**Expendable Under Water Target (EUT)**

1. **Brief Description/ Technical Details**

(a)There is a requirement of an Expendable Underwater Target (EUT) for undertaking Anti-Submarine Warfare (ASW) training at sea. EUT should be capable of simulating a submarine by being detected, located and tracked by Hull Mounted Sonar, Active/Passive Towed Array Sonars, Helo Dunking Sonar and Sonobuoys. Additionally, it should be capable of simulating a target for Practice/Combat torpedo firings.

(b) The EUT would be used to train sonar operators of ship, submarine, aircraft and helo in detecting, tracking and classifying a variable speed manoeuvring underwater target. It act as a credible target against which torpedo firings can be undertaken. The self-propelled expendable body should have the following characteristics: -­

(i) It should be of hydrodynamic design and battery powered.

(ii) It should be lightweight (less than 50 Kg) and capable of being launched manually by lowering from ship’s side and/or launched from helo.

(iii) Dimensions of the EUT should not exceed 1500mm x 300mm x 300mm.

(iv) It should be capable of operating at speeds between 1 and 8 Kn, which should be programmable in steps of 1 Kn (as required by the operator).

(v) It should have an endurance of more than 4 hours while operating between 3 and 5 Kn for 70% of the run and 6 and 8 Kn for balance 30%.

(vi) It should be capable of being manoeuvred in azimuth and depth according to an operator defined programme. In the azimuth plane, it should have all-round manoeuvrability. In the depth plane, it should be capable of operating from 10 to 150 meters.

(vii) The self-propelled body should be interfaced with Control Console for feeding trajectory and signature programme.

(viii) EUT should have a service life of not less than 5 years without any requirement of maintenance. The service life of the battery should also be not less than 5 years to obviate the requirement of changing batteries during its service life.

(ix) EUT should retain pre-fed data for at least one hour prior launch.

(x) EUT should automatically sink post completion of run.

(xi) In case of error during launch the body should remain afloat.

 (c) Environmental Specifications. The system should be capable of being operated in following environmental conditions:-

(i) Sea surface temperatures : 4o C to 35o C.

(ii) Ambient temperature : 5o C to 55o C.

(iii) Humidity : 95%.

5. **Tentative Quantity.** 300 @60 /Year

6. **Tentative Timelines for Development/Production**. The estimated time period for design and development of the EUT is estimated to be 03 years.