

MONITORING INSTRUCTION FOR INSPECTION		Issue No. 01 Rev. No. 01
		Date of Issue 12.02.2020
STEEL TUBE OD 159MM ID 132.8MM		HAPP/QA/SC/ZI/087
Rev no	Amendment	Date
1	Specification BS 970-Pt-3:91 Was BS 970-Pt-1:83	12.02.2020

SPECIFICATION : BS 970 (PT 3)-91 GRADE 817M40 (En 24)

SUPPLY CONDITION : HARDENED AND TEMPERED 'X' CONDITION

END USE : CHAMBER AFT MOTOR - A/S ROCKET RGB 60 EMPTY

TABLE A: RAW MATERIAL INSPECTION CHECK TO BE CARRIED OUT AT FIRM'S PREMISES BY THE FIRM.

SL. NO.	CHARACTERITICS	SPECIFICATION / REQUIREMENT	SAMPLE SIZE
1	WORKMANSHIP (VISUAL)	THE TUBE SHALL BE FREE FROM DEFECTS SUCH AS RUST, SCALE, BURRS, AND ANY OTHER HARMFUL DEFECTS.	100 %
2	OUTER DIAMETER	159 +1.0/-0.6mm	AS PER NAI SPEC A-31B
3	INNER DIAMETER	132.8 +0.6/-1mm	
4	LENGTH	700 ± 2mm	
5	CHEMICAL COMPOSITION (%)	BS 970 (PT 3)-91 GRADE 817M40	1 SAMPLE PER LOT
6	MECHANICAL TESTING	BS 970 (PT 3)-91 GRADE 817M40 HARDENED AND TEMPERED 'X' CONDITION	2 SAMPLES PER LOT
7	ULTRASONIC TEST	ALL COMPONENTS SHALL BE TESTED AS PER SPECIFICATION IS: 8791/98 CLASS "A" FOR FERRITIC STEEL FORGING OR ASTM E213 FOR SEAMLESS TUBE COLD FINISHED CONDITION & ANNEALED CONDITION AND TEST CERTIFICATE TO BE SUBMITTED.	100 %
8	MARKING	EACH TUBE SHALL BE LEGIBLY STAMPED WITH MANUFACTURER'S IDENTITY & HEAT NUMBER.	EACH CONSIGNMENT
9	PACKING	PACKING OF THE MATERIAL SHALL BE DONE IN SUCH A MANNER TO AVOID CORROSION AND DAMAGE IN HANDLING AND TRANSIT.	

NOTE:

1. THE RAW MATERIAL TO BE TESTED BY THE FIRM BY SELECTING THE SAMPLE BY THE FIRM ITSELF FOR CHEMICAL AND MECHANICAL PROPERTIES FOR EACH HEAT IN NABL ACCREDITED TABLE A
2. THE FIRM HAS TO CHECK FOR THE DIMENSIONS, VISUAL DEFECTS AND MARKING AS PER TABLE A. AFTER COMPLETION OF DIMENSIONAL, CHEMICAL AND MECHANICAL PROPERTIES. THE FIRM HAS TO FORWARD THE FOLLOWING DOCUMENTS TO NAI/TRICHY.
 - I. THE RAW MATERIAL ORIGINAL MANUFACTURER'S CERTIFICATE, HEAT NUMBER, QUANTITY PURCHASED AND NUMBER OF TUBES ARE TO BE MENTIONED IN THE INSPECTION LETTER TO NAI/TRICHY.
 - II. THE CHEMICAL, MECHANICAL AND ULTRASONIC TEST CERTIFICATES FROM NABL ACCREDITED LAB AS PER TABLE A.
 - III. DIMENSION REPORT INCLUDING VISUAL AS PER TABLE A.
3. ALL THE ABOVE DOCUMENTS ARE TO BE FORWARDED TO NAI/TRICHY WITH A COPY TO GM/HAPP.
4. THE NAI/TRICHY SHALL VERIFY ALL THE DOCUMENTS AS ABOVE AND ACCORD CLEARANCE FOR DISPATCH OF THE MATERIAL TO HAPP IF ALL DOCUMENTS ARE IN ORDER.
5. MATERIAL HAS TO BE DESPATCHED TO HAPP ONLY AFTER DUE SUBMISSIONS OF ALL RELATED DOCUMENTS AS DETAILED IN TABLE A AND AFTER GETTING CLEARANCE FROM NAI/TRICHY RD CELL.

