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**155MM/45CAL ELECTRONICALLY UPGRADED GUN
SYSTEM
"DHANUSH"**

**QUALITY ASSURANCE PLAN/ACCEPTANCE TEST
PROCEDURE
OF
BRACKET LEFT MACHINED CASTING (GCF-50-
40864)**

**GOVERNMENT OF INDIA, MINISTRY OF DEFENCE
ORDNANCE FACTORY BOARD
GUN CARRIAGE FACTORY
JABALPUR (M.P) 482011**

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QAP NO-GCF/QC/100/QAP/155MM/45CAL/DHANUSH/BACKET LEFT MACHINED
CASTING (GCF-50-40864)/JUNE/2021/01


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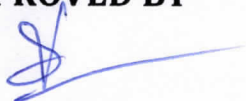
REVIEWED BY

**(NILESH SOLANKY)
WM/QC**

PREPARED BY


**(DANISH ANSARI)
JWM/QC**

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**(SANJAY SHRIVASTAVA)
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**QUALITY ASSURANCE PLAN/ACCEPTANCE TEST PROCEDURE OF
BRACKET LEFT MACHINED CASTING (GCF-50-40864)/DHANUSH**



1. MATERIAL DETAILS:

| S.N. | Material |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a) | Chemical composition and mechanical properties compliance with standard given in drawing. And its Chemical composition and mechanical properties NABL accredited/Gov. approved lab reports is to be attached herewith. |

2. DIMENSIONS:

| Dimensions | Instrument to be used for measurement of dimension | Observed dimensions | Remark |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------|--------|
| All dimensions must compliance with drawing and should be in the tolerance limits. Note: i. Casing tolerance according: SS722GTA12 or SS722 GTB 16, which ever mentioned in casting drawing. ii. Dimensions given regarding wall thickness are minimum. iii. Appropriate casting clearance to be applies. | General engineering instrument | | |

3. NON-DESTRUCTIVE TESTING :



| Parameter | Specification | Report |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1. Radiography | Gas hole and forging material: level 5 as per ASTM E-192 Shrinkage (All type): Level 3 as per ASTM E-192. | NABL accredited/Gov. approved lab reports |
| 2. Ultrasonic test | ASTM E446-78 , Class 2 , Group A,B & C Group D, E, F & G are not acceptable. | |
| Note: i. The above mentioned ND Test | | |

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|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
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|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|

| | | |
|------------------------------------------------------------------------------------------------|--|--|
| to be done according to individual drawing. ii. X-ray first part sample only (Conditional). | | |
|------------------------------------------------------------------------------------------------|--|--|

4. DESTRUCTIVE TEST:

| Parameter | Report |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Tensile test: One tensile test from separate cast test piece from each charge. Note: The above mentioned Tensile Test to be done according to individual drawing. | NABL accredited/Gov. approved lab reports |

5. LIST OF DOCUMENTS TO BE SUBMITTED BY FIRM ALONG WITH SUB ASSY/COMPONENT/ ITEM:

- a) Copies of invoice /Purchases order of all raw materials/Standard items pertaining to said item/components/sub-assy are to be attached herewith this QAP/ATP by the firm in hard copy.
- b) NABL accredited /Gov. approved Chemical composition report.
- c) All dimension check list reports.
- d) Cast test report.

6. IMPORTANT NOTES:

- a) Manufacturing Specification: A2003, if applicable.
- b) Inspection and delivery specification: A2017 commercial quality, if applicable.
- c) Sealing and surface decarburization, if applicable.
- d) Test Specification: 0804092, if applicable.
- e) Use rust preventative (W11-217-1) after integration, location specified in drawing; if applicable.
- f) If any query arise pertaining to dimensions, standards (viz. mechanical properties, chemical composition, Heat treatment etc) or any other aspects which are mentioned in QAP but the same is mismatched with actual drawings/standards, then the firm should intimate GCF with detail

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explanation .The commencement of bulk production only be initiate after the proper clarification received from GCF, Jabalpur.

- g) Sample test piece of adequate size need to submit for testing purpose.
- h) All necessary mark/punch/patter should be compliance with drawing, if applicable.

**7. LIST OF DOCUMENTS PROVIDED BY GCF TO FIRM ALONG WITH THIS QAP/ATP.
ISENUMERATED BELOW:**

- a) A copy of drawing no. GCF-50-40864

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RESTRICTED