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**REQUEST FOR INFORMATION (RFI) FOR SUPPLY AND INSTALLATION  
OF MAGAZINE FIRE FIGHTING SYSTEM**

1. The Ministry of Defence, Government of India, intends to procure an **Automatic Magazine Fire Fighting System (MFFS)** for seven warships under construction at two different shipyards in India. The salient characteristics of the magazine fire fighting system are as follows:-

<b><u>Ser</u></b>	<b><u>Description</u></b>	<b><u>Equipment Requirements</u></b>
(a)	Detection and prevention of fire in magazines of a ship	A magazine is a compartment, within the ship's structure, which is specially designed and constructed for the safe, permanent stowage of explosives or ammunition. These compartments are required to be continuously monitored for change in temperature, pressure and radiation. In case of change in compartment conditions or on occurrence of spark/smoke/fire, an alarm is to be generated along with activation of magazine fire fighting system automatically.
(b)	Types of magazines	The magazines would be classified into two types namely:-  (i) <b><u>Ready Use</u></b> . Temporary stowage of explosives stores to facilitate quick supply when the relevant weapon is required to be in a high state of operational readiness.  (ii) <b><u>Main Magazines</u></b> . Designed for permanent stowage of the whole or part of the ship's outfit of the designated explosive stores.
(c)	Methodology	(i) The Magazine Fire Fighting System would have fire detection and monitoring system which would work on the combination of temperature,

		<p>pressure and infrared sensors logic.</p> <p>(ii) These sensors would continuously monitor the magazine for any change in temperature, pressure and radiation. The output of sensors would be used for activation of Automatic Magazine Fire Fighting System. Whenever any symptom of fire is detected, following systems would activate automatically:-</p> <p>(aa) <b><u>Audio Visual Alarm and Feedback.</u></b> The system shall be capable of providing indications and warnings in the main control panel and mimic panel by way of audio and visual alarm and feedback which would be activated at various stages of fire detection and operation of system including pre-warning.</p> <p>(ab) <b><u>Sprinkler System.</u></b> The sprinkling system would be designed and developed to cool and protect ordnance stored in the magazine from external fire and to extinguish incipient fires within the magazines. The principle of fire prevention in the magazines is to reduce the temperature of the ammunition. A magazine sprinkling system would have a network of pipes and sprinklers located at different locations so that the water spray covers all areas of the magazine.</p> <p>(ac) <b><u>Inhibitor System.</u></b> The inhibitor system would be an automatic gas based firefighting system. The fire suppression agent would form a curtain at the hatch opening to prevent entry of fresh air into the compartment.</p> <p>(iii) All the detection system would be coupled with the control system for interfacing with various other sub-systems for activation of Magazine Fire Fighting System.</p>
(d)	Applicable Standards	The system should be designed in accordance with DEFSTAN 00-101 Part 1 and equivalent Military Standards.
(e)	Applicable Certification	Should have at least one certification from an IACS (Internationally Accredited Classification Society) or

		a reputed Fire Test Laboratory that conducts similar test for warships.
(f)	Product Life	Not less than 25 years.
(g)	Product support	Not less than 25 years.

2. This Request for Information (RFI) consists of two parts as indicated below: -

(a) **Part I.** This part of the RFI incorporates operational characteristics and features that should be met by the equipment. Few important technical parameters of the proposed equipment are also mentioned.

(b) **Part II.** This part of the RFI states the methodology of seeking response of the vendors. **Submission of incomplete response format would render the vendor liable for rejection.**

### **PART – I**

3. **Important Parameters.**

(a) **Intended Use.** The term ‘magazine’ is a compartment used for stowage of explosives or ammunition. These compartments are required to be continuously monitored for change in temperature, pressure and radiation. In case of change in compartment conditions or on occurrence of fire, an alarm is to be generated and the magazine fire fighting system is activated. The magazine fire fighting system would have fire detection and monitoring system which would be a combination of temperature, pressure and infrared sensors.

(b) These sensors would continuously monitor the magazine for any change in temperature and pressure. The output of the sensors would be used for activation of Automatic Magazine Fire Fighting System. Whenever any symptom of fire is detected, following systems would activate automatically:-

(i) **Audio Visual Alarm.** The system must be capable of providing indications and warnings in the main control panel and mimic panel by way of audio and visual alarm and feedback which would be activated at various stages of fire detection and operation of system including pre-warning.

