

INCH-POUND
MIL-DTL-60585B (AR)
W/AMENDMENT 1
20 September 2006
SUPERSEDING
MIL-DTL-60585B (AR)
20 June 2006

DETAILED SPECIFICATION

CASE, PROJECTILE BURSTER – ASSEMBLY, M1E1

This specification is approved for use by the U.S. Army ARDEC, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements, examinations and tests for the metal parts of the Case, Projectile Burster – Assembly, M1E1.

2. APPLICABLE DOCUMENTS.

2.1 General. The documents listed in this section are needed to meet the requirements specified in sections 3 and 4 of this specification. This section does not include documents in other sections of this specification or recommended for additional information or as examples. While every effort has been made to assure the completeness of this list, document users are cautioned that they must meet all requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Comments, suggestions, or questions on this document should be addressed to the Commander, U.S. Army ARDEC, ATTN: AMSRD-AAR-AIS-SS, Picatinny, NJ 07806-5000 or emailed to ardec-stdzn@pica.army.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

AMSC N/A

FSC:1320

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2.2 Government documents.

2.2.1 Specification, standards and handbooks. The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-1916 - DOD Preferred Method of Acceptance of Product

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil> or from the Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings and publications. The following other Government documents, drawings and publications below form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT, AND
ENGINEERING CENTER (ARDEC) DRAWINGS

10542950 - Case, Projectile, Burster, M1E1 Assembly
10542949 - Case, Burster
10535949 - Tube Reinforcing
9217031 - Projectile, 155MM: Smoke, WP, M110A2, Filling
Assembly

(Copies of these drawings may be requested online at Drawing-Request@pica.army.mil or from US Army ARDEC, ATTN: AMSRD-AAR-AIS-T, Picatinny, NJ 07806-5000.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents are those cited in the solicitation or contract.

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ASTM INTERNATIONAL

ASTM E 8 - Standard Test Method for Tension Testing of Metallic Materials

ASTM E 18 - Standard Test Method for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials

(Copies of ASTM standards are available online from <http://www.astm.org/> and from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

2.4 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2) a sample shall be subject to first article inspection in accordance with 4.2.

3.2 Materials, components and assemblies.

3.2.1 Tube reinforcing. The materials, components and assemblies shall comply with all requirements specified on Drawing 10535949.

3.2.2 Sleeve (alternative two piece design). The materials, components and assemblies shall comply with all requirements specified on Drawing 10542949.

3.2.3 Casing (alternative two piece design). The materials, components and assemblies shall comply with all requirements specified on Drawing 10542949.

3.2.4 Plug and casing (alternative design). The materials, components and assemblies shall comply with all requirements specified on Drawing 10542949 and paragraph 4.3.3.1.

3.2.5 Burster case. The materials, components and assemblies shall comply with all requirements specified on Drawing 10542949.

3.2.6 Case, projectile, burster assembly (prior to coating). The materials, components and assemblies shall comply with all requirements specified on Drawing 10542950.

3.2.7 Case, projectile, burster assembly. The materials, components and assemblies shall comply with all requirements specified on Drawing 10542950.

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3.2.8 Ammunition lot numbering. Ammunition lot numbering shall be assigned in accordance with drawing 10542950.

3.3 Brazed joint (alternative designs). The braze metal shall be visible for the full 360 degrees around the joint at the juncture of casing and rear of sleeve and also the juncture of the casing and base plug, outside, if applicable.

3.3.1 Joint sections (alternative designs). When sectionalized, the braze metal joint shall be free of voids, cracks, entrapped slag, cleaning or other fluid for an aggregate of 85 percent of the exposed joint section.

3.4 Protective coating. The components and assemblies shall comply with all requirements specified on Drawing 10542950.

3.4.1 Cleaning prior to protective coating. Prior to application of the protective coating all surfaces of the burster case shall be thoroughly cleaned to remove all traces of grit, oil, wax, grease, rust or other foreign matter.

3.4.2 Cleaning prior to testing. The burster casing, prior to hydrostatic and air testing, shall be free from rust and other foreign matter in order no to clog passages and possibly result in false non-leakers.

