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

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Type of Proof</th>
<th>Sample size</th>
<th>Method of Proof</th>
<th>Observation</th>
<th>Type of Defects</th>
<th>Acceptance criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Detonation proof.</td>
<td>05 nos.</td>
<td>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.</td>
<td>Fuze to be opened and septum to be checked for puncturing.</td>
<td>Septum not punctured.</td>
<td>Ac</td>
</tr>
<tr>
<td>2.</td>
<td>Non-arming proof.</td>
<td>10 nos.</td>
<td>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.</td>
<td>Functioning of fuze on plate.</td>
<td>i) Fuze on plate. functioning</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>** ii) Fuze functioning before 10 m.**</td>
<td></td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>i) Functioning of fuze on hitting the plate.</th>
<th>i) Functioning of fuze on hitting the plate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>For first five lots</td>
<td>For subsequent lots.</td>
</tr>
</tbody>
</table>

*Note:* For sentencing round which has missed the target should not be considered. Additional rounds can be fired.
subsequent lots. 10 mils. iii) Time to impact.  

\[
\begin{array}{cccc}
\text{Ac} & \text{Re} \\
\text{ii)} & \text{Non} & 2 & 5 \\
& \text{functioning} & 6 & 7 \\
of \text{fuze} (\text{blind}) & & & \\
\text{Ac} & \text{Re} \\
& 0 & 2 & \\
& 1 & 2 & \\
\end{array}
\]

**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 13 for 1st and Proof at Hot every 10th lot. condition

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 Ac Re given for 0 2

functioning proof at S.No.4

6. Functioning 13 for first proof at cold and every 10th condition. 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 Ac Re given for 0 2

functioning proof at S.No.4

7. Functioning 13 for first proof under and every 10th bump and lot jolted condition.

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. i) Lifting/Loosening of Cover Fuze after the bump and jolt test.

Same as S. Ac Re No.4 0 2

ii) Any other visual defect/damage.

**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 inspecting 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 ½ 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.