(ii) **Sprinkler System.** The sprinkling system would be designed and developed to cool and protect ordnance stored in the magazine from external fire and to extinguish incipient fires within the magazines. The principle of fire prevention in the magazines is to reduce the temperature of the ammunition. A magazine sprinkling system would have a network of pipes and sprinklers located at different locations so that the water spray covers all areas of the magazine.

(iii) **Inhibitor System.** The inhibitor system would be an automatic gas based firefighting system. The fire suppression agent would form a

curtain at the hatch opening to prevent entry of fresh air in to the compartment.

(c) All the detection system would be coupled with the control system for interfacing with various other sub-systems for activation of Magazine Fire Fighting System.

(d) **Technical Parameters**. A questionnaire to solicit information regarding technical and functional parameters for the **Magazine Fire Fighting System** is placed at **Appendix A**.

(e) **Overall Costing**. The cost of product would be taken into account for determining the L1 vendor. Vendors are required to provide complete elements of costing.

(f) **Option Clause**. An option clause may be exercised in the procurement case. Vendors must express their willingness or otherwise for option clause, including the duration for which the option clause would be valid.

(g) The vendors are required to indicate whether the equipment has been supplied to any other company in India.

(h) Vendors would also be required to provide an operational manual with details of precautions in operation and side effects if any.

(j) The deliveries of the **Magazine Fire Fighting System** would need to commence as per a stipulated time period post conclusion of contract.

(k) The vendors are required to indicate their willingness to the terms of payment as per DPP 2013.

(l) The vendors are required to indicate compliance or otherwise to the conditions of the RFI and respond to the queries pertaining to the operational and technical requirements placed at **Appendix A**.

(m) Vendors may consider RFI as advance information to obtain requisite government clearances.

(n) Ability of the vendors to comply with all provisions of DPP 13 is to be indicated. If not, then the relevant Para/clause of DPP 13 which cannot be agreed to along with reasons is to be indicated.

(p) Additional literature/equipment details may be submitted along with the response to the RFI.

(q) **Certification**. Certification regarding conformity to an accredited Laboratory needs to be submitted.

(r) **User Evaluation Trials**. Trials will consist of Factory Acceptance Trials and HATs/SATs. FATs will consist of Design Verification, Functional Tests, Test

Equipment Study, Calibration Procedure and Pass/Fail criteria. Ship based trials would be full functional trials to ascertain all operational parameters of the system.

4. Vendors should confirm to the under mentioned conditions in accordance with Chapter 5 read in conjunction with Appendix 'C' of Defence Procurement Procedure – 2016 (DPP-2016): -

(a) The solicitation of offer would be as per 'Single Stage – Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers should be at least 12 months from the date of submission of offers.

(b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.

(c) The equipment of all TEC cleared vendors would be put through a Field Evaluation Trial (FET) in India on a 'No Cost No Commitment' basis. A staff evaluation would be carried out by SHQ to analyse the result of field evaluation and shortlist the equipment for introduction into Service.

(d) Amongst the vendors cleared by the staff evaluation, a Commercial Negotiation Committee (CNC) would decide the lowest cost bidder (L1) and conclude the appropriate contract.

(e) The vendor would be required to accept the standard conditions of contract given in DPP - 16.

## **PART – II**

5. **Procedure for Response.**

(a) Vendors must fill the form of response as given in **Appendix B**. Apart from filling details about company, details about the exact product meeting our generic technical specifications should also be carefully filled. Additional literature on the product could also be attached with the form.

(b) The response to the RFI Forms at Appendix B, duly filled, should be dispatched at the under mentioned address:-

The Principal Director of NBCD  
 Integrated Headquarters of Ministry of Defence (Navy)  
 Room No 15 & 15A  
 A - Block Hutments  
 Dalhousie Road  
 New Delhi 110011  
 Fax: +91 11 23793514  
 Email ID: dnbcd-navy@nic.in

(c) Last date of acceptance of filled form is **05 Mar 18**. The vendors short listed for issue of RFP would be intimated.

6. The Government of India invites responses to this request only from Original Equipment Manufacturer(OEM)/Vendors authorised by OEMs/Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEMs). The end user of the equipment is the Indian Navy.

7. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part the Magazine Fire Fighting System at any stage. The Government of India also reserves the right to withdraw it should it be so necessary at any stage. The acquisition process would be carried out under the provisions of DPP 2016.

