

## **Expression of Interest (Eoi) for ToT of 'High Explosive Technology for Warhead (MCHEW-1) of Missile System'**

### **Description of Technology:**

There was a need to develop high explosive technologies for warheads to intercept 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 warhead inflicts damage to surrounding, by blast effect in the near vicinity and by fragments at lethal distance. The melt cast technology has been developed for the main filling of the warhead and pressing technology for the booster charge. The system carries a Preformed Fragmentation (PF) warhead with more powerful main filling of high VoD HE composition (MCHE-202) has been finalized for the warhead. Booster pellets are of HE composition (PBXP 101); they are developed for completion of explosive train.

HE casting in warhead has been completed successfully. All trials are completed successfully. The warhead system has been exhaustively evaluated in all modes. Developed high explosive composition met QR.

### **Application Areas:**

High explosive compositions and their filling in warhead of MCHEW-1 is designed and developed by DRDO to intercept various targets by the blast effect and lethal fragmentation.

### **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 equipments required for the preparation of explosive composition filling are 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 industrials license for defence manufacturing be provided by the industry seeking ToTs.