Loading Test Procedure for

CS/BME2 120mm ER Satellite-Guided Mortar Bomb

1. ***Test Purpose***

Aimed to test the adaptability of CS/BME2 guided mortar bomb and AGRAB 120mm mortar through loading and extracting.

1. ***Test Time***

Pending.

1. ***Test Place***

User designated place, UAE.

1. ***Article Preparation***
2. OEM preparation includes 3 rds of CS/BME2 mortar bomb (without igniter), and 4 sets of propellant charges (sand filler).
3. User preparation includes 1 AGRAB mortar (serial number will be provided), and 1 set of projectile extractor.
4. ***Test Procedure***
5. Assembling: After arrival, all test rds will be examined and assembled by the OEM.
6. Packing cylinder adaptability with AGRAB: Unpack the packing cylinder (with product inside) from the outer package box, load the cylinder into the ammo cabin of AGRAB. This procedure will be operated by the OEM and confirmed by User.
7. Unpacking: Open the packing cylinder and take out the product with packing bag, remove the packing bag. This procedure will be operated by the OEM.
8. Examination before loading: Appearance inspection, measure the dimension for front and rear centring. This procedure will be operated by the OEM and confirmed by User.
9. Loading (Manual/Automatic): Timing for the gliding of rd at 800mil and 1300mil firing angle respectively for 5 times. Read the display on the mortar loading UI. This procedure will be operated by the OEM and confirmed by User.
10. Percussion: Strike the primer with firing pin. This procedure will be operated by User.
11. Ammo Extraction: Take out the test rd from the tube with extractor. This procedure will be operated by User.
12. Rds examination and evaluation: The OEM will examine the test rds for the coat of painting, tail fin, tail tube, propellant charge, cotton thread around the tail fin, and the position of strike trace on the primer. Table 4.
13. Igniter examination: The OEM will take off the igniter and examine for deformation or falling off of the copper ring. This procedure will only be carried out during the first and last loading.
14. Repeat Procedure (e) to (h) 3 times with 3 different rds.
15. No grasping or holding the cotton thread on the tail tube and tail fin during the entire test.
16. Summary and mutual signing of test results.
17. ***Safety Precautions***

All members of OEM and User will conform to safety precautions and the following method of disposition in case of unforeseen circumstances:

1. The test will be suspended when environmental condition cannot meet test requirement, and resume if condition permits.
2. The test will be suspended if the measuring device or the examination device is malfunctioned, and resume if the malfunction is resolved. Otherwise the test will be terminated.
3. The test will be terminated if there is major safety issues.

**Table 1 Test Article Preparation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **OEM** | | **User** | |
| 1 | CS/BME2 | 3 rds | AGRAB | 1 |
| 2 | Caliper | 1 | Extractor | 1 set |
| 3 | Video recorder | 1 | — | — |
| 4 | Propellant charge | 4 sets | — | — |
| 5 | Charge tubes | 4 sets | — | — |
| 6 | Extractor | 1 set | — | — |

**Table 2 Centring dimension measurement**

|  |  |  |
| --- | --- | --- |
| **Rd No** | **Front (mm)** | **Rear (mm)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| Remark | All test rds will be assemble by OEM | |

**Table 3 Test Sequence and methods**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Seq** | **Rd No** | **Test methods** | | | |
| **Manual loading and extracting** | **No of Time** | **Automatic loading and extracting** | **No of Time** |
| 1 | 1 | ● | 1 | ● | 9 |
| 2 | 2 | — | — | ● | 10 |
| 3 | 3 | — | — | ● | 1 |
| Remark | 1 All test rds will be assemble by OEM.  2 The front and rear centring dimension will be mutually confirmed.  3 Test sequence might be slightly adjusted due to dimension results. | | | | |

**Table 4 Test Results**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Seq** | **Rd No** | **Centring Dimension (mm)** | **Firing Angle (mil)** | **Sliding Time (s)** | **Primer Strike Traces** | **Igniter Condition** | **Condition of coating, tail fin, tail tube, propellant charge, cotton thread** | **Remarks** |
| 1 | 1 |  | 800mil |  |  |  |  |  |
|  | 800mil |  | — | — |  |
|  | 800mil |  |  |
|  | 800mil |  |  |
|  | 800mil |  |  |
|  | 1300mil |  |  |
|  | 1300mil |  |  |
|  | 1300mil |  |  |
|  | 1300mil |  |  |
|  | 1300mil |  |  |  |
| 2 | 2 |  | 1300mil |  |  |  |  |  |
|  | 1300mil |  | — |  |  |
|  | 1300mil |  |  |  |
|  | 1300mil |  |  |  |
|  | 1300mil |  |  |  |
|  | 800mil |  |  |  |
|  | 800mil |  |  |  |
|  | 800mil |  |  |  |
|  | 800mil |  |  |  |
|  | 800mil |  |  |  |
| 3 | 3 |  | 800mil |  | — |  |  |  |
|  | 1300mil |  |  |  |