3.5 Metal defects. The burster case and burster case assembly shall be free from cracks, splits, cold shuts, inclusions, porosity, laps, seams or other similar defects.

3.6 Burr. The burster case and burster case assembly shall contain no burr which might interfere with assembly or function of the item or which might be injurious to personnel handling the item.

3.7 Workmanship. All parts and assemblies shall be lubricated, loaded and assembled in a thorough, skillful manner. Components shall be free of burrs, sharp edges, cracks, dirt, grease, corrosion, and other foreign matter. Cleaning methods shall not be injurious to any parts, nor shall the cleaning agents contaminate the parts. All required marking and stamping shall be neat and sharply defined.

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4. VERIFICATION

Table I Requirement/verification cross-reference

SECTION 3 REQUIREMENTS		DESCRIPTION	VERIFICATION METHOD					VERIFICATION CLASS		SECTION 4 VERIFICATION
			N/A	1	2	3	4	A	B	
3.1	First article				X	X	X		4.2 – 4.2.1	
3.2	Components and assemblies				X	X	X	X	4.3.2.1 – 4.3.2.7	
3.2.1	Tube reinforcing				X	X	X	X	4.3.2.1	
3.2.2	Sleeve (alternative two piece design)				X	X	X	X	4.3.2.2	
3.2.3	Casing (alternative two piece design)				X	X	X	X	4.3.2.3	
3.2.4	Plug and casing				X	X	X	X	4.3.2.4 – 4.3.3.1	
3.2.5	Burster case				X	X	X	X	4.3.2.5	
3.2.6	Case, projectile, burster assembly (prior to coating)				X	X	X	X	4.3.2.6	
3.2.7	Case, projectile, burster assembly				X	X	X	X	4.3.2.7	
3.2.8	Ammunition lot numbering				X		X	X	4.3.2.6	
3.3	Brazed joint				X		X	X	4.3.3.3	
3.3.1	Joint sections (alternative design)				X		X	X	4.3.3.3	
3.4	Protective coating				X		X	X	4.3.2.7	
3.4.1	Cleaning prior to protective coating				X		X	X	4.3.2.6	
3.4.2	Cleaning prior to testing				X		X	X	4.3.2.6	
3.5	Metal defects				X		X	X	4.3.2.1 - 4.3.2.6	
3.6	Burr				X		X	X	4.3.2.1 – 4.3.2.6	
3.7	Workmanship				X		X	X	4.3.2.1 - 4.3.2.6	

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4.1 Classification of verification.

- a. First article inspection (see 4.3).
- b. Conformance inspection (see 4.3).

4.2 First article verification. When specified, a sample of the cartridge and its components shall be subjected to First Article Verification in accordance with Table II.

4.2.1 First article quantity. First article verification shall be performed on the quantity of item indicated.

<u>Part description</u>	<u>Drawing</u>	<u>Quantity</u>
Tube, reinforcing	10535949	10
Sleeve	10542949	10*
Casing	10542949	10*
Plug	10542949	10*
Case, Projectile, Burster Assembly (prior to coating)	10542950	10
Case, Projectile, Burster Assembly	10542950	10

* These items shall be submitted if alternative design is used.

4.2.2 Rejection. If any item fails to comply with requirements, the first article sample shall be rejected.

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TABLE II - First article inspection

PART	NUMBER OF SAMPLES	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Tube, reinforcing</u> Dwg. 10535949	10	3.2.1	4.3.2.1
<u>Sleeve</u> Dwg. 10542949 Note 1	10	3.2.2	4.3.2.2
<u>Casing</u> Dwg. 10542949 Note 1	10	3.2.3	4.3.2.3
<u>Plug</u> Dwg. 10542949 Note 1	10	3.2.4	4.3.2.4
<u>Case, Projectile, Burster Assembly</u> (prior to coating) Dwg. 10542950	10	3.2.6	4.3.2.6
<u>Case, Projectile, Burster Assembly</u> Dwg. 10542950	10	3.2.7	4.3.2.7

Note 1. These items shall be submitted if alternate design is used.

