

SCHEDULE OF PROOF AND SENTENCING CONDITIONS FOR FUZE ISD FOR 30 MM HE
GRENADE-RUDRA (FILLED)

After entire lot is filled it will be bonded and proof samples will be drawn at random by the competent authority. Proof samples will be serially numbered in 3 mm type letter for identification. The lot size will be 1000 nos. plus qty. required for the proof for the first 5 consecutive lots of new manufacture and 2000 nos. plus qty required for subsequent lots. The weapon used should have barrel not beyond second quarter of life. Conduct of proof and sentencing is to be carried out as laid down in the Table 'A'.

For dynamic proof sampling plan adopted is -double sampling, normal inspection, inspection level S-3 code letter-E AQL-2.5

Sl No	Type of Proof	Sample size	Method of Proof	Observation	Type of Defects	Acceptance criteria
1.	Detonation proof.	05 nos.	Fuze without A-30-T detonator to be assembled By keeping the Shutter (filled) in fully armed position (Dummy explosive components are to be used in place of other explosive components) Body upper to be carefully screwed in. The above assembly is to be housed in a suitable adapter and dropped in SDTA/Masset Impact test M/C from a suitable height so that Shutter /Detonator is initiated by striker.	Fuze to be opened and septum to be checked for puncturing.	Septum not punctured.	Ac 0 Re 1
2.	Non-arming proof.	10 nos.	Fuze (filled) to be assembled to grenade filled inert and fired. Against 2 mm thick Aluminium plate kept at a distance of 10 m from the muzzle.	Functioning of fuze on plate.	i) Fuze functioning on plate. * ii) Fuze functioning before 10 m.	Ac 0 Re 1
* Note : This observation is to be carried out for all further proofs and above acceptance criteria to be applied.						
3.	Arming Proof	i) 20-For first 5 lots of new manufacture. ii) 13- For subsequent lots.	Fuze filled to be assembled to the grenade filled inert and fired against 2 mm thick Aluminium plate kept at a distance of 80m from the muzzle.	i) Functioning of fuze on hitting the plate. ii) Non-Functioning of fuzes on hitting the plate.	i) Non-Functionioing of fuze on hitting the plate.	For first five lots Ac Re 0 3 3 4 For sub-sequent lots. Ac Re 0 2 1 2

Note : For sentencing round which has missed the target should not be considered. Additional rounds can be fired.

subsequent 10 mils.
lots.

iii) Time to impact.	Ac	Re
function.	2	5
ii) Non functioning of fuze (blind).	6	7
	Ac	Re
	0	2
	1	2

Note : In case the first lot gets subjected to reproof and becomes acceptable with blinds more than 4 special proof may be carried out at the discretion of AHSP.

- | | | | | | | | |
|----|--|--|---|---|---|----|----|
| 5. | Functioning Proof at Hot condition | 13-For 1 st and every 10 th lot. | Fuze filled to be assembled with grenade (filled) and fired at QE 200+10 mils after the rounds are conditioned at +50 deg C for 8 hours. | Same as given for functioning proof at S. No.4 | Same as given for functioning proof at S.No.4 | Ac | Re |
| | | | | | | 0 | 2 |
| | | | | | | 1 | 2 |
| 6. | Functioning proof at cold condition . | 13 for first and every 10 th lot. | Fuze filled to be assembled with grenade (filled) and fired at QE 200+10 mils after the rounds are conditioned at - 20°C for 8 hrs, | Same as given for functioning proof at S. No.4 | Same as given for functioning proof at S.No.4 | Ac | Re |
| | | | | | | 0 | 2 |
| | | | | | | 1 | 2 |
| 7. | Functioning proof under bump and jolted condition. | 13 for first and every 10 th lot | Fuze filled to be assembled with inert filled grenade and cartridge case and packed in approved package and subjected to bump and jolt test as given in annexure I. After the test the fuzes should be insoected for lifting/loosening of Cover Fuze/Body Upper and any other visual defects, if any. Fuzes are to be assembled with HE grenade (filled) and fired at QE 200+10 mils. | i) Lifting/Loosening of Cover Fuze after the bump and jolt test.
ii) Any other visual defect/damage. | Same as S. No.4 | Ac | Re |
| | | | | | | 0 | 2 |
| | | | | | | 1 | 2 |

NOTE:- Lifting /Loosening of cover is attributed to Bump & Jolted conditioning and if found the fuze is not be fired. Cause for the defect is to be ascertained and heavy proof at the discretion of the Inpspecting to be carried out.

ANNEXURE-I

ENVIRONMENTAL TESTING OF FUZES FOR ACCEPTANCE LEVEL

1. **BUMP TEST** – (Test No. 15 U- JSG 0102)

1000 bumps at a rate not exceeding 4 per sec, with a free fall of 25 ± 3 mm and a peak acceleration of 400 ± 40 m/sec² (The fuze be mounted in nose up condition).

2. **VIBRATION TEST**– (Test No. 17 U- JSG 0102)

Vibrate the store for $\frac{1}{2}$ hour in each of 3 mutually perpendicular planes with the vibration frequently swept continuously and logarithmically over the frequency range 5 to 350 Hz at a rate not exceeding 1 octave per minute. The vibration level shall be controlled at a constant peak to peak displacement of 12 mm over the frequency ranges 5 to 11 Hz and constant peak acceleration of 30 m/s² over the frequency range 11 to 350 Hz.