

Air Retainable type Inflatable Aircraft Decoy Technology (InfADec)

Introduction:

Decoys are very important components of Camouflage, Concealment and Deception (CCD) strategy for modern warfare. Full scale decoys are very efficient way to deceive adversaries in order to waste their time, efforts and ammunition in wartime. As aircraft are critical assets of any county, their protection / safety from enemy attack are of prime importance to maintain air strike capability. And aircraft decoys can be useful in war scenario.

Full scale Metallic decoy of aircraft are very bulky and heavy and prone to have more deployment time. Their dismantling and loading / un-loading during transportation is work force intensive, time consuming and more resource requiring. An inflatable aircraft decoy can minimize all these requirements and can be handled easily.

DRDO developed Air retainable type inflatable aircraft decoy also reduces the dependency on continuous air blower operation. Plastic coated fabric was used to make inflatable aircraft decoy, so it is lightweight and can be easily handled with 2-3 persons in comparison with rubber coated fabrics based decoys. An automated air pressure control system was also developed for uninterrupted operation of Inflatable decoy for number of days.

Preparation: The developed aircraft made up of specially designed coated fabric structures with minimal air permeability to make an air retainable type lightweight fabric patterns. Modular design was adopted for ease in handling and deployment. Further, appropriate fabric sealing technologies were used to make the Inflatable modules. Necessary cross-sectional members were provided to obtain the required shape & size. A metallic support platform was provided its movability in deployment area.

Advantages of Technology: The developed Air Retainable Inflatable Aircraft decoy has following advantages.

- . Air retainable type full scale (1:1 scale) decoy resembling as actual aircraft
- . Made up of coated fabrics to make it lightweight inflatables
- . Modular structure for easy handling by 2-3 persons
- . Can be inflated/ deflated within 10-12 minutes
- . Able to retain shape upto 8 hrs without any need of air top-up
- . Equipped with Automated air pressure control system for deployment for longer duration

- . Movable support structure for portability in air stations/ fields
- . Anchoring system for stability against wind loads

Interested companies/industries are requested to apply against this EoI to following address:-

Director
Defence Laboratory
Ratanada Palace
Jodhpur
Rajasthan-342011

Phone : 0291-2510275
Fax : 0291-2511191, 0291-2510260
Email : director[dot]dl[at]gov[dot]in

A copy of interest may be sent to the following address without any attachment:-

The Director,
Directorate of Industry Interface & Technology Management (DIITM), Room
No. 447, DRDO Bhawan,
Rajaji Marg, New Delhi-110 011
[Email: diitm\[dot\]hqr\[at\]gov\[dot\]in](mailto:diitm[dot]hqr[at]gov[dot]in)
Phone No.- 011-23007446 Fax No.-011-23793008

All industries interested in seeking ToT are requested to apply in the format given below. Kindly fill in the fields. The list of documents to be attached is provided in Annexure – I. Kindly provide the reference of page no. of supporting document in the relevant field of form.

PART-1

General Information

(Please enclose documents in support of information provided)

| | | |
|----|---|--|
| 1. | Name of the Technology requested for Technology Transfer (Technology name and concerned Lab, Category) | |
| 2. | Name of the industry/ organization | |
| 3. | Complete Address and other details | |

| | | |
|-----|---|--|
| | Registered Office State Phone No Fax Email Website | |
| | Factory State Phone No Fax Email Website | |
| 4. | Point of Contact Name Designation Address Mobile No Ph No Email ID | |
| 5. | NAME OF CMD/ MD /PARTNERS/ PROPRIETOR/ etc Name Designation Address Mobile No Ph No Email ID | |
| 6. | Date of Incorporation of company | |
| 7. | Foreign Direct Investment in company (if any in %) | |
| 8. | Shareholding pattern | |
| 9. | Turn over as per Audited Balance Sheet for the preceding three years. Year _____ Year _____ Year _____ | |
| 10. | Annual budget for R&D during last three years (if any) Year _____ Year _____ Year _____ | |
| 11. | Income Tax returns for the preceding three years period Year Year | |