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4.3 Conformance inspection.

4.3.1 Lot formation. Lot formation shall be in accordance with lot formation requirement of MIL-STD-1916 paragraph “Formation and identification of lots or batches”. In addition, each lot of projectile burster cases shall contain:

- a. Tubing lots containing not more than one heat of steel.
- b. Bar stock lots containing not more than one heat of steel.

4.3.2 Conformance inspection by classification of characteristics. See paragraphs 4.3.2.1 through 4.3.2.7.

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PARAGRAPH 4.3.2.1	TITLE Tube, reinforcing	SHEET 1 OF 1		DRAWING NUMBER 10535949
				NEXT HIGHER ASSEMBLY 10542950
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Inside diameter	Level IV	3.2.1	AIE
102	Thickness of wall	Level IV	3.2.1	AIE
* 103	Metal defective	Level IV	3.2.1/3.5	Visual
<u>Minor</u>				
201	Minimum flat of wall front and rear	Level II	3.2.1	AIE
202	Length total	Level II	3.2.1	AIE
203	Width of slot	Level II	3.2.1	AIE
204	Radii or chamfers missing or incorrect	Level II	3.2.1	Visual
205	Surface finish, improper	Level II	3.2.1	Visual
206	Burr	Level II	3.6	Visual
207	Foreign matter	Level II	3.7	Visual

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PARAGRAPH 4.3.2.2	TITLE Sleeve (Alternative Two Piece Design)	SHEET 1 OF 1		DRAWING NUMBER 10542949
				NEXT HIGHER ASSEMBLY 10542950
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Diameter of counterbore rear of sleeve	Level IV	3.2.2	AIE
102	Diameter at rear of sleeve (outside)	Level IV	3.2.2	AIE
103	Length total	Level IV	3.2.2	AIE
104	Diameter of through hole max	Level IV	3.2.2	AIE
<u>Minor</u>				
201	Length from rear of flange to bottom of counterbore rear of sleeve	Level II	3.2.2	AIE
202	Radii or chamfers missing or incorrect	Level II	3.2.2	Visual
203	Surface finish improper	Level II	3.2.2	Visual
204	Burr	Level II	3.6	Visual
205	Foreign matter	Level II	3.7	Visual
206	Evidence of poor workmanship	Level II	3.7	Visual
* 207	Metal defective	Level II	3.2.2/3.5	Visual

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PARAGRAPH 4.3.2.3	TITLE Casing (Alternative Two Piece Design)		SHEET 1 OF 1		DRAWING NUMBER 10542949
NEXT HIGHER ASSEMBLY 10542950					
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE	
<u>Critical</u>	None defined				
<u>Major</u>					
101	Diameter at front of tube (outside) for minimum indicated length	Level IV	3.2.3	AIE	
102	Outside diameter at rear of transition zone	Level IV	3.2.3	AIE	
103	Thickness of wall minimum for minimum Length	Level IV	3.2.3	AIE	
104	Thickness of wall rear of transition Zone	Level IV	3.2.3	AIE	
<u>Minor</u>					
201	Radii or chamfers missing or incorrect	Level II	3.2.3	Visual	
202	Surface finish improper	Level II	3.2.3	Visual	
203	Burr	Level II	3.6	Visual	
204	Foreign matter	Level II	3.7	Visual	
205	Evidence of poor workmanship	Level II	3.7	Visual	
* 206	Metal defective	Level II	3.2.3/3.5	Visual	

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PARAGRAPH 4.3.2.4	TITLE Plug and Casing (Alternative Design)	SHEET 1 OF 1		DRAWING NUMBER 10542949
				NEXT HIGHER ASSEMBLY 10542950
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Large Diameter	Level IV	3.2.4	AIE
102	Length of small diameter	Level IV	3.2.4	AIE
103	Radius on plug corner	Level IV	3.2.4	AIE
104	Small diameter	Level IV	3.2.4	AIE
105	Diameter of counterbore at rear of casing	Level IV	3.2.4	AIE
106	Depth of counterbore at rear casing			
* 107	Thickness of casing wall at rear counterbore	Level IV	3.2.4	AIE
108	Surface finish of radius on plug corner	Level IV	3.2.4	AIE
<u>Minor</u>				
201	Radii or chamfers missing or incorrect	Level II	3.2.4	Visual
202	Surface finish improper	Level II	3.2.4	Visual
203	Burr	Level II	3.6	Visual
204	Foreign matter	Level II	3.7	Visual
205	Plug thickness	Level II	3.2.3	AIE
206	Evidence of poor workmanship	Level II	3.7	Visual
* 207	Metal defective	Level II	3.2.4/3.5	Visual

