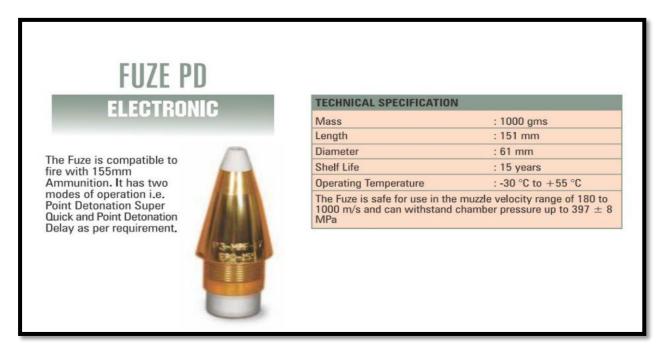
#### OFCH/155/01 ATP No: EXPORT of PERCUSSION FUZE M85P13 PD3A for 155 mm

#### ACCEPTANCE TEST PROCEDURE FOR PERCUSSION FUZE M85P13 PD3A for 155 mm



OIC / QCP & QA&P

OIC/QC(Mat)

**OIC/Unit-III** 

DO/QCP & QA&P

DO/QC(Mat)

**DO/Unit-III** 

GO/QCP & QA&P

**GO/Unit-III** 

#### ACCEPTANCE TEST PROCEDURE

#### FOR PERCUSSION FUZE M85P13 PD3A for 155 mm

- 1. The Fuzes shall be compatible with shell 155 mm for firing.
- 2. <u>Bill of Materials</u>: Firm shall submit bill of materials for each lot with acceptance documents of each sub assembly component
- 3. <u>Documents Verification</u>: Acceptance documents of end product to be provided along with shop test reports and inspection / Proof reports of the components as applicable. The following documents and details of inspection/tests conducted by firm to be submitted along with lot:
  - a) Acceptance and test reports for all sub-assemblies involved in fuze
  - b) 100% radiographic examination acceptance report of Fuzes along with X-ray film images in soft form.
  - c) Electronic Clearance certificate from supplier for explosive filling.
  - d) Certificate of Conformity for the different components / sub-assemblies used.

#### 4. Acceptance Inspection of Packing.

a) Each fuze will be individually packaged in a hermitically sealed container with an O-ring seal. 20 cylinders will be packed together in one plastic box. The package marking shall have all relevant ammunition details includes UN Hazardous division.

#### 5. Lot size and Proof samples.

- a) The firm shall supply the consignment with different lots.
  - 1. Pilot lot size of 2000 nos. + proof samples
  - 2. Subsequent lot size of 1600 nos. +proof samples
- b) The proof samples to be selected at random from the bulk by O F Chanda representative.
- c) Before drawl of samples, following documents /certificates will be obtained from manufacturer.
  - 1. Shelf life certificate
  - 2. Environmental test certificate (as per production spec.)
  - 3. QA certificate for components viz. battery, electronic portion, SAD etc. supplied by OEM

- 4. Radiographic examination (fused are fit for firing and use)
- 5. Lot details of components viz., battery, SAD, firing circuit etc. used in each fuze lot offered for inspection. Homogeneity of lot to be maintained.
- d) The first lot of the consignment shall be treated as pilot lot and subsequent lot as OT lot with lot size and proof samples as follows:

# 6. <u>Dynamic Proof</u>

 $\underline{Pilot\ lot\ /1^{st}\ Lot}$ 

Sr. No	Test	Sampling Plan	Sample	Sentence		AQL
			Size	Ac	Re	
1.	SAD	Single	5	0	1	2.5%
2.	PD DELAY	Double				6.5%
		First	20	2	5	
		Reproof	40	6	7	
3.	PDSQ	Double				6.5%
		First	20	2	5	
		Reproof	40	6	7	

#### Subsequent Lot

Sr. No	Test	Sampling	Sample	Sentence		AQL
		Plan	Size	Ac	Re	
1.	SAD	Single	5	0	1	2.5%
2.	PD DELAY	Double			6.5%	
		First	13	1	4	
		Reproof	26	4	5	
3.	PDSQ	Double				6.5%
		First	13	1	4	
		Reproof	26	4	5	

#### 7. Target& Range

Sl. No.	Test	Target	Range
1.	SAD	2 to 3 mm mild steel (MS) plate at 39 mm from muzzle	
2.	PD	-	Considering the velocity
	DELAY	mm thick wooden plate, size 2	••••

		m x 3m kept at@>1 sec time	distance will
		of flight from the gun	approximately 700 m from
			the gun
3.	PDSQ	Ground (Excluding marshy &	To suit proof officer
		water logged area)	

### 4. Observations

### SAD Test

- a) Functioning /non-functioning of fuze on mild steel plate
- b) Functioning of fuze after impact on ground
- c) Premature/abnormal observations

# PD DELAY TEST

- a) Premature
- b) Trajectory Burst
- c) Delay timing (milliseconds) behind the target at which the round functions
- d) Blind
- e) Functioning /nonfunctioning of fuze on the target
- f) Muzzle velocity
- g) Any other defects/abnormalities

# PDSQ TEST

- a) Premature
- b) Trajectory Burst
- c) Early burst (functioned after 0.5 sec but before impact)
- d) Blind
- e) Pressure
- f) Muzzle velocity
- g) Any other abnormality

#### 7. Explanation

- 1. Premature is a malfunction in which the fuze functions before 100 meter from muzzle end
- 2. Trajectory burst means in which round burst between premature zone/time but before 0.5 sec after firing.
- 3. Early burst means a burst after 0.5 sec and before impact

#### 8. Performance:

- 1. SAD: Fuzes should not Function on impact (hitting MS plate)
- PD Delay: Fuzes must function after impact on target with delay time of 50+/-20 milliseconds
- 3. PDSQ: Fuzes must impact on impact

# 9. Defect classification

Critical

- 1. Premature
- 2. Trajectory Burst
- 3. In case of SAD test, functioning of fuze on hitting the mild steel plate

Major

- 1. Early burst (functioned after 0.5 sec but before impact)
- 2. Blind
- 3. Delay time beyond specified limit.

## 10. Sentencing authority: Ordnance Factory Chanda