



Please Address  
**THE GENERAL MANAGER**  
 (And not any Officer by name)  
 Grams: ORDKHAM  
 FAX: 91-761-2430202,2337301  
 E-Mail : ofk.ofb@nic.in



GOVERNMENT OF INDIA  
 MINISTRY OF DEFENCE  
 INDIAN ORDNANCE FACTORIES  
 ORDNANCE FACTORY KHAMARIA  
 JABALPUR (M.P.)– 482 005



An ISO 9001: 2000 Enterprise

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## GLOBAL TENDER NOTICE

On behalf of President of India the Sr. General Manager Ordnance Factory Khamaria Jabalpur (A unit of Dept. Of Defence Production & Supplies Ministry of Defence, government of India) invites application from reputed manufacturers, for following item(s):-

No.	Tender Notice No. & Date	ITEM	QTY	EMD
1.	ORDFYS/OFK/DAVP/03/ 17-18/VII/PV/ GLOBAL-41 Dated: 08/05/2017	PROPELLANT POWDER 6/7П-5Бф/1 TO RUSSIAN SPECN. TY-84-813-82 FOR 30MM BMP-II AP/T, HE/I, HET with proportionate quantity of Cylindrical Copper Crusher Pre-pressed at 3300 KGF/CM2, Dimension 4x6.5mm	35000 kg along with 2500 nos of Copper Crusher with 50% option clause of both items	Rs. 31,68,000/- (Rs. Thirty one lakh sixty eight thousand only) Or USD 47000.00 (USD Forty seven thousand only)
Last date for receiving request for issue of tenders			<b>22/06/2017</b>	<b>17:00 Hrs.</b>
Last Date & Time for receiving filled tenders			<b>23/06/2017</b>	<b>13:00 Hrs.</b>
Due Date & Time for opening of tenders ( Technical Bid only)			<b>23/06/2017</b>	<b>14:30 Hrs.</b>

### TERMS & CONDITIONS

2. This Tender Enquiry is meant for “**Source Development**” purpose only. Hence established suppliers of the above item need not to apply.
3. Prospective bidders should be experienced in the manufacturing of similar items and possess adequate infrastructure and financial capability for the tendered item(s).
- (a) **For Indian Bidder/ Manufacture:**
  - (i) The Indian bidder/manufacturer should have license of explosive manufacturing issued by Government of India  
OR
  - (ii) The Indian Bidder should have agreement with other firm which have license of explosive manufacturing issued by Government of India.
  - (iii) **In case both firms participated in same tender enquiry then firm with license of explosive manufacturing will only be considered.**
  - (iv) The firm holding any development order for subject item, need not to apply.
- (b) **For foreign Suppliers:** The firm should be capable and experienced in the manufacturing of same or similar item and has to confirm in their technical bid that Export License, if required, would be arranged by the bidder himself
4. Inspection Officer: The General Manager, Ordnance Factory Khamaria, Jabalpur or his authorized representative.
5. Place of inspection: Pre-dispatch inspection at firm's premises by our representatives and final inspection at Ordnance Factory Khamaria.  
**AHSP for end use** : CQA (A) Kirkee,  
**Inspecting Authority:** GM/OF Khamaria or his authorized representative(s).
6. All correspondence should be addressed to The Sr. General Manager, Ordnance Factory Khamaria, Jabalpur (Madhya Pradesh), PIN – 482005.
7. Specifications/Drawing has been attached with this tender.

8. The cost of tender documents is Rs 1000/- (Rs. One thousand Only) or USD 15 (USD Fifteen) and is to be paid in the form of Demand Draft / P.O. drawn in favour of "General Manager, Ordnance Factory Khamaria, Jabalpur" payable at Jabalpur. This fee is neither refundable nor transferable to other Advertisement. This fee is not required from NSIC/SSI registered units for which copy of valid registration should be enclosed.
9. The Sr. General Manager, Ordnance Factory Khamaria reserves the right to place order on more than one firm, if required for source development in the ratio of 70%: 30% i.e. 70% on L-1 and 30 % on L-2 firm after acceptance of L-1 price by L-2 as per OFB guidelines.
10. All the firms should desist from forming cartel as the practice is prohibited under section 3(3) (a) & (d) of the Competition Act 2002.
11. The firms should quote for minimum 50% of the tender quantity otherwise their offer will be treated as invalid / unresponsive and liable to be rejected. The General Manager reserves the right to order any quantity on one or more firms
12. Whenever all or most of the approved firms quote equal rates in CARTEL, the purchaser reserves the right to place order on any one or more firms with exclusion of the rest. The selection of firms for placement of order would be based on a predetermined ranking of the firms decided based on the marks scored by the firms during capacity verification.
13. The purchaser reserves the right to delete the established firms who quote in CARTEL from list of approved sources or to debar them from competing for a period to be decided by the purchaser.
14. The name of the newly established firm which enters into CARTEL formation immediately on getting registered will be summarily deleted from the list of approved suppliers.
15. **In case the bidder is not OEM,** the bidder has to confirm that they have requisite export license from their government and authorization from the manufacturing plant to export the goods to India.
16. If any certificate/ format is required to be submitted by the purchaser, the sample format of the same to be furnished along with the technical bid for acceptance of the purchaser.
17. The overseas bidder has to confirm in their technical bid that Export License, if required, would be arranged by the bidder himself.
18. The firm should submit the source of supply along with detailed quality plan.
19. **Law:** The Supply Order shall be considered and made in accordance with the laws of the Republic of India. The Supply Order shall be governed by and interpreted in accordance with the laws of the Republic of India.
20. **Effective Date of the Supply Order:** The Supply Order shall come into effect on the date of its acknowledgment by the Seller and shall remain valid until the completion of the obligations of the parties under the Supply Order. The deliveries and supplies and performance of the services shall commence from the effective date of the Supply Order.
21. **Arbitration:** All disputes or differences arising out of or in connection with the Contract shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to construction or performance, which cannot be settled amicably, may be resolved through arbitration. The standard clause of arbitration is as per Forms OFBPM-32, OFBPM-34 and OFBPM-34 (Available in OFB website and can be provided on request).
22. **Penalty for use of undue influence :** The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Government of India for showing or forbearing to show favour or dis-favour to any person in relation to the present Contract or any other Contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/ penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

23. **Agents / Agency Commission** : The Seller confirms and declares to the Buyer that the Seller is the original manufacturer of the stores/provider of the services referred to in this Contract and has not engaged any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries, whether officially or unofficially, to the award of the contract to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from entering into any supply Contract with the Government of India for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such an event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% per annum above LIBOR rate. The Buyer will also have the right to recover any such amount from any contracts concluded earlier with the Government of India.
24. **Access to the Book of Accounts**: In case it is found to the satisfaction of the Buyer that the Seller has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents/Agency Commission and penalty for use of undue influence, the Seller, on a specific request of the Buyer, shall provide necessary information/ inspection of the relevant financial documents/information.
25. **Non-disclosure of Supply Order documents**: Except with the written consent of the Buyer/Seller, other party shall not disclose the Supply Order or any provision, specification, plan, design, pattern, sample or information thereof to any third party.
26. **Liquidated Damages**: The *following Liquidated Damage clause will be applicable for delayed supplies* - If the contractor fails to deliver the stores or any installment thereof within the period fixed for such delivery or at any time repudiates the contract before the expiry of such period, the General Manager may without any prejudice to the right of the purchaser (Ordnance Factory Khamaria) to recover damages for breach of contract. In the event of seller's failure to have the stores delivered by the date/dates specified in the contract, the buyer may, at his discretion withhold any payment until the whole of the stores have been supplied and the buyer may also deduct from the seller as agreed, liquidated damages and not by way of penalty the sum of 0.5 % of the contract price of the undelivered store for each and every week and the part of a week for which the stores have been delayed subject to maximum of 10% of the value of the delayed stores, in case the delay in delivery is acceptable to buyer.
27. **Termination of the Supply Order**: The Buyer shall have the right to terminate this Supply Order in part or in full in any of the following cases:-
- (a) The delivery of the material is delayed for causes not attributable to Force Majeure for more than (\_\_\_\_ months) after the scheduled date of delivery.
  - (b) The Seller is declared bankrupt or becomes insolvent.
  - (c) The delivery of material is delayed due to causes of Force Majeure by more than (\_\_\_months).
  - (d) The Buyer has noticed that the Seller has utilized the services of any Indian/Foreign agent in getting this Supply Order and paid any commission to such individual/company etc.
  - (e) As per decision of the Arbitration Tribunal.
28. **Notices**: Any notice required or permitted by the Supply Order shall be written in the English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is sent.
29. **Transfer and sub-letting**: The Seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Supply Order or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Supply Order or any part thereof.
30. **Patents and Other Industrial Property Rights**: The prices stated in the present Supply Order shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other industrial property rights. The Seller shall indemnify the Buyer against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.
31. **Amendments**: No provision of present Supply Order shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this Supply Order and signed on behalf of both the parties and which expressly states to amend the present Supply Order.