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PARAGRAPH 4.3.2.5	TITLE Burster Case	SHEET 1 OF 2		DRAWING NUMBER 10542949
				NEXT HIGHER ASSEMBLY 10542950
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u> 1	Diameter of press fit surface for minimum indicated length	100%	3.2.5	AIE
<u>Major</u> 101	Diameter of casing at rear of transition zone	Level IV	3.2.5	AIE
102	Wall rear of transition zone	Level IV	3.2.5	AIE
103	Pitch diameter	Level IV	3.2.5	AIE
104	Minor diameter max.	Level IV	3.2.5	AIE
105	Runout of pitch diameter to press fit surface and rear of flange	Level IV	3.2.5	AIE
106	Perpendicularity of front face to press fit surface	Level IV	3.2.5	AIE
107	True position of flange to press fit surface	Level IV	3.2.5	AIE
* 108	True position of rear of casing for given length to press fit surface and rear flange	Level IV	3.2.5	AIE
* 109	Outside radius at bottom of buster case	Level IV	3.2.5	AIE
* 110	Inside radius at bottom of burster case	Level IV	3.2.5	AIE
* 111	Thickness through case	Level IV	3.2.5	AIE
112	Thickness of flange	Level IV	3.2.5	AIE
113	Length from rear of flange to bottom of case	Level IV	3.2.5	AIE

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PARAGRAPH 4.3.2.5 Cont.	TITLE Burster Case	SHEET 2 OF 2		DRAWING NUMBER 10542949
				NEXT HIGHER ASSEMBLY 10542950
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Major</u>				
* 114	Presence of reverse taper in press fit surface	Level IV	3.2.5	AIE
* 115	Profile of radius blend with press fit surface	Level IV	3.2.5	AIE
116	Surface finish of press fit surface, improper	Level IV	3.2.5	Visual/AIE
117	Metal defective	Level IV	3.2.5/3.5	Visual
<u>Minor</u>				
* 201	Radii or chamfers missing or incorrect	Level II	3.2.5	Visual
* 202	Surface finish improper with the exception of the press fit surface	Level II	3.2.5	Visual/AIE
203	Burr	Level II	3.6	Visual
204	Foreign matter	Level II	3.7	Visual
* 205	Diameter of flange	Level II	3.2.5	AIE
206	Evidence of poor workmanship	Level II	3.7	Visual

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PARAGRAPH 4.3.2.6	TITLE Case, projectile, burster assembly (prior to coating)	SHEET 1 OF 2		DRAWING NUMBER 10542950
				NEXT HIGHER ASSEMBLY 9217031
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>				
1	Air pressure test	100%	3.2.6	4.3.3.5
2	Hydrostatic test (if applicable)	100%	3.2.6	4.3.3.2
<u>Major</u>				
101	Flange not functionally concentric with press fit surface	Level IV	3.2.6	AIE
102	True position of rear of case for given length to press fit surface and rear of flange	Level IV	3.2.6	AIE
103	Perpendicularity of front face of flange with press fit surface	Level IV	3.2.6	AIE
104	Location of reinforcing sleeve	Level IV	3.2.6	AIE
105	Improper cleaning	Level IV	3.4.1	Visual
106	Burster case not clean prior to testing	100%	3.4.2	Visual
107	Joint Section Test	4.3.3.3	3.3.1	4.3.3.3
108	Tension Test	4.3.3.4	3.2.6	4.3.3.4