| | | |
|-----|---|--|
| | Year | |
| 12. | Nature of company DPSU, Private Limited, Public Limited, Partnership, Proprietary, Ex- Serviceman Unit | |
| 13. | Category of industry Large Scale, Medium Scale, Small Scale, Micro, Startup | |
| 14. | MSME Registration No | |
| 15. | Certificates of registration as a manufacturing unit, if any. | |
| 16. | If Startup, DPIIT Registration No | |
| 17. | UDYOG AADHAR No | |
| 18. | PAN Number | |
| 19. | Details of Industrial license for defence manufacturing issued by DPIIT (if any) | |
| 20. | Details of PESO license (if any) | |
| 21. | GST Number | |
| 22. | Nature of business Manufacturing/ Sole Selling or Authorized Agent/ Assembler/ Traders/ Dealer/ Processor/ Repacker/ Others | |
| 23. | Details of current products and services Products and services Supplied (please specify Govt/ Domestic market/ Export) | |
| 24. | Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any). | |
| 25. | Details of registration with NSIC / SSI, DGS&D, other Defence Department, other Govt. Dept, membership of FICCI/ASSOCHAM/CII or other Industrial Association (Attach relevant copies of registration letters) | |
| 26. | Have you already taken any technology from DRDO (If yes, give details attaching separate sheet) Name of the Technology, Lab, Year, License number & Status | |
| 27. | ISO/ ISI certification or any other certification (If yes, give details) | |

| | | |
|-----|---|--|
| 28. | Relevant clearances form the authorities/ ministries (if any) | |
| 29. | Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks. | |
| 30. | Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality. | |

PART-2

Infrastructure and other Information

| | | |
|-----------|--|--|
| 1. | Total area of factory Covered (m ²), Uncovered (m ²), Bonded space available (m ²) | |
| 2. | Ownership of factory Self-owned, partnership, rental | |
| 3. | Electric power Sanctioned Installed Standby (if any) | |
| 4. | Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise | |
| 5. | Name of bank & A/c No Name of bank A/c type A/c no Address of the bank Phone: Email: | |

6. Details of current products:

| S.No | Type | Description | Licensed/installed capacity | Annual production for preceding 3 years |
|------|------|-------------|-----------------------------|---|
| | | | | |
| | | | | |

7. Details of foreign collaboration, if any

| S.No | Product | Name and address of collaborator | Year | Remarks |
|------|---------|----------------------------------|------|---------|
| | | | | |
| | | | | |

8. Details of products developed for services

| S.No | Nomenclature of stores | Order No. and date | Remarks |
|------|------------------------|--------------------|---------|
| | | | |
| | | | |

9. Please give details of important facilities & infrastructure as per following format for:

- (a) Production
- (b) Unconventional, special m/c
- (c) Testing & quality control facilities

10. Furnish the following details with relevant certificates and documents

- (a) R&D facilities available :
- (b) Inspection quality control of raw material components :
- (c) Assistance from central agency for testing / calibration etc.:
- (d) laboratory and drawing office facility :

11. Principal customers:

| S. No | Name & address | S.O No and date | Date of last supply | Products supplied | Value |
|-------|----------------|-----------------|---------------------|-------------------|-------|
| | | | | | |
| | | | | | |

12. Future plans (if any) in respect of expansion programme/ installation of additional machines/ test facilities etc.

13. Name of the technology requested for transfer

(give self-assessment of your capability to absorb the technology)

14. Details of employee as on date on firm's pay roll

| PERMANENT | | | | | |
|----------------|---|--------|---------------|---------------|--|
| Category | Post Held | Number | Qualification | Total Service | |
| Technical | Prod. Manager | | | | |
| | Q.C. Manager Supervisor Testing Staff (QC) Skilled workers Unskilled workers, etc | | | | |
| Administrative | Purchase Manager Accounts Officer | | | | |

| | | | | |
|--|--|--|--|--|
| | Office Superintendent Clerical Others, etc | | | |
|--|--|--|--|--|

| TEMPORARY | | | | |
|------------------|--|--------|---------------|---------------|
| Category | Post Held | Number | Qualification | Total Service |
| Technical | Prod. Manager Q.C. Manager Supervisor Testing Staff (QC) Skilled workers Unskilled workers, etc | | | |
| Administrative | Purchase Manager Accounts Officer Office Superintendent Clerical Others, etc | | | |

DECLARATION

I / we confirm that the information furnished in Part 1 & 2 above is correct. In the event of any information given by me / us is found incorrect / false at any time, I / we understand our EoI for ToT will be cancelled/ rejected without notice, beside any other appropriate action against me / us.

Industry seal

Authorized signatory

Name(s) in capital

Designation and seal of authorized signatory

Date: Place:

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.
- (s) Application cum Industry Assessment Form