## 32. Taxes and Duties :

- (a) **In respect of Foreign Bidders:** All taxes, duties, levies and charges which are to be paid for the delivery of goods, including advance samples, shall be paid by the parties under the present contract in their respective countries.
- b) **In case of Indigenous Seller: (i) General**
  - b-i. *If any concession is available in regard to rate/quantum of any Duty/tax, as mentioned by the Seller in their bids, relevant certificate will be issued by the Buyer to enable the Seller to obtain exemptions from taxation authorities.*
  - b-ii *Any changes in levies, taxes and duties levied by Central/State/Local governments such as excise duty, VAT, Service tax, Octroi / entry tax, etc on final product upward as a result of any statutory variation taking place within contract period shall be allowed reimbursement by the Buyer, to the extent of actual quantum of such duty/tax paid by the Seller. Similarly, in case of downward revision in nay such duty/tax, the actual quantum of reduction of such duty/tax shall be reimbursed to the Buyer by the Seller. All such adjustments shall include all reliefs, exemptions, rebates, concession etc, if any, obtained by the Seller. Section 64-A of Sales of Goods Act will be relevant in this situation.*
  - b-iv *Levies, taxes and duties levied by Central/State /Local governments such as excise duty, VAT, Service tax, Octroi/entry tax, etc on final product will be paid by the Buyer on actual, based on relevant documentary evidence. Taxes and duties on input items will not be paid by Buyer and they may not be indicated separately in the bids. Bidders are required to include the same in the pricing of their product.*

### **(32.1) Excise Duty**

- (a) Where the excise duty is payable on ad valorem basis, the Bidder should submit along with the tender, the relevant form and the Manufacturer's price list showing the assessable value of the stores as approved by the Excise authorities.
- (b) Bidders should note that in case any refund of excise duty is granted to them by Excise authorities in respect of Stores supplied under the contract, they will pass on the credit to the Buyer immediately along with a certificate that the credit so passed on relates to the Excise Duty, originally paid for the stores supplied under the contract. In case of their failure to do so, within 10 days of the issue of the excise duty refund orders to them by the Excise Authorities the Buyer would be empowered to deduct a sum equivalent to the amount refunded by the Excise Authorities without any further reference to them from any of their outstanding bills against the contract or any other pending Government Contract and that no disputes on this account would be raised by them.
- (c) The Seller is also required to furnish to the Paying Authority the following certificates:
  - (c-i) Certificate with each bill to the effect that no refund has been obtained in respect of the reimbursement of excise duty made to the Seller during three months immediately preceding the date of the claim covered by the relevant bill.
  - (c-ii) Certificate as to whether refunds have been obtained or applied for by them or not in the preceding financial year after the annual Audit of their accounts also indicating details of such refunds/applications, if any.
  - (c-iii) A certificate along with the final payment bills of the Seller to the effect whether or not they have any pending appeal/protest for refund or partial refund of excise duties already reimbursed to the Seller by the Government pending with the Excise authorities and if so, the nature, the amount involved, and the position of such appeals.
  - (c-iv) An undertaking to the effect that in case it is detected by the Government that any refund from Excise Authority was obtained by the Seller after obtaining reimbursement from the Paying Authority, and if the same is not immediately refunded by the Seller to the Paying Authority giving details and particulars of the transactions, Paying Authority will have full authority to recover such amounts from seller's outstanding bills against that particular contract or any other pending Government contracts and that no dispute on this account would be raised by the Seller.
  - (c-v) Unless otherwise specifically agreed to in terms of the contract, the Buyer shall not be liable for any claim on account of fresh imposition and/or increase of Excise Duty on raw materials and/or components used directly in the manufacture of the contracted stores taking place during the pendency of the contract.

### **(32.3) Sales Tax / VAT**

- (a). If it is desired by the Bidder to ask for Sales tax / VAT to be paid as extra, the same must be specifically stated. In the absence of any such stipulation in the bid, it will be presumed that the prices quoted by the Bidder are inclusive of sales tax and no liability of sales tax will be developed upon the Buyer.
- (b) On the Bids quoting sales tax extra, the rate and the nature of Sales Tax applicable at the time of supply should be shown separately. Sales tax will be paid to the Seller at the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to sales tax and the same is payable as per the terms of the contract.

(32.4) **Octroi Duty & Local Taxes**

- (a) Normally, materials to be supplied to Government Departments against Government Contracts are exempted from levy of town duty, Octroi Duty, Terminal Tax and other levies of local bodies. The local Town/Municipal Body regulations at times, however, provide for such Exemption only on production of such exemption certificate from any authorized officer. Seller should ensure that stores ordered against contracts placed by this office are exempted from levy of Town Duty/Octroi Duty, Terminal Tax or other local taxes and duties. Wherever required, they should obtain the exemption certificate from the Buyer, to avoid payment of such local taxes or duties.
- b) In case where the Municipality or other local body insists upon payment of these duties or taxes the same should be paid by the Seller to avoid delay in supplies and possible demurrage charges. The receipt obtained for such payment should be forwarded to the Buyer without delay together with a copy of the relevant act or by-laws/notifications of the Municipality of the local body concerned to enable him to take up the question of refund with the concerned bodies if admissible under the said acts or rules.

(32.5) **Customs Duty –**

- (a) For imported stores offered against forward delivery, the Bidder shall quote prices thereof exclusive of customs duty. The Bidder shall specify separately the C.I.F. prices and total amount of customs duty payable. They will also indicate correctly the rate of customs duty applicable along with Indian Customs Tariff Number. Customs duty as actually paid will be reimbursed on production of necessary documents i.e. (i) Triplicate copy of the bill entry; (ii) copy of bill of lading; (iii) a copy of foreign principal's invoice. However, if the Bidder imports the stores in question against his own commercial quota Import License, he will also be required to submit in addition the triplicate copy of bills of entry etc. a certificate from his Internal auditor on the bill itself, to the effect that the following items/quantity in the bill of entry related to the stores imported against Defence Buyer contract Number----- dated-----.
- (b) Subsequent to the reimbursement of customs duty, the Bidder will submit to the concerned Payment Authority a certificate to the effect that he has not obtained any refund of customs duty subsequent to the payment of duty to the Customs authority by him. In addition, he shall also submit to the Paying Authority concerned a certificate immediately after a period of three months from the date of payment of the duty to customs authorities to the effect that he has not applied for refund of the customs duty subsequent to the payment of duty to the customs authorities by him
- (c) In case the Bidder obtains any refund of customs duty, subsequently to the payment of the same by him to the customs authorities and reimbursement of the customs duty to him by the Payment Authority, he should forthwith furnish the details of the refund obtained and afford full credit of the same to the Buyer.

33. **Option Clause:** This Tender enquiry has an Option Clause where in the buyer can exercise an option to procure an additional 50% of the original quantity in accordance with the same terms and conditions of the present contract. This will be applicable within the currency of contract. It will be entirely the discretion of the Buyer to exercise this option or not.

34. **Repeat Order Clause:** This Tender enquiry has a Repeat Order Clause, wherein the Buyer can order up to 50% quantity of the items under the present contract within six months from the date of supply/successful completion of this contract, the cost, terms & conditions remaining the same. The Bidder has to confirm acceptance of this clause. It will be entirely the discretion of the Buyer to place the Repeat order or not.

