and marking as 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. Raw material sample minimum of 300mm length should be supplied for cross verification along with the first supply of stores.
 - IV. Dimensional reports including visual as per Table 'A'.
 - V. Guarantee / Warrantee certificate of supplier against the supply.
3. All the above Documents mentioned at Note No.2 above are to be forwarded to GM/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

SI_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.



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