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PARAGRAPH 4.3.2.6 Con't	TITLE Case, projectile, burster assembly (prior to coating)	SHEET 2 OF 2		DRAWING NUMBER 10542950
				NEXT HIGHER ASSEMBLY 9217031
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Minor</u> 201 202 203 204 205 206 207 208	Surface finish improper (except as otherwise classified) Reinforcing tube not properly brazed to body Marking missing, incorrect or illegible Burr Foreign matter Evidence of poor workmanship Braze metal not visible for full 360 degrees at exterior juncture of casing and rear of sleeve (if applicable) Braze metal not visible for full 360 degrees at exterior juncture of casing and plug (if applicable)	Level II Level II Level II Level II Level II Level II Level II Level II	3.2.6 3.2.6 3.2.6 3.6 3.7 3.7 3.3 3.3	Visual Visual Visual Visual Visual Visual Visual Visual

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PARAGRAPH 4.3.2.7	TITLE Case, projectile, burster assembly	SHEET 1 OF 1		DRAWING NUMBER 10542950
				NEXT HIGHER ASSEMBLY 9217031
CLASSIFICATION	EXAMINATION OR TEST	CONFORMAN CE CRITERIA	REQUIREMEN T PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Pitch diameter of thread	Level IV	3.2.7	AIE
102	Minor diameter of thread, max.	Level IV	3.2.7	AIE
103	Diameter over reinforcing tube	Level IV	3.2.7	AIE
104	Length of effective thread, min.	Level IV	3.2.7	AIE
105	Length of thread cavity, max.	Level IV	3.2.7	AIE
106	Protective coating incomplete or damaged	Level IV	3.2.7	Visual
107	Cavity fails to accept full length of plug gage	100%	3.2.7	Visual/AIE
108	Corrosion preventive compound missing from press fit surface	Level IV	3.2.7	Visual
* 109	Air Pressure test stamp missing, see Note 1	100%	3.2.7	Visual
110	Hydrostatic test stamp missing (if applicable), see Note 1	100%	3.2.7	Visual
<u>Minor</u>	None defined			
<p>Note 1. Any part found without the required test stamp shall be tested to determine if the part fails critical test. If the part fails the critical test it shall be treated as a Critical Nonconformance. If the part passes the critical test, it shall be treated as a Major Nonconformance.</p>				

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4.3.3 Testing

4.3.3.1 Plug. Ten plugs from each lot of plugs, when manufactured from sheet or strip steel shall be subjected to a hardness test in accordance with ASTM E 18. The test may be made on either face of the plug to determine compliance with the applicable drawing. Failure of any plug to comply shall be cause for rejection of the lot.

4.3.3.2 Hydrostatic test (alternative designs). Each burster case, after cleaning but before gaging and coating, shall be hydrostatically tested using equipment capable of performing the test accurately and consistently. No portion of the burster case shall be restrained during application of the pressure. The pressure shall be applied until the minimum pressure is reached and then held for the minimum time specified on the applicable drawing 10542950. The equipment shall be calibrated prior to the start of each day's operation and at intervals of not over 4 hours during operation. It shall also be calibrated prior to re-starting the operation after a stoppage of 2 hours or more. Failure of any burster case to comply with the requirements of the drawing 10542950 shall be cause for rejection of the burster case. Burster cases which comply shall be stamped with the letter "H" as indicated on the applicable drawing.

4.3.3.3 Joint sections (alternative designs). Five burster cases from each lot after hydrostatic test and air test, but prior to application of protective coating, shall be sectionalized into 2 segments by cutting longitudinally along the assembly axis. Care shall be exercised to assure that no damage occurs to the brazed joint section. The braze metal of the joints of each segment shall be visually examined to determine compliance with 3.3. Failure of any specimen to comply shall be cause for rejection of the lot.

4.3.3.4 Tension test. Two burster casings, prior to insertion of the reinforcing tube, from each lot shall be subjected to tension testing to determine compliance with the yield strength and elongation requirements of the applicable drawing 10542949. One full section test specimen as prescribed by ASTM E 8 shall be taken from the tube portion of each of the 2 burster casings, and tested in accordance with ASTM E 8. Failure of any specimen to comply shall be cause for rejection of the lot.