35. **Payment Terms:**

- a. **For domestic suppliers:** – 100 % in 30 days of receipt of stores and acceptance in final inspection at Ordnance Factory Khamaria no receipt of following documents;
  - i. Ink Signed copy of contractor bill / seller's bill.
  - ii. Ink-signed copy of Commercial invoice / seller's bill.
  - iii. Inspection Note.
  - iv. Claim for statutory and other levies to be supported with requisite documents / proof of payment such as Excise duty challan, Customs duty clearance certificate, Octroi receipt, proof of payment for EPF/ESIC contribution with nominal roll of beneficiaries, etc as applicable.
  - v. Exemption certificate for excise duty / Customs duty, if applicable.
  - vi. Guarantee / Warranty Certificate.
  - vii. Performance bank guarantee / Indemnity bond where applicable.

b. **For Foreign Suppliers: -** 100% value will be released through L.C. on shipment of material and on negotiation of the following documents:

- i. Signed Commercial Invoice – One Original + Two Copies
  - ii. One signed original clean shipped on board, negotiable bill of lading + three non-negotiable bills of lading.
  - iii. Packing list – One original + two copies.
  - iv. Certificate of country of origin certified by independent authority like Chamber of Commerce.
  - v. Certificate of conformity and acceptance report and test certificate at the pre-dispatch inspection signed by the seller with Lot No./Batch No., manufacture year and shelf life of each item (minimum 10 months from the date of receipt)
  - vi. A confirmation that the items are of current production year.
  - vii. Certificate of acceptance in pre-dispatch inspection issued by the purchaser in original, in case of pre-dispatch inspection.
  - viii. Supplier's certificate to the effect that contents each package are not less than those entered in the invoice and the packing list and the quality of goods are guaranteed as new and conform to the specification and the corresponding pilot sample is accepted by the purchaser. One original + two copies.
  - ix. Supplier's certificate stating that the payment claimed is not against replacement of defective material.
  - x. Dangerous Cargo certificate, if any.
  - xi. Physio-sanitary / Fumigation Certificate, if any.
  - xii. Submission of Performance Bond / Warranty Certificate.
  - xiii. Insurance policy of 110% if CIF / CIP supplier order.
36. **Pre-Contract Integrity Pact:** A Pre- Contract Integrity Pact would be signed between the Buyer and successful bidder for purchase exceeding Rs. Ten crore as per enclosed format (annexure-II). The bidder has to confirm the acceptance of this clause in the quotation as well as in compliance statement. The bidder has to submit the Pre Contract Integrity Pact duly filled and signed along with quotation.
37. **Fall Clause:** In cases where contracts have to be concluded with the firms, whose rate contract with DGS&D/other central procurement agencies has expired and renewal of RC has not taken place, a 'fall clause' should be incorporated in the Supply Order/Contract to the effect that during the currency of the Supply Order/Contract, in case rates are found to be lower on conclusion of rate contract, the lower rates as in the rate contract shall be applicable.
38. **Force Majeure clause:**
- (a) Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.
  - (b) In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.
  - (c) The party for which it becomes impossible to meet obligations under this contract due to Force Majeure conditions, is to notify in written form the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from the moment of their beginning.
  - (d) Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.
  - (e) If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.
39. **Franking Clause:** The following Franking clause will form part of the contract placed on successful Bidder –
- (a) **Franking Clause in the case of Acceptance of Goods** “The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the contract”.
  - (b) **Franking Clause in the case of Rejection of Goods** “The fact that the goods have been inspected after the delivery period and rejected by the Inspecting Officer will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract.”
40. **Freak Rates:** Price offered by a firm/vendor will be considered as freak if it is found to be less than 30% or more than the average of the rate at which orders have been placed over the last three years.

41. **Performance Security Deposit / Performance Bank Guarantee**

- (a) **In case of Indigenous Seller:** The Bidder will be required to furnish a Performance Security Deposit to purchaser by way of Performance Bank Guarantee through a public sector bank or a private sector bank authorized to conduct government business (ICICI Bank Ltd., Axis Bank Ltd or HDFC Bank Ltd.) for a sum equal to 10% of the Supply Order value within 30 days of signing of this Supply Order. Performance Bank Guarantee will be valid up to 60 days beyond the date of warranty. PSD has to be deposited in favour of PCA (Fys) Not GM in Form of DPM- 15. The custody of the instrument will be the GM and onus of verification of the genuineness of the instruments rests with GM. The BG will be returned to the supplier on successful completion of all his obligations under the contract. In case the execution of the contract is delayed beyond the contracted period and the purchaser grants extension of delivery period, with or without LD, the supplier must get the BG revalidated, if not already valid. The format of the PBG is given in Annexure -25.
- (b) **In case of Foreign Seller:** The Seller will be required to furnish a Performance Guarantee by way of a Bank Guarantee from seller's bank through an international recognized first class Bank in favour of Government of India, Ministry of Defence to be confirmed by public sector bank or a private sector bank authorized to conduct government business (ICICI Bank Ltd., Axis Bank Ltd or HDFC Bank Ltd.) equal to 10 (Ten percent) of the total value of this Supply Order i.e. for US \$ .....(US Dollars (in words) ..... only). Performance Bank Guarantee should be valid up to 60 days beyond the date of warranty. The Performance Bank Guarantee shall be considered open upon receipt by the buyer's bank. In case any claims or any other supply order obligations are outstanding, the seller will extend the Performance Bank Guarantee as asked for by the Buyer till such time as the seller settles all claims and completes all supply order obligations. The Performance Bank Guarantee will be subject to encashment by the Buyer, in case the conditions regarding adherence to delivery schedule, settlement of claims and other provisions of the Supply Order are not fulfilled by the Seller. The specimen of PBG is given in Form DPM-15, enclosed to Part-IV of this Supply Order.

42. **Specification:** The Seller guarantees to meet the specifications as per statement of Supply Order and to incorporate the modifications to the existing design configuration to meet the specific requirement of the Buyer Services as per modifications/requirements recommended after the Maintenance Evaluation Trials. All technical literature and drawings shall be amended as the modifications by the Seller before supply to the Buyer. The Seller, in consultation with the Buyer, may carry out technical up gradation/alterations in the design, drawings and specifications due to change in manufacturing procedures, indigenization or obsolescence. This will, however, not in any way, adversely affect the end specifications of the equipment. Changes in technical details, drawings repair and maintenance techniques along with necessary tools as a result of up gradation/alterations will be provided to the Buyer free of cost within (30) days of affecting such up gradation/alterations.

43. **Export License:** The Seller is to confirm that they have requisite export license from their Government and Authorization from the manufacturing plant, in case they are not the OEM, to export the military / non-military goods to India.

44. **Transportation:** Up to OFK in case of Indian firm and in case of foreign firm;

**CIF/CIP –** The stores shall be delivered CIF/CIP Mumbai Port India. Seller will bear the costs and freight necessary to bring the goods to the port of destination. The Seller also has to procure marine insurance against The Seller will contract for insurance and pay the insurance premium. Seller is also required to clear the goods for export. The stores shall be delivered to the Buyer by Indian ships only. The date of issue of the Bill of Lading shall be considered as the date of delivery. No part shipment of goods would be permitted. Trans-shipment of goods would not be permitted. In case it becomes inevitable to do so, the Seller shall not arrange part-shipments and/or transshipment without the express/prior written consent of the Buyer. The goods should be shipped by Indian vessels only. However, the Seller can still utilize the services of the M of D, Govt. of India Freight Forwarding Agent details for which will be provided by the Buyer. Seller will be required to communicate the following information invariably by telex/signed in case of import of Defence Stores being brought in commercial ships to Embarkation Head Quarters concerned well in advance before the Ship sails the port of loading:

- i. Name of the Ship
- ii. Port of Loading and name of Country.
- iii. ETA at port of Discharge i.e. Bombay, Calcutta, Madras and Cochin.
- iv. Number of Packages and weight.
- v. Nomenclature and details of major equipment.
- vi. Special instructions, if any stores of sensitive nature requiring special attention.

45. **Air lift:** Should the Buyer intend to airlift all or some of the stores, the Seller shall pack the stores accordingly on receipt of intimation to that effect from the Buyer. Such deliveries will be agreed upon well in advance and paid for as may be mutually agreed.

46. **Packing and Marking**

- a. The Seller shall provide packing and preservation of the equipment and spares/goods contracted so as to ensure their safety against damage in the conditions of land, sea and air transportation, transshipment, storage and weather hazards during transportation, subject to proper cargo handling. The Seller shall ensure that the stores are packed in containers, which are made sufficiently strong, and with seasoned wood. The packing cases should have hooks for lifting by crane/fork lift truck. Tags with proper marking shall be fastened to the special equipment, which cannot be packed.
- b. The packing of the equipment and spares/goods shall conform to the requirements of specifications and standards in force in the territory of the seller's country.
- c. Each spare, tools and accessory shall be packed in separate cartons. A label in English shall be pasted on the carton indicating the under mentioned details of the item contained in the carton. A tag in English with said information shall also be attached to six samples of the item. If quantity contracted is less than six then tag shall be affixed to complete quantity contracted of the item. The cartons shall then be packed in packing cases as required.
  - i) Part Number:
  - ii) Nomenclature:
  - iii) Contract annex number:
  - iv) Annex serial number:
  - v) Quantity contracted:
- d. One copy of the packing list in English shall be inserted in each cargo package, and the full set of the packing lists shall be placed in Case No.1 painted in a yellow colour.
- e. The Seller shall mark each package with indelible paint in the English language as follows:-
  - i. EXPORT
  - ii. Contract No. -----
  - iii. Consignee -----
  - iv. Port / airport of destination -----
  - v. Ultimate consignee -----
  - vi. SELLER -----
  - vii. Package No. -----
  - viii. Gross/net weight: -----
  - ix. Overall dimensions/volume: -----
  - x. The Seller's marking-----
- f. If necessary, each package shall be marked with warning instructions: < TOP>, "Do not turn over", category of cargo etc.
- g. Should any special equipment be returned to the seller by the buyer, the later shall provide normal packing which protects the equipment and spares/goods from the damage of deterioration during transportation by hand, air or see. In this case the buyer shall finalize the marking with the seller.
- h. The packing and forwarding charges should be borne by the manufacturer/contractor.