SUBMISSIONS OF ALL RELATED
DOCUMENTS AS DETAILED IN TABLE A AND AFTER GETTING CLEARANCE FROM NAI/TRICHY RD CELL

MPS No:- P/205 dt:- 20/2/19
SI

DATE: 20/2/20 SIGNATURE

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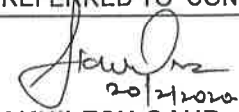
TABLE B : INSPECTION CHECK TO BE CARRIED OUT AT HAPP BY NAI/TRICHY AFTER RECEIPT.

SL. NO.	CHARACTERITICS	SPECIFICATION / REQUIREMENT	SAMPLE SIZE
1	WORKMANSHIP (VISUAL)	THE TUBE SHALL BE FREE FROM DEFECTS SUCH AS RUST, SCALE, BURRS, AND ANY OTHER HARMFUL DEFECTS.	100 %
2	OUTER DIAMETER	159 +1.0/-0.6mm	AS PER NAI SPEC A-31B
3	INNER DIAMETER	132.8 +0.6/-1mm	
4	LENGTH	700 ± 2mm	
5	CHEMICAL COMPOSITION (%)	BS 970 (PT 3)-91 GRADE 817M40	1 SAMPLE PER LOT
6	MECHANICAL TESTING	BS 970 (PT 3)-91 GRADE 817M40 HARDENED AND TEMPERED 'X' CONDITION	2 SAMPLES PER LOT
7	MARKING	EACH TUBE SHALL BE LEGIBLY STAMPED WITH MANUFACTURER'S IDENTITY & HEAT NUMBER.	EACH CONSIGNMENT
8	PACKING	PACKING OF THE MATERIAL SHALL BE DONE IN SUCH A MANNER TO AVOID CORROSION AND DAMAGE IN HANDLING AND TRANSIT.	

1. THE NAI/TRICHY SHALL VERIFY ALL THE PARAMETERS AS ABOVE AND AFTER SATISFACTORY RESULTS, NAI/TRICHY SHALL ISSUE I-NOTE FOR THE MATERIAL RECEIVED.
2. MATERIAL/COMPONENT WILL BE CLEARED/ACCEPTED BASED ON NAI I-NOTE/CLEARANCE CERTIFICATE ONLY.
3. MATERIAL HAS TO BE REPLACED 100% BY THE FIRM IN CASE OF NON CONFORMITY TO SPECIFICATION AS PER TABLE A, NOTE AND TABLE B DURING NAI INSPECTION AT HAPP, TRICHY.

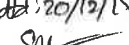
TABLE C. VERIFICATION OF INSPECTION DOCUMENTS.
FOLLOWING INSPECTION DOCUMENTS MUST BE ENCLOSED WITH EACH SUPPLY.

SL. NO.	INSPECTION DOCUMENTS
1.	THE RAW MATERIAL ORIGINAL MANUFACTURER'S CERTIFICATE, DETAILS OF HEAT NUMBER, QUANTITY PURCHASED AND NUMBER OF TUBE ETC.
2.	THE CHEMICAL, MECHANICAL TEST CERTIFICATES FROM NABL ACCREDITED LAB.
3.	DIMENSION REPORT INCLUDING VISUAL.
4.	PACKING SLIP DETAILS.
5.	GUARANTEE / WARRANTY CERTIFICATE OF SUPPLIER.
6.	NAI - I-NOTE.
7.	IN ADDTION TO THE ABOVE SOFT COPIES OF ALL THE CERTIFICATES MENTIONED IN TABLE - A SHALL BE SENT TO E-MAIL ID's. happga.ofb@ofb.gov.in , mmhapp.ofb@ofb.gov.in
NOTE	1. IN CASE OF ANY DIFFERENCES, QAP & DRAWING SHALL PREVAIL 2. EXPLICIT DEVIATION(S) IF ANY SUCH AS TYPOGRAPHICAL ERROR, VALUES, NUMERIC, OTHER PARAMETER, ETC IS/ARE FOUND IN MONITORING INSTRUCTION OF THE ABOVE STORES, THE RELEVANT STANDARD CONFORMING TO THE CONCERNED SPECIFICATION BS 970 (PT 1)-91 SHALL BE REFERRED TO CONFIRM THE PARAMETER


20/2/2020
AKHILESH GAUR
AWM / P
MEMBER / MI COMMITTEE


M. RAMESH PARANI
AWM / R&D
CHAIRMAN / MI COMMITTEE


20/02/2020
D. BHASKAR RAO
WM / PM
MEMBER/MI COMMITTEE BY

ISSUED BY
STANDARD CELL
MPS NO: 190205 dt: 20/2/19

DATE: 20/2/20 SIGNATURE: