

## **Expression of Interest (Eoi) for ToT of High Explosive Technology for Warhead (MCHEW-2) of Missile System**

### **Description of Technology:**

There was a need to develop high explosive technologies for the PCB and BF type of warheads to destroy various targets.

- i. HE technology for penetration cum blast warhead
- ii. HE technology for blast fragmentation warhead
- iii. HES compositions for Inert warhead

High explosive technology has been developed by DRDO to destroy various targets. Exhaustive studies were carried out to finalize the HE compositions and their filling methodologies in warhead to realize the required performance lethality at the desired distances. The melt cast technology has been developed for the main filling of the warhead and pressing technology for the booster charge.

More powerful main filling of high VoD HE composition has been finalized for the Blast Fragmentation (BF) warhead. High shock insensitive composition has been finalized for the Penetration cum blast warhead (PCB). Booster pellets are of HE composition (PBXP 101). They are developed for completion of explosive train

HE casting in two types of warheads viz. penetration cum blast (PCB) and blast fragmentation (BF) has been completed. All trials such as integration checks, static performance trials, controlled dynamic trials of warheads for design validation are completed successfully. Developed high explosive composition met QR.

### **Application Areas:**

High explosive compositions and their filling in warhead of MCHEW-2 is designed and developed by DRDO to destroy various targets by blast fragmentation and penetration cum blast.

### **Unique Selling Point (USP):**

All the trials including User trials of warhead in both static and flight modes have been completed successfully. Developed technology met QR and it is equivalent to global level. All the raw materials for the filling of warhead system are available indigenously. The equipment required for the preparation of explosive composition filling is available indigenously.

### **Contact Details**

Interested companies/industries are requested to apply against this Eoi through email or by DAK to following address:-

To,

Director

High Energy Materials Research Laboratory

Govt. of India, Ministry of Defence

Pune-411 021

Email-director.hemrl@gov.in

**Copy to:-**

**The Director**

**Directorate of Industry Interface & technology Management (DIITM)**

**Room No. 447, DRDO Bhawan, Rajaji Marg, New Delhi-110 011**

**Email-diitm.hqr@gov.in**

**List of Support documents to be attached with EoI**

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, as amended time to time)
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Audited Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three year period
- (e) Details of shareholding/ownership pattern especially foreign partners/ shareholders, foreign employees, directors, etc. The company must adhere to the prevailing Govt of India policies and regulations on Foreign Direct Investment (FDI)/DIPP norms as applicable.
- (f) Annual budget for R&D during last three years.
- (g) Numbers and details of IPR or patents, etc., held by the company.
- (h) Number of technically or professionally qualified personnel.
- (i) Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any).
- (j) Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise.
- (k) List of Testing and Support equipment's
- (l) ISO/ ISI certification or any other certification
- (m) Relevant clearances form the authorities/ ministries (if any)
- (n) Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.
- (o) Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.
- (p) PESO and DPIIT license for explosive handling if ToT is for high energy Material, explosives, propellants, and component/ system dealing with it etc.
- (q) Under taking form company seeking ToT that none of its Directors, Independent Directors, non-executive Directors, Key management personnel are involved in any corrupt practices, unfair means and illegal activities.

- (r) Details of the industrial license for defence manufacturing be provided by the industry seeking ToTs.