47. **Delivery Period** - Delivery period for supply of **item would be 09 months from the effective date of contract** including the time to obtain the Export License from concern authorities (In case of foreign firm). Please note that Contract can be cancelled unilaterally by the Buyer in case item(s) are not received within the contracted delivery period. Extension of contracted delivery period will be at the sole discretion of the Buyer, with applicability of LD clause.

48. **Quality:**

The quality of the stores delivered according to the present Supply Order shall correspond to the technical conditions and standards valid for the deliveries of the same stores for in seller's country or specifications enumerated as per RFP and shall also include therein modification to the stores suggested by the Buyer. Such modifications will be mutually agreed to. The Seller confirms that the stores to be supplied under this Supply Order shall be new i.e. not manufactured before (Year of Supply Order), and shall incorporate all the latest improvements and modifications thereto and spares of improved and modified equipment are backward integrated and interchangeable with same equipment supplied by the Seller in the past if any. The Seller shall supply an interchangeability certificate along with the changed part numbers wherein it should be mentioned that item would provide as much life as the original item.



49. **Quality Assurance:** The firm has to confirm the acceptance of OFK Acceptance Test Procedure (ATP) as per enclosure-B enclosed with tender documents. Buyer reserves the right to modify the ATP. Seller would be required to provide all test facilities at his premises for acceptance and inspection by Buyer. The item should be of the latest manufacture, conforming to the current production standard and having 100% defined life at the time of delivery.
50. **The following quality documents to be supplied by the firm along with bulk supply:**
- The supply required should be of current production with year of manufacture and Lot No. version and its shelf life.
  - ACM of propellant lot wise along with its ballistic report and quantity against each propellant lot
  - Laboratory test report (chemical) including closed vessel test and Calorimetric value test of propellant lot wise.
  - Detailed firing test report of propellant i.e. initial charge assessment, confirmatory and temperature co-efficient – lot- wise clearly indicating charge mass and version.
  - Details of standard lot used for comparison including its ballistic.
  - Gram equivalent data (charge in velocity per gram charge in quantity filled)
  - Test certificate physical and chemical test report including evidence of other specified static and dynamics testing.
  - Quality Assurance Documents (QAD) reports.
  - Firm's guarantee / warranty certificates.
  - Certificate of origin.
  - Packing details lot wise and quantity in each package.
  - Any other relevant test report / Quality documents required by inspector to be provided by the firm.

Declaration certificate as: We hereby declare that the products .....quantity ..... supplied by our company .....vide challan No. .... as per the S.O. no & date are meeting all requirements laid down in the specification. We here by undertake to replace whole and / or part consignment as the case may be in the event of its not meeting the requirements / standards laid down in the supply order.

51. **Claims:** The following Claims clause will form part of the contract placed on successful Bidder –
- i. The claims may be presented either: (a) on quantity of the stores, where the quantity does not correspond to the quantity shown in the Packing List/Insufficiency in packing, or (b) on quality of the stores, where quality does not correspond to the quality mentioned in the contract.
  - ii. The quantity claims for deficiency of quantity shall be presented within 45 days of completion of JRI and acceptance of goods. The quantity claim shall be submitted to the Seller as per Form DPM-22 (Available in MoD website and can be given on request).
  - iii. The quality claims for defects or deficiencies in quality noticed during the JRI shall be presented within 45 days of completion of JRI and acceptance of goods. Quality claims shall be presented for defects or deficiencies in quality noticed during warranty period earliest but not later than 45 days after expiry of the guarantee period. The quality claims shall be submitted to the Seller as per Form of bpm-33 (Available in M of D website and can be given on request).
  - iv. The description and quantity of the stores are to be furnished to the Seller along with concrete reasons for making the claims. Copies of all the justifying documents shall be enclosed to the presented claim. The Seller will settle the claims within 45 days from the date of the receipt of the received during this period the claim will be deemed to have been accepted.
  - v. The Seller shall collect the defective or rejected goods from the location nominated by the Buyer
  - vi. Claims may also be settled by reduction of cost of goods under claim from bonds submitted by the Seller or payment of claim amount by Seller through demand draft drawn on an Indian Bank, in favour of General Manager, Ordnance Factory Khamaria, Jabalpur (MP) India.
  - vii. The quality claims will be raised solely by the Buyer and without any certification / countersigning by seller's representative stationed in India.
52. **Pre-inspection** - Supplier must satisfy themselves that the stores are in accordance with the terms and conditions and fully conform to the required specifications by carrying out a thorough pre-inspection of each lot before actually tendering the same for inspection of the Inspecting Officer nominated under the terms of the contract. The contractor/manufacturer must keep a record of the pre-inspection carried out of which must be submitted to the Inspecting Officer. If the Inspecting Officer finds that the pre-inspection of the consignment as required above has not been carried out the consignment is liable to be rejected.
53. **Pre-Dispatch Inspection:** The following Pre-Dispatch Inspection clause will form part of the contract placed on successful bidder.
- (a) The Buyer's representatives will carry out Pre Dispatch Inspection (PDI) of the Equipment in order to check their compliance with specifications in accordance with its usual standard procedures. Upon successful completion such PDI, the Seller and Buyer will issue and sign a Certificate of Conformity as per specimen at **Form OFBPM-13** (available in OFB website and can be given on request)

- (b) The Seller shall intimate the Buyer at least 45 days before the scheduled date of PDI. The time required for completing visa formalities by the Seller should not be inclusive in this notice. The Buyer will send his authorized representative(s) to attend the PDI.
- (c) The list of Buyer's representatives together with their particulars including name, title, date and place of birth, passport numbers including date of issue and date of expiry, address, etc. must be communicated by the Buyer at least fifteen days (15 days) in advance to apply for the necessary authorizations and clearances.
- (d) The Buyer reserves the right not to attend the PDI or to request for a delay in the beginning of the PDI with a maximum of fifteen (15) days from the date fixed for such PDI in order to allow his representative(s) to attend such tests, in which cases he shall inform in writing the Seller within 15 days before the date of the beginning of the PDI. Should the Buyer request for such postponement, liquidated damages, if any, shall not apply. In case the Buyer has informs the Seller within the period mentioned herein above that he cannot attend the PDI or in case the Buyer does not come at the postponed date requested by him for performance of the PDI as mentioned above, the Seller shall be entitled to carry out said tests alone as scheduled. The Certificate of Conformity and the Acceptance Test Report will be signed by the Seller's QA representative alone and such documents bearing the sole signature of the Seller's QA representative shall have the same value and effect as if they have been signed by both Parties. In case Buyer does not elect to attend the PDI, then the Buyer shall intimate the Seller in writing that it does not wish to attend the PDI.
- (e) The Seller shall provide all reasonable facilities, access and assistance to the Buyer's Representative for safety and convenience in the performance of their duties in Seller's Country.
- (f) All costs associated with the stay of Buyer's representative(s) in the country where PDI is to be carried out, including travel expenses, boarding and lodging accommodation, daily expenses shall be borne by the Buyer.

54. **Joint Receipt Inspection:** The following Joint Receipt Inspection clause will form part of the contract placed on successful Bidder-

- (a) The Parties agree that the Joint Receipt Inspection (JRI) of delivered goods shall be conducted on arrival in India at O.F.K. Jabalpur. JRI shall be completed within 120 days (for armament/ammunition) / 90 days (for other tan armament/ammunition) of arrival of good at Port Consignee. JRI will consist of;
  - (i) Quantitative checking to verify that the quantities of the delivered goods correspond to the quantities defined in this contract and the invoices.
  - (ii) Complete functional checking of the stores / equipment as per specifications in the contract and as per procedures and tests laid down by the Buyer but functional checking of spares not be done.
  - (iii) Check proof and firing, if required.
- (b) JRI will be carried out by the Buyer with a prior notice of fifteen (15) days to attend the JRI for the delivered goods. The Seller shall have the right not to attend the JRI. The bio-data of the Seller's Representative will be communicated fifteen (15) days prior to the dispatch of goods to the Buyer for obtaining the necessary security clearance in accordance with the rules applicable in the Buyers country.
- (c) Up on completion of each JRI, JRI proceedings and Acceptance Certificates will be signed by both parties. In case the Seller's representative is not present then the JRI proceedings and Acceptance Certificate shall ber signed by the Buyer's representative only and same shall be binding on the Seller. Copy of JRI proceedings and Acceptance Certificate shall be dispatched to Seller within 30 days of completion of JRI. In case of deficiency in quantity and quality or defects, details of these shall be recorded in the JRI proceedings. Acceptance Certificate shall not be issued and claims raised as per Article on Claims in this contract. In case of claims, Acceptance Certificate shall be issued by perform the JRI as mentioned above reasons exclusively.

