

Igniters for Fore and Aft Motors (HL-I-407)

Anti Submarine Rocket project aimed for design and development of Extend Range Anti Submarine Rocket (ASR) for RBU 6000 Launcher available on Indian Navy warships. This new anti-submarine rocket has range up to 8km. To meet this requirement without changing external profile, mass of rocket, stacking and launching system, Anti-Submarine Rocket has been designed by changing the fore and Aft motor propellant and increasing quantity of propellant from 15 kg to 18.5 kg by reducing structural mass of rocket using flow formed tubes of high strength steel SAE 4130 and replacing complicated valve mechanism of RGB-60 rocket.

Accordingly igniters for Fore and Aft motors have also been changed. Boron based pyrotechnic composition (ME-445) in pellet form is selected as Fore motor igniter composition.

Same boron based pyrotechnic composition (ME-445) in granules form is selected for initiation of Aft motor igniter. Torroidal shaped metallic canister (SS304) having slots for flash communication has been designed and developed for Aft motor. This igniter is mounted at head end of aft motor around the blast tube of fore motor. Both the igniters are initiated by squibs.

Both the developed igniters confirming all project requirements and performance of same have been demonstrated in number of static tests and flight tests repeatedly. Igniters provide desired pressure and heat output, required for combustion of Fore and Aft motors propellant.

The technology for igniter processing and evaluation is also established. The igniters designed and developed by HEMRL have successfully demonstrated their performance in static tests in standalone as well as integrated mode as well as in flight test.

Now this technology is completely matured and the same can be transferred to production agencies for further requirement.