

# **BOMB SUIT**

1. Bomb Suit: The suit should consist of the following items, which collectively make a complete garment
  - a. Jacket with collar, chest and groin Plates
  - b. Trousers – Adjustable, and back protectors
  - c. Boot protector/over shoes
  - d. Helmet with EOD and breathing apparatus (BA) Visors
  - e. Hand Gloves
  - f. Transit Bag
  - g. Integrated Groin Protector (IGP)
  - h. Hydration bag
  - i. Complete cooling suite
  
2. Protection Level
  - a. The suit protection performance figures should be for the NATO stanag 2920 or MIL standard 662F, 17Grain fragment simulator-V-O (Firm to submit lab test report from national/international accredited lab)
    - i. Front chest- 1800 m/s or better
    - ii. Front Groin - 1800 m/s or better
  
  - b. The suit protection performance figures should be for the NATO stanag 2920 or MIL standard 662F, 17Grain fragment simulator-V-O (Firm to submit lab test report from national/international accredited lab)
    - i. Sleeves front – 560 m/s or better
    - ii. Collar front – 850 m/s or better
    - iii. Trousers Front Thighs – 690 m/s or better
    - iv. Trousers Front Shins – 620 m/s or better
    - v. Boot cover – 450 m/s or better
  
3. Cooling suite
  - a. Fabric should be washable

- b. The heat removal rate should be at least 270 watts (full suite) or better (Firm should submit lab test report from international reputed lab)
  - c. Should enable the operator to wear it comfortably for minimum of 30mins with ambient temperature at 35°C or more
  - d. The pump should be operatable by a dry/rechargeable battery
  - e. Should be available in different sizes to suite user's requirement (small/medium/large)
  - f. A second water/ice bottle should be supplied for standby
  - g. Cooling source should be ice and water
  - h. Cleaning kit for cooling suit
4. Ballistic EOD Helmet protection performance (Firm should submit lab test report from international reputed lab)
- a. V 50 (Helmet) 600 m/s or better
  - b. V 50 (EOD and BA) (Visor) 700 m/s or better
  - c. Weight with EOD and BA Visors not more than 8.5 kgs
  - d. The system should have an arrangement to accommodate full face mask inside the Visor for breathing in an NBC environment
  - e. Ventilation and diminishing – A Helmet mount fan should provide effective ventilation and replaceable demisting arrangement with control unit within easy reach of the user
  - f. Environmental awareness – The helmet should have built in microphone for operator to hear all the conversation taking place in the vicinity
  - g. Two way communication – It should provide a two way communication whether on radio or wired between operator and office in charge up to a distance of 100mts (wired communication being optional depending on the user requirement)
  - h. Search light – The helmet must be fitted with a search light mounted on the Visor for working in dark conditions
  - i. Live video camera – Helmet must have a integrated facility into its Visor for live video transmission to a command post located at a distance of 200mtrs LOS and 100 mtrs in BUA ( non – line of site)
  - j. The system must have voice activated, hands free controls of electronic features including light, audio levels, ventilation and

demisting. However, these electronic features should also be operated through a separate console ergonomically located on suit

5. Jacket

- a. Immediate removal/quick release of the jacket should be achieved
- b. The jacket should have an arrangement for keeping working tools
- c. All soft ballistic pouches must be removable in order to maintain outer shell

6. Trousers

- a. The trousers should be adjustable catering for different size
- b. Immediate removable/quick release of the trouser should be achieved
- c. Back protector should be fitted to the trouser
- d. Trouser boot should be adjustable and also removable

7. Power Pack

- a. A rechargeable power pack should be suitably placed
- b. It should have a battery level indicator
- c. Provide 2 spare battery
- d. Recharging – A suitable charger should be provided for rechargeable power pack

8. Weight

Overall operating weight including helmet, cooling suit, complete suit, communication support and live audio video system etc. should not exceed 50 kgs.

9. Back bone protection

- a. The suit should provide a high impact back bone protection arrangement (Firm to submit lab test report for national/international accredited lab)

10. Operational time

It should not take more than 10mins to wear the suit with all accessories when assisted by a trained technician

11. Static discharge

The bomb suit should have protection against static charge

12. Miscellaneous (User to specify as per requirement). The firm should be able to provide the following applicable along with the equipment

- a. Strong sturdy and portable Carrying case and field case.
- b. Sets of all kinds of spare rechargeable batteries used in suit, cleaning kit.
- c. SMT (Special maintenance tools) if any
- d. Training aids – Charts, slides, Training brochure, Training work model, blow up diagram, video films etc. if any
- e. Physical training in India
- f. Proof scheduled to include details of inspection and acceptance criteria
- g. Technical manual in English giving full description of the item
- h. User hand book in English
- i. Literature on preservation/maintenance in English
- j. Specification for packing, handling/transportation/storage
- k. Details regarding periodical inspection by the user

13. Validity and Authenticity of lab test reports and certificates

- a. OEM to provide the latest lab test report from a national/international accredited lab. One of the certificates should be obtained from the manufacturing country itself. The OEM should also confirm that no product changes related to ballistic rating/testing or material have taken place since the last test
- b. All the test reports and certificates must invariably have the name, address, website , email address and contact numbers of the testing agencies/lab. There should also be a contact provided for each testing lab
- c. Blast Test:-The manufacturer / supplier should indicate its willingness to organize a jointly attended blast test for final acceptance (from successful bidder only) of the product at manufacturer's expense. The test sample will be randomly selected from the stores ready for dispatch.

14. The vendor should impart detailed training free of cost to sufficient personnel at the place(s) specified by the Department.

15. The supplier should have well-equipped office / workshop for maintenance with qualified engineers in repairs/ service. If the equipment needs repairs it should be carried out within 10 days from the date of receipt of intimation.
16. Supplier should have direct authorization from the OEM to participate in the tender. Necessary authorization documents should be made available in this regard. The name of the OEM along with the contact telephone numbers, addresses, fax numbers & E-mail address may be available for confirmations with the OEM about the status of the supplier.
17. Periodical service minimum once in three months during warranty period.
18. Minimum 3 years warranty for the equipment, batteries, charger and for other all accessories.
19. The Firm should provide AMC for a period of 5 years after the warranty period should be enclosed with the tender proposal.
20. AMC should be express as percentage of total product value (TPV) separately for each year of AMC.
21. Tenders will be evaluated based on the net liability to the department which includes Product cost and AMC cost.