55. **Warranty:** The following Warranty will form part of the contract placed on successful Bidder –

- i. The Seller warrants that the goods supplied under the contract conform to technical specifications prescribed and shall perform according to the said technical specifications.
- ii. The Seller warrants for a period of 18 months from the date of acceptance of stores in supplier's country or 12 calendar months from the arrival in India whichever is later, that the goods/stores supplied under the contract and each component used in the manufacture thereof shall be free from all types of defects/failures. Any items are found to be defective due to incorrect design, defective material or faulty workmanship; the same will be replaced by free of cost, supply new parts or to adjust the defective parts.
- iii. If within the period of warranty, the goods are reported by the Buyer to have failed to perform as per the specifications, the Seller shall either replace or rectify the same free of charge, within a maximum period of 45 days of notification of such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by the user in the logbook. Spares required for warranty repairs shall be provided free of cost by the Seller. The Seller also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising

due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Seller.

- iv. The Seller will guarantee the shelf life of (10) years under the Indian tropical condition as given below provided it is stored in original manufacturer's packing:-
- |                                     |                                 |
|-------------------------------------|---------------------------------|
| (a) Maximum Temperature             | + 45 Degree Centigrade          |
| (b) Minimum Temperature             | - 35 Degree Centigrade          |
| (c) Average Temperature of the year | ≤ + 30 Degree Centigrade        |
| (d) Maximum temperature change      | ≤ 20 Degree Centigrade/24 Hours |
| (e) Maximum Humidity                | ≤ 75%                           |
| (f) Average Humidity of the year    | ≤ 55%                           |

56. In case the firm is not registered for the tendered item with any of the Ordnance Factory, the firm should submit the form for vendor registration (as per annexure-I) along with the following registration fee;

- (a) Rs. 2000/- for SSI units.  
(b) Rs. 5000/- for other units.

The registration fee to be paid in the form of Demand Draft in favour of "General Manager, Ordnance Factory Khamaria, Jabalpur" payable at Jabalpur.

The vendor registration form along with Registration fee should be forwarded by post to "The General Manager Ordnance Factory Khamaria, Jabalpur" in a separate envelope clearly mentioning the "Vendor Registration Form for GTE No. .... and due date of opening of Technical Bid ....." on the envelope so as to reach this factory by the due date and time for submission of the technical bid.

The registration fee is required to be paid by all firms if they are not registered for subject /similar item(s) with any of Indian Ordnance Factories and also in case it is decided to carry out Capacity Verification of the firm.

57. **The tenders are invited in two bid system viz (i) Technical Bid (ii) Price Bids.**

- a) **Technical Bid** – The Technical bid should contain the following along with copies of relevant documents.
- b) Quantity quoted for (**minimum 50 %**).
- c) Validity of offer – 180 days minimum.
- d) Details of technical capability including list of Plant & Machineries, test equipments, manpower.
- e) Details of Quality Systems, ISO – 9000 certifications etc.
- f) Documents in support of financial capability in the form of;
- f-i) Copies of last 03 years annual report indicating profit and losses.
- f-ii) Copies of partnership deeds.
- f-iii) Copy of certificate of incorporation and Articles of Association.
- f-iv) Copies of ownership documents in respect of manufacturing plant.
- g) Documents in support of supplying similar items to Ordnance Factories/Other Organizations in the form of copies of supply orders executed and their performance certificates.
- h) Copies of valid registrations, if any, with Ordnance Factories/ DGQA/NSIC/DGS&D or concerned Departments or Ministries of the Government of India etc.
- i) **Earnest Money Deposit (EMD)** :Bidders are required to submit Earnest Money Deposit (EMD) for amount of **Rs. 31,68,000/-** (Rs. Thirty one lakh sixty eight thousand only) or **USD 47000 (USD forty seven thousand only)** along with their bids. The EMD may be submitted in the form of an Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque in favour of "General Manager, Ordnance Factory Khamaria, Jabalpur" payable at Jabalpur, India or Bank Guarantee from any of the public sector banks or a private sector bank authorized to conduct government business as per Form OFBPM-13 (Available in OFB website and can be provided on request). EMD is to remain valid for a period of forty-five days beyond the final bid validity period. EMD of the unsuccessful bidders will be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract. The Bid Security of the successful bidder would be returned, without any interest whatsoever, after the receipt of Performance Security from them as called for in the contract. **EMD is not required to be submitted by those Bidders who are registered with Ordnance Factories, the Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation (NSIC) or concerned Departments or Ministries of the Government of India but firms have to give a copy of documentary proof for the same along with technical bid.** The EMD will be forfeited if the bidder withdraws or amends, impairs or derogates from the tender in any respect within the validity period of their tender.
- i. Confirmation to submit Performance Security Deposit / Performance Bank Guaranty (In case of foreign firm) @ 10 % of order value, if supply order is placed on them, irrespective of their registration with Ordnance Factories /DGS&D/NSIC.
- ii. An undertaking on firms letter head that the firm will not be part of CARTEL with other vendors and will quote competitive rates in future tenders, otherwise would face expulsion from the list of approved vendors.
- iii. Acceptance of Liquidated Damages clause, Warranty Clause, Penalty for use of undue influence clause, Access to Book of accounts clause, Agents/ Agency commission clause.

iv. **Compliance Statement, duly filled in applications without this Compliance Statement duly filled and signed will be summarily rejected.**

58. **Price Bid** – The Price Bid should indicate only the price of the tendered items.

- (a) The price bid should not contain any other terms and conditions.
- (b) Quoted price should be in words and figure. Any discrepancy between words and figures, the price in words shall Prevail.
- (c) The price quoted should be firm and fixed.
- (d) The price quoted should be as per the tendered accounting unit. If different unit is inescapable, the conversion formula should be indicated.
- (e) The price should be quoted giving break-up as;
  - (i) Basic Rate both in figure and words.
  - (ii) Customs Duty with surcharge, if any
  - (iii) Excise Duty with surcharge, if any
  - (iv) Sales Tax/VAT, if any
  - (v) Packing charges, if applicable extra
  - (vi) Forwarding charges, if applicable extra
  - (vii) Any other charges
  - (viii) Total Price
- (ix) **The price should be quoted on;**
  - (i) CIF- Indian port/ Airport basis only. (In case of foreign firm)
  - (ii) OFK (in case of Indian firm)

59. **Evaluation Criteria & Price Bid issues.**

60. **Evaluation Criteria:** The broad guidelines for evaluation of Bids will be as follows:

- (a). Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the RFP, both technically and commercially.
- (b). In respect of Two-Bid system, the technical Bids forwarded by the Bidders will be evaluated by the Buyer with reference to the technical characteristics of the items as mentioned in the TENDER ENQUIRY NOTICE. The compliance of Technical Bids would be determined on the basis of the parameters specified in the TENDER ENQUIRY NOTICE. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.
- (c). **In cases where only Indian Bidders are competing: L-1 bidder will be determined by excluding levies, taxes and duties levied by Central/ State/Local government such as excise duty, VAT, Service Tax, Octroi/Entry Tax, etc on final product, as quoted above.**
- (d) The Lowest Bid will be decided upon the lowest price quoted by the particular Bidder as per the Price Format given at Para 2 below. The consideration of taxes and duties in evaluation process will be as follows:

Bidders must indicate separately the relevant Taxes/Duties Likely to be paid in connection with delivery of completed goods specified in RFP. In absence of this, the total cost quoted by them in their bids will be taken in to account in the ranking of bids.

If a Bidder is exempted from payment of any duty/tax up to any value of supplies from them, he should clearly state that no such duty/tax will be charged by them up to limit of exemption which they may have. If any concessions is available in regard to rate/quantum of any Duty/Tax, it should be brought out clearly. In such cases, relevant certificate will be issued by the Buyer later to enable the Seller to obtain exemptions from taxation authorities.

Any charges in levies, taxes and duties levied by Central/State/Local government such as excise duty, VAT, Service Tax, Octroi/entry tax etc, on final product up wards as a result of any statutory variation taking place within contract period shall be allowed re-imbusement by the Buyer, to the extent of actual quantum of such duty/tax paid by the Seller. Similarly, in case of downward revision in any such duty/tax, the actual quantum of reduction of such duty/tax shall be reimbursed to the Buyer by the Seller. All such adjustments shall be reliefs, exemptions, rebates etc, if any, obtained by the Seller. Section 64-A of Sales of Goods Act will be relevant in this situation.