4.3.3.5 Air test. Each burster case shall be subjected to an internal air pressure test under water to determine compliance with the requirements specified on the applicable drawing 10542950. Each burster case shall be mounted in an approved fixture in such a manner that the burster case is completely submerged. The inspector shall ascertain that the required pressure is reached and the water has been permitted to settle, after immersion of the case under test, prior to start of timing. Observation for leakage shall be made for the entire time the case is required to be pressurized. The equipment shall be calibrated prior to the start of each day's operation and at intervals of not over 4 hours during operation. It shall also be calibrated prior to re-starting the operation after a stoppage of 2 hours or more. A suitable corrosion inhibitor shall be added to the water. Failure to comply, as evidenced by the presence of bubbles on the surface of the burster case or rising to the surface of the water, shall be cause for rejection of the burster case. Burster cases that comply shall be stamped with the letter "A" as indicated on the applicable drawing.

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5. Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DOD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES.

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The components and assemblies covered by this specification are intended for use on 155MM, WP, M110 Projectile. The M1E1 Projectile burster case covered by this specification is military unique because it is used for 155MM howitzer ammunition only.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number and date of this specification.
- b. Packaging requirements (see 5)
- c. Requirements for submission of first article sample
- d. Requirements for submission of zinc phosphate coating procedure (see 6.3).
- e. Provisions for Government furnished material.

6.3 Zinc phosphate coating procedure. Details of the proposed procedure for zinc phosphate coating to be used by the contractor should be submitted in writing to the Government Technical Agency, and written approval should be received prior to initiation of production. The proposed procedure should be in accordance with TT-C-490, and should include materials, process and equipment to be used by the contractor, a detailed method of control including limits for time, temperature, concentration and all other information pertinent to the process. Approval of the process, materials or equipment implies no guarantee of acceptance of the results obtained in use.

6.4 Stress relieved. When manufacturing the one piece design or alternative two piece design (casing and sleeve), the burster casing should be stress relieved at a minimum temperature of 700 degrees F. for a minimum of 30 minutes at temperature, following the final metal forming operation and prior to assembly when using the two piece design.

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6.5 Cleaning prior to testing. The burster casing, prior to hydrostatic and air testing, should be free from rust and other foreign matter in order not to clog passages and possibly result in false non-leakers.

6.6 Critical characteristic controls. All production contracts should contain requirements for handling critical defects. As part of all proposals, suppliers should be asked to describe policies, procedures and controls for all operations associated with safety characteristics, how they are documented and maintained under the supplier's integrated management system.

6.6.1 Classification of characteristics. Conformance examinations and tests are specified in the following Classification of Characteristics paragraphs. When cited herein, attributes sampling inspection should be conducted in accordance with MIL-STD-1916, using the inspection levels cited in the Classification of Characteristic paragraphs. Definitions of Critical and Major should be as defined in MIL-STD-1916. Acceptance criteria should be in accordance with MIL-STD-1916. Alternative conformance inspections may be submitted and approved in accordance with MIL-STD-1916. Dimensions marked tool control should be gaged at the beginning of production and whenever tooling is replaced. Where destruction of components is necessary to inspect these dimensions, measurements of the tool may be substituted provided that the contractor has established correlation between the tool dimensions and the component dimensions prior to the start of production.

6.7 Definitions

6.7.1 Acceptance inspection equipment (AIE). Any measuring device that is traceable to the national or international standard used to assure conformance of material to the contract requirements.

6.8 Critical defects. Critical defects in 4.3.2.5 and 4.3.2.6 are so classified because the conditions are likely to cause failure to seal the WP load or to support and seal the burster, and allow WP leakage or cause premature projectile burst. In the case of inbore function, it is possible that the weapon muzzle brake can deflect burning WP and projectile body fragments toward adjacent weapon crews.

6.9 Amendment notation The margins of this specification are marked with asterisks to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

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6.10 Subject term (key word) listing.

Ammunition
Artillery

Custodian:
Army – AR

Preparing Activity:
Army – AR
(Project 1320-2006-007)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.