

MONITORING INSTRUCTION FOR INSPECTION		Issue No. 01 Rev. No. 03
		Date of Issue 03/09/16
HEAD ROCKET BODY (PRE MACHINED) RGB-60		HAPP/QA/SC/ZI/060

DRAWING NO. : HAPP Drg.. NO. O ROC 060 1 230 1

RAW MATERIAL : STEEL AS PER ASTM 106 GR.' B'

END USE : HEAD ROCKET ASSEMBLY OF RGB 60 ROCKET.

A. INSPECTION CHECK TO BE CARRIED OUT AT FIRM'S PREMISES FOR RAW MATERIAL BY NAI.

SL. NO.	CHARACTERISTICS	SPECIFICATION / REQUIREMENT	SAMPLE SIZE
1	WORKMANSHIP (VISUAL)	THE MATERIAL SHALL BE CLEAN, AND FREE FROM SHARP EDGES, INTERNAL FLAWS LIKE PIN HOLES, POROSITY, CRACKS OR OTHER HARMFUL DEFECTS.	100 %
2	DIMENSIONS	RAW MATERIAL DIMENSION	100 %
3	CHEMICAL COMPOSITION (%)	C - 0.30 Max. Mn - 0.29 - 1.06 P - 0.035 Max. S - 0.035 Max. Si - 0.10 Min. Cr - 0.40 Max. Cu - 0.40 Max Mo - 0.15 Max. Ni - 0.40 Max. V - 0.08 Max. Note: 1. In case of carbon for each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% manganese above the specified maximum will be permitted up to a maximum of 1.35%. 2. Cr, Cu, Mo, Ni and V combined not to exceed 1%.	ONE SAMPLE PER HEAT
4	MECHANICAL TESTING	UTS - 415 MPa Min. YS - 240 Mpa Min. EL - 30 % Min.	ONE SAMPLE PER HEAT
5	ULTRASONIC TEST	COMPONENTS SHOULD BE TESTED FOR ULTRASONIC TESTING AS PER SPECIFICATION ASTM A388.	100 %

NOTE 1:

1. THE RAW MATERIAL SAMPLES / TEST SPECIMENS FOR EACH HEAT SHALL BE SELECTED FROM BULK AT FIRM'S PREMISES BY NAI REP. AND FORWARDED TO NEARBY NABL ACCREDITED OR GOVT. APPROVED LABORATORY FOR TESTING.
2. THE FIRM HAS TO CHECK FOR THE DIMENSIONS, VISUAL DEFECTS AND MARKING AS PER TABLE A. AFTER COMPLETION OF DIMENSIONAL, CHEMICAL, MECHANICAL AND ULTRASONIC PROPERTIES THE FIRM HAS TO SUBMIT/FORWARD THE FOLLOWING DOCUMENTS TO HAPP.
 - I. THE RAW MATERIAL ORIGINAL MANUFACTURER'S CERTIFICATE, DETAILS OF HEAT NUMBER, QUANTITY PURCHASED AND NUMBER OF BARS ARE TO BE SUBMITTED.
 - II. THE CHEMICAL, MECHANICAL AND ULTRASONIC TEST CERTIFICATES FROM NABL ACCREDITED OR GOVT. APPROVED LAB AS PER THE TABLE A.
 - III. DIMENSION REPORT INCLUDING VISUAL AS PER TABLE A.
 - IV. GUARANTEE/WARRANTEE CERTIFICATE OF ORIGINAL MANUFACTURER.

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3. 100% ULTRASONIC INSPECTION TEST AS PER **ASTM A388** TO BE CARRIED OUT TO ENSURE THE HEAT TREATED COMPONENTS ARE FREE FROM INTERNAL FLAWS AND REPORT SHOULD BE SUBMITTED FROM STEEL SUPPLIER /MANUFACTURER ALONG WITH MATERIAL.
4. PRE MACHINING OF COMPONENT SHOULD BE DONE ONLY AFTER GETTING RAW MATERIAL CLEARANCE FROM NAI.

NOTE 2:

1. THE FIRM SHOULD SUPPLY 2 NOS ADVANCE SAMPLE FOR INSPECTION OF VARIOUS PARAMETERS BEFORE BULK PRODUCTION. BULK SUPPLY SHOULD BE AFFECTED ONLY ON RECEIVING CLEARANCE FROM HAPP.
2. MATERIAL TO BE DESPATCHED ONLY AFTER GETTING CLEARANCE OF PILOT SAMPLES FROM HAPP..

B. INSPECTION CHECK TO BE CARRIED OUT AT HAPP AFTER THE RECEIPT.

SL. NO.	CHARACTERISTICS	SPECIFICATION / REQUIREMENT	SAMPLE SIZE
1	WORKMANSHIP (VISUAL)	THE MATERIAL SHALL BE CLEAN, AND FREE FROM SHARP EDGES, INTERNAL FLAWS LIKE PIN HOLES, POROSITY, CRACKS OR OTHER HARMFUL DEFECTS.	100 %
2	PACKING	SUITABLY PACKED TO AVOID TRANSIT DAMAGES AND SECURELY TIED WITH METAL / PLASTIC TAG.PACKING SLIP SHOULD SPECIFY HAPP SUPPLY ORDER NO. QUANTITY IN NOS. AND PRODUCER'S NAME OR CODE.THE MATERIAL SHOULD BE FREE FROM CORROSION. (APPLY RUST PREVENT OIL)	100 %

1. MATERIAL/COMPONENT WILL BE CLEARED/ACCEPTED BASED ON NAI I-NOTE/CLEARANCE CERTIFICATE ONLY.
2. MATERIAL HAS TO BE REPLACED 100% BY THE FIRM IN CASE OF ANY DAMAGES DURING INSPECTION AT HAPP, TRICHY.



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