Levies, Taxes and duties vied by Central/State/Local government such as excise duty, VAT, Service Tax, Octroi/entry tax etc, on final produce will be paid by the Buyer on actual, based on relevant documentary evidence. Taxes and duties on input items will not be paid by Buyer and they may not be indicated separately in the bids. Bidders are required to include the same in the pricing of their product.

- (c-i) In cases where only indigenous Bidders are competing, all taxes and duties (including those for which exemption Certificates are issued) quoted by the Bidders will be considered. The ultimate cost to the Buyer would be the deciding factor for ranking of Bids.
- (c-ii) In cases where both foreign and indigenous Bidders are competing, following criteria would be followed;
- (c-iii) In case of foreign Bidders, the basic cost (CIF) quoted by them would be the basis for the purpose of comparison of various tenders.

- (d). In cases where only Indian Bidders are competing, L-1 bidder will be determined by excluding levies, taxes and duties levied by Central/State/Local governments such as excise duty, VAT, Service tax, Octroi/entry tax, etc on final product, as quoted by bidders.
- (e). Sales tax and other local levies, i.e. Octroi, entry tax etc would be ignored in case of indigenous Bidders.
- (f). In import cases, all the foreign quotes will be brought to a common denomination in Indian Rupees by adopting the exchange rate as BC selling rate of the State Bank of India on the date of the opening of Price Bids.
- (g). If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.
- (h). The Lowest Acceptable Bid will be considered further for placement of contract / Supply Order after complete clarification and price negotiations as decided by the Buyer. The Buyer will have the right to award contracts to different Bidders for being lowest in particular items. The Buyer also reserves the right to do Apportionment of Quantity, if it is convinced that Lowest Bidder is not in a position to supply full quantity in stipulated time.
- (i). any other criteria as applicable to suit a particular case.

61. **Price Bid Format:** The Price Bid Format is given below and Bidders are required to fill this up correctly with full details:

a. *Item(s) -*

Item	Unit	Price	Qty	Total
i. A				
ii. B				
iii. C				
iv. Total price of item(s)				

i. A

ii. B

iii. C

iv. Total price of item(s)

b. *Accessories*

c. *Installation/Commissioning*

d. *Training*

e. *Technical literature*

f. *Tools*

g. *AMC*

h. *Any other requirement*

**Note** . 1. Determination of L-1 will be done based on total of basic prices (not including levies, taxes and duties levied by Central/State/Local governments such as excise duty, VAT, Service tax, Octroi/entry tax, etc on final product) of all items / requirements as mentioned above.

**Additional information in Price Bid on Taxes and Duties (not in scope of L-1 determination) –**

a. Is Excise Duty extra?

b. If yes, mention the following –

i. Total value of items on which Excise Duty is leviable

ii. Rate of Excise duty (item-wise if different ED is applicable.)

iii. Surcharge on Excise duty, if applicable.

iv. Total value of excise duty payable.

c. Is Excise Duty Exemption (EDE) required?

d. If yes, then mention and enclose the following:

i. Excise notification number under which EDE can be given

e. Is VAT extra?

f. If yes, then mention the following –

i. Total value on which VAT is leviable

ii. Rate of VAT

iii. Total value of VAT leviable.

g. Is Service Tax extra?

h. If yes, then mention the following –

i. Total value of Services on which Service Tax is leviable.

ii. Rate of Service Tax leviable

iii. Total value of Service Tax leviable

i. Is Custom Duty Exemption (CDE) required?

j. If yes, then mention the following-

i. Custom notification number under which CDE can be given (enclose a copy)

ii. CIF value of stores to be imported.

iii. Rate of Custom Duty payable.

iv. Total amount of Customs Duty payable.

k. Octroi / Entry taxes

l. *Any other Taxes/Duties.*

62. **Quotations without above details, Registration fee/EMD, Tender fee are liable to be rejected.**
63. The General Manager, Ordnance Factory Khamaria reserves the right to verify the documents and details submitted by the firm(s) and may reject the unsatisfactory offers based on physical capacity verification or based on technical scrutiny of documents.
64. **Instructions for filling the tenders** –
- i. The Technical Bid should be sealed in an envelope and envelope will be marked as “Technical Bid” with tender notice no. and date.
  - ii. Price should not be mentioned in the technical bid.
  - iii. The Price Bid should be made separately and sealed in a separate envelope for each item. This envelope should be marked as “Price Bid” with tender notice number and date.
  - iv. Both Sealed envelopes i.e. Technical Bid and Price Bids should be sealed in another envelope. This envelope will be marked with tender advertisement no. , date and due date of opening of technical bids and addressed to “The General Manager, Ordnance Factory Khamaria, Jabalpur (MP) PIN-482005”. This envelope should be dropped in the tender box marked as “PV Tender Box “kept at the reception office at the main gate or to be sent by registered post so as to reach this factory by 13:00 Hrs. on due date.
  - v. No responsibility will be taken for postal delay or non-delivery/non-receipt of tender documents. If the sealed offers are dropped in the wrong box, they will be rendered invalid.
  - vi. Quotations received after due date and time will not be considered.
65. Technical Bids ONLY will be opened on due date and time mentioned above. If tenderers desire, may depute their representative, duly authorizing in writing, to be present at the time of opening of tenders.
66. If due to any exigency the due date of opening is declared as holiday, the tenders will be opened on next working day at the same time or any other day and time as intimated by the buyer.
67. Price Bids will be opened only for shortlisted firms based on the above criteria. The date for opening of price bid will be intimated to the eligible firms separately.
68. Conditional offers will not be accepted.
69. Quotations sent by fax will not be considered.
70. **Jurisdiction**: All questions, disputes or differences arising under out of or in connection with the contract, if concluded shall be subject to the exclusive jurisdiction of the court-within the local limits of whose jurisdiction the place from which the Acceptance of Tender is issued, is situated.
71. The General Manager, Ordnance Factory Khamaria reserves the right to reject / cancel/scrap the Tender Enquiry or change the quantity of tendered item(s) without notifying any reason whatsoever. In case of any dispute, the decision of General Manager, Ordnance Factory Khamaria shall be final and binding on all participants in the tender.
72. If Tender Forms are downloaded from the website, cost of Tender set to be paid at the time of submitting tenders otherwise tender shall be ignored.
73. Details of this tender notice along with compliance statement (annexure-I) is also available on website <http://tenders.gov.in> and may be viewed through advanced search option selecting “Ordnance Factory Board” as organization and entering “Ordnance Factory Khamaria” in location.
74. Rejected material will be sent at risk & cost of supplier.
75. Applied firm has to confirm/ certify that, the goods to be delivered shall be fresh and will be manufacture after the date of opening of GTE.
76. Sr. No. 19 to 55 will be the part of the supply order terms and conditions to be placed no successful bidder.

**(R.K.GUPTA)**  
JT .GENERAL MANAGER  
FOR SR.GENERAL MANAGER  
ORDNANCE FACTORY KHAMARIA

Enclosures – Compliance Statement (Annexure-I)

Compliance Statement

Sl. No.	Terms/Condition of Tender	Compliance	If not complied, specific deviations
1	Quoted for at least 50% of tender qty.		
2	Details of technical capability including list of Plants & machineries, test equipment man power attached.		
3	Details of quality system, ISO-9000 certificate etc attached.		
4	Documents in support of financial capability attached.		
5	Documents in support of supplying similar items to Ordnance Factories/Other organizations attached		
6	Copies of valid registrations with Ordnance Factories/DGQA/NSIC /DGS&D etc attached		
7	Undertaking that the firm will not be part of Cartel in future tenders attached		
8	Rs. 3168000/- Or USD 47000/- submitted. Details of EMD i.e. Demand Draft/FDR/BG No. & Dt. Validity and Banker's name furnished in quotation.		
9	Price mentioned both in words & figure.		
10	Prices are quoted showing Basic Price & Taxes / Duties separately.		
11	All inclusive price is quoted separately.		
12	Installation / commissioning/ Freight / Packing charges, if any.		
13	Prices quoted in Rupees / Foreign Exchange.		
14	Prices are firm & fixed.		
15	Delivery & Prices on (i) CIF- Indian Port/Airport basis. (In case of foreign bidder) (ii) FOR-OFK basis in case of Indian bidder)		
16	Whether the offered store is as per specifications mentioned in TE.		
17	Inspection at Factory/At firms premises.		
18	Delivery as per Delivery Period mentioned in TE.		
19	Payment terms of TE acceptable.		
20	Agreed for submission of security deposit /Performance security <b>deposit @ 10%</b> .		
21	Liquidated damages clause <b>@ 10%</b> (maximum) accepted.		
22	Warranty clause accepted.		
23	Penalty for use of undue influence clause accepted.		
24	Access to book of account clause accepted.		
25	Agents/ Agency commission clause accepted.		
26	Arbitration clause accepted.		
27	Dispute subject to Indian law jurisdiction accepted.		
28	Whether the tender is signed by authorized signatory.		
29	Return of tender documents with all pages duly signed and stamped.		
30	Whether Force Majeure clause included in quotation.		
31	Validity of offer as per tender i.e. <b>180 days from the date of opening of technical bid.</b>		
32	Acceptance of Pre Dispatch Inspection.		
33	Acceptance of Joint Receipt Inspection.		

Signature of Authorized person  
With name and seal

**Note:** Please indicate Yes/No clearly against each clause. Offer without this statement filled completely and duly signed and sealed will be rejected.

## **PRE- CONTRACT INTEGRITY PACT**

### **General:**

1. Whereas the President of India, represented by General Manager \_\_\_\_\_, hereinafter referred to as the Buyer and the first party, proposes to procure (Name of the Equipment), hereinafter referred to as Defence Stores, and M/s \_\_\_\_\_ represented by, \_\_\_\_\_ (Designation which terms, unless expressly indicated by the contract, shall be deemed to include its successors and its assignees), hereinafter referred to as the Bidder/Seller and the second party, is willing to offer/has offered the stores.
2. Whereas the Bidder is a private company/public company/partnership/ registered export agency, constituted in accordance with the relevant law in the matter and the Buyer is a Ministry of the Government of India, performing its functions on behalf of the President of India.

### **Objectives:**

3. Now, therefore, the Buyer and the Bidder agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence / unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-
  - 3.1 Enabling the Buyer to obtain the desired defence stores at a competitive price in conformity with the defined specifications of the Services by avoiding the high cost and the distortionary impact of corruption on public procurement, and
  - 3.2 Enabling bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Buyer will commit to prevent corruption, in any form, by their officials by following transparent procedures.

### **Commitments of the Buyer:**

4. The Buyer Commits itself to the following:-
  - 4.1 The Buyer undertakes that no official of the Buyer, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.
  - 4.2 The Buyer will, during the pre-contract stage, treat all Bidders alike, and will provide to all Bidders the same information and will not provide any such information to any particular Bidder which could afford an advantage to that particular Bidder in comparison to other Bidders.
  - 4.3 All the officials of the Buyer will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
5. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Buyer with full and verifiable facts and the same is prima facie found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

### **Commitments of Bidders:**

6. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:-
  - 6.1 The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.
  - 6.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.



- 6.3 The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 6.4 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 6.5 The Bidder further confirms and declares to the Buyer that the Bidder is the original manufacturer/integrator/authorized government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
- 6.6 The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Buyer or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 6.7 The Bidder shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Buyer as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.
- 6.8 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 6.9 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

7. **Previous Transgression:**

- 7.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify bidder's exclusion from the tender process.
- 7.2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

8. **Earnest Money/Security Deposit:**

- 8.1 All procurement cases above Rs. 10.00 crore and up to Rs. 100.00 crore, IP is required to be executed without any additional financial guarantee. The EMD/SD/PBG required to be submitted by the vendor as prescribed in the respective Procurement Manual shall only act as the financial guarantee for the IP.
- 8.2 The validity of the IP will be the validity of the EMD/SD/PBG or the complete conclusion of contractual obligations to complete satisfaction of both the bidder and the buyer, whichever is later.

In the case there are more than one bidder, the Earnest Money/Security Deposit shall be refunded by the buyer to those bidder(s) whose bid(s) does/do not qualify for negotiation by the Commercial Negotiation Committee (CNC)/Tender Purchase Committee (TPC), as constituted by the Buyer, immediately after a recommendation is made by the CNC/TPC on the bid(s) after an evaluation.

- 8.3 In case of successful bidder a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of this pact.
- 8.4 The provisions regarding Sanctions for Violation in Integrity Pact include forfeiture of Performance Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of Integrity Pact.
- 8.5 No interest shall be payable by the Buyer to the Bidder(s) on Earnest Money/ Security Deposit for the period of its currency.

9. **Company Code of Conduct:**

- 9.1 Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behavior) and a compliance program for the implementation of the code of conduct throughout the company.

## 10. **Sanctions for Violation:**

10.1 Any breach of the aforesaid provisions by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act 1988 or any other act enacted for the prevention of corruption shall entitle the Buyer to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.
- (ii) The Earnest Money/Security Deposit/Performance Bond shall stand forfeited either fully or partially, as decided by the Buyer and the Buyer shall not be required to assign any reason therefore.  
To immediately cancel the contract, if already signed, without giving any compensation to the Bidder.
- (iii) To recover all sums already paid by the Buyer, and in case of an Indian Bidder with interest thereon at 2% higher than the prevailing Prime Landing Rate, while in case of a Bidder from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the Bidder from the Buyer in connection with any other contract for any other defence stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (iv) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the Bidder, in order to recover the payments, already made by the Buyer, along with interest.
- (v) To cancel all or any other Contracts with the Bidder.
- (vi) To debar the Bidder from entering into any bid from the Government of India for a minimum period of five years, which may be further extended at the discretion of the Buyer.
- (vii) To recover all sums paid in violation of this Pact by Bidder(s) to any middleman or agent or broker with a view to securing the contract.
- (viii) If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is closely related to any of the officers of the Buyer, or alternatively, if any close relative of an officer of the Buyer has financial interest/stake in Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. Any failure to disclose the interest involved shall entitle the Buyer to rescind the contract without payment of any compensation to the Bidder.  
The term 'close relative' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependants upon Government servant.
- (ix) The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Buyer, and if he does so, the Buyer shall be entitled forthwith to rescind the contract and all other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Buyer resulting from such rescission and the Buyer shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.
- (x) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Buyer with the Bidder, the same shall not be opened.

10.2 The decision of the Buyer to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder shall be final and binding on the Bidder, however, the Bidder can approach the monitor appointed for the purposes of this Pact.

## 11. **Fall Clause:**

11.1 The Bidder undertakes that he has not supplied/is not supplying the similar systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India and if it is found at any stage that the similar system or sub-system was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Buyer, if the contract has already been concluded.

11.2 The Bidder shall strive to accord the most favoured customer treatment to the Buyer in respect of all matters pertaining to the present case.

12. **Independent Monitors:**

12.1 The Buyer has appointed Independent Monitors for this Pact in consultation with the Central Vigilance Commission .Names and Addresses of the Monitor is:

Name: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Email:**

12.2 As soon as the monitor notices, or believes to notice, a violation of this Pact, he will so inform the Head of the Acquisition Wing of the Ministry of Defence, Government of India. Integrity pact is signed, the Buyer shall provide a copy thereof, along with a brief background of the case to the Independent Monitors.

13. **Examination of Books of Accounts:**

In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Buyer or its agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

14. **Law and Place of Jurisdiction:**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer i.e. New Delhi.

15. **Other Legal Actions:**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

16. **Validity:**

16.1 The validity of this Integrity Pact shall be from date of its signing and will remain valid up to the validity of the PBG or the complete conclusion of contractual obligations to complete satisfaction of both the bidder and the buyer, whichever is later.

16.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

17. The Parties hereby sign this Integrity Pact. \_\_\_\_\_ on \_\_\_\_\_.

**BUYER**

**BIDDER**

Witness:

Witness:

1. \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

2. \_\_\_\_\_

**INDIAN ORDNANCE FACTORIES  
 VENDOR REGISTRATION REQUEST FORM  
 (To be filled by Firm)  
 PART – I ADMINISTRATIVE INFORMATION**

1. Name of the company/vendor  
 .....
2. Address: a) regd. Office:  
 .....  
 .....  
 .....PIN.....  
 STD CODE .....PH No 1: .....  
 PH. No.2 .....FAX.....  
 E.MAIL.....MOBILE.....  
 (b) WORKS/FACTORY:  
 .....  
 .....  
 PIN.....  
 STD CODE .....PH No 1: .....  
 PH. No.2 .....FAX.....  
 E.MAIL.....MOBILE.....  
 (In case of works at more than one location, a separate sheet to be attached for page 1 only)
3. Address of local branch/branch office /sole selling agent (If any)  
 .....  
 .....  
 .....PIN.....  
 STD CODE .....PH No 1: .....  
 PH. No.2 .....FAX.....  
 E-Mail.....Mobile.....
4. Date of incorporation of the company/ commencement of production...  
 .....
5. Nature of company.....  
 (Attach relevant copies of incorporation / partnership deed/registration of enterprise)  
 A. Proprietary  
 B. Pvt. Limited  
 C. P.S.U  
 D. Partnership
6. Category of industry:  
 (a) Large scale. (Attach relevant registration documents)  
 (b) Medium scale  
 (c) Small scale
7. Details of registration with ..... (Attach relevant Copies of Registration Certificate)  
 A. NSIC/SSI  
 B. DGS&D  
 C. DGQA  
 D. Other defence departments  
 E. Any other ord. Fys. For different product
8. Name of proprietor /M.D./Partner  
 Name.....  
 Address .....  
 PIN.....  
 STD CODE .....PH No 1: .....  
 PH. No.2 .....FAX.....  
 E.MAIL.....MOBILE.....

9. Nature of business.....

- A. Manufacturing
- B. Sole Selling/Authorized agent
- C. Trader/Dealer/Processor/Repacker

10. Details of current products & services

Sl. No.	Type	Description	Licensed/installedRange/Capacity	Annual productionFor preceding two years

(Attach product literature & leaflet, if available)

11. Details of technical collaborations (foreign or indigenous)

Sl. No.	Product name & address of Collaborator	Year	Current or not

12. Details of major customers along with list of items supplied to individual customer

Sl. No.	Name & Address	Product Supplied	S.o. no. & date	Date of last Supply	Value

**Part - ii financial information**

13. I. Name of bankers & account nos. And address (with phone no. STD code, pin, fax & e-mail)

- Principal Banker
- Type of Account
- Account No.
- Credit & Overdraft Facility & Limit
- ii. - Tan Details
- Tan No.
- Address of Assessing I.T.O

14. Income tax returns for three years.

15. Valid license for production

- License No.
- Details of Licensing Authority
- Validity Period
- Valid For Products

16. Valid excise registration number

17. Valid state/ vat/ central sales tax registration certificate.

18. Ownership of factory land & building company: owned/rented

(Attach proof of ownership, agreement detailed site plan of layout of premises clearly depicting areas eg. Production area (approx. Location of plant/machinery Stores, bond room, inspection etc.

Also indicate boundary wall)

- Production Area
- Bond Room Area
- Inspection Room Area
- Storage Area
- Over all Area

19. Indicate annual turnover/sales for last three years and present net worth of the firm & status of orders in hand.

20. Audited balance sheet & profit & loss a/c for last three years and total accumulated losses if any.

21. Value of capital employed

22. Value of current assets (As per balance sheet)

23. Value of current liabilities (As per balance sheet)

24. Details of hypothecation
25. Relevant information's with complete details about sister concerns subsidiaries, if any.
26. Source of finance with borrowing limit and bank guarantee.
27. Whether ever filed or petition for bankcurrupcy or re-organization?
28. Whether debarred from government contracts/ ordnance factories?
29. Whether terminated for contract non-performance?
30. Whether changed firm's name in last 5 years (if yes details of previous name registration no. & address)

**PART – III TECHNICAL**

31. Total area of factory premises:

<b>TOTAL AREA (SQR. MTR.)</b>	<b>COVERED AREA/FLOOR AREA ( SQR. MTR.)</b>	<b>BOND SPACE NO. OF ROOMS</b>	<b>SQR. MTR.</b>
-----------------------------------	---	------------------------------------	------------------

32. Details of electric power:

- a) Sanctioned .....
- b) Installed .....
- C) Stand by Arrangement of Power.....  
(Indicate Capacity of Generator)

33. Details of man power employed:

- |                        |                     |
|------------------------|---------------------|
| a) Technical           | B) Administrative   |
| Managerial.....        | Managerial.....     |
| Supervisory.....       | Asstt/Clerical..... |
| Lab. Technicians.....  |                     |
| Labourers Skilled..... |                     |
| <b>TOTAL.....</b>      | <b>TOTAL.....</b>   |
- c) Employees with degree qualification in technology/engg.
  - d) Employees with diploma qualification in Engg.
  - e) Employees with ITI diploma in any Engg. Trade

34. a) Details of defence stores for which registration is sought:

<b>SL. NO.</b>	<b>NOMENCLATURE</b>	<b>SPECN. NO.</b>	<b>PRODUCTION CAPACITY</b>
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

35. (a) Details of bought out items (component /sub assy/ assy/ processes) from sub contractors:  
(Attach copies of agreements, if any)

SL. NO.	MAIN EQPT	Comp/Assy/Sub Assy/ Processes	Name & address of the SUB CONTRACTOR
------------	--------------	----------------------------------	---

(b) Details of testing/quality control done by sub-contractors  
(Attach copies of agreements where applicable)

SL. NO.	MAIN EQPT	DETAILS OF TEST	NAME AND ADDRESS OF SUB-CONTRACTOR/LABORATORY	AGREEMENT (IF ANY)
------------	--------------	--------------------	--	-----------------------

36. Detail of important facilities & infrastructure as per following format:

- (a) Production (Including Heat Treatment, Dies, Jigs & Fixtures, spinning , weaving, wet processing, printing etc. details are to be furnished on type/make of plant, licensed capacity & installed capacity etc.)
- (b) Special Purpose M/C (Like NC, EDM), CAD/CAM, ROBOT etc

SL. No.	Description of M/c & specn	Make & Model	qty	date of purchase	appx cost	percentage depreciation	per year
------------	-------------------------------	-----------------	-----	---------------------	--------------	----------------------------	----------

(c) Tool Room, Metrology & Test equipments & facilities:

Sl. No.	Type of Inst, Gauges, auges, Test eqpmt**	make model	qty	date of purchase calibration for	frequency for calibration	approx cost
---------	---	------------	-----	----------------------------------	---------------------------	-------------

37. Details of items produced in last 3 years

Name of Product	year of first mfg.	Production Year	In last 03 years qty supplies to
.....			
.....			
.....			

38. Individual flow process chart of all the items for which registration is reqd. To be furnished attach separate sheet of each item.

39. Basis of estimated production capacity in respect of items for which registration is required.

.....  
.....

40. Source of raw material for each of above items:

(Attach copies of agreement, if any)

ITEMS	BASIC RAW MATERIAL	SOURCE (INDIGENOUS/ IMPORTED)	NAMES OF MAJOR RAW MATERIAL SUPPLIERS
-------	--------------------	-------------------------------	---------------------------------------

.....  
.....  
.....

41. Details of inspection & quality control of facilities:

- A) Lab. Equipment & no. Of trained tech. In lab.
- B) Is the lab. Accredited by N.A.B.L
- C) Valid up to
- D) Type of lab
- E) Assistance from or dependence on any central agency for testing/calibration etc. (furnished details)

.....  
.....  
.....

42. Is company ISO 9001:2000 certified (if yes give details)

- A. Date of certification
- B. Certifying body
- C. Last audited on
- D. Valid up to

43. Details of R&D facilities available:

.....  
.....

44. Future plan if any, in respect of expansion programme / installation of additional machines / facilities & testing equipment

etc.:

.....  
.....

45. (a) Details of outsourcing of facilities of production or processing from sub contractors:

(Give item wise outsourced facility & attach copies of agreement)

SL. NO.	MAIN STORE	FACILITY/PROCESS	NAME & ADDRESS OF SUB. CONTRACTOR
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

(b) Details of capacity of Sub. Contractor In Respect Of Areas of Sub. Contracting:

.....  
 .....

(c) Details Of Testing /Quality Control Done By Sub. Contractor

SL. NO.	MAIN STORE	DETAILS OF TESTS	NAME OF SUB. CONTRACTOR
---------	------------	------------------	-------------------------

46. Details of Successfully completed Supply Orders in last 3 years:

Name of OF	Description of store supplied	Order Qty.	Qty. Supplied	S.O. No. & Date
1				
2				

47. Attach copy of valid pollution clearance certificate from designated statutory authority.

48. Company Brochure / Catalogue and Literature to Be Enclosed

- NOTE:** (i) kindly number or codify the extra sheets & annexure & ensure that documents are linked properly according to sl.nos. in this proforma.  
 (ii) Wherever space is inadequate attach extra sheets with proper linking.  
 (iii) All sheets of proforma as well as extra sheets & annexure must be signed and stamped by vendor.

**DECLARATION**

I/We confirm that the information furnished in Part I, II & III above are correct to the best of My knowledge & belief. In the event of any information given by me/us is found in-correct/false at any time, I/we understand our registration will be cancelled without notice, besides any other appropriate action against me/us.

**DATE**

**SIGNATURE (S)**

**NAME (S) IN CAPITAL LETTERS**

**PLACE**



**TY 84-813-82 6/7 П-5БФл**  
**SPECIFICATIONS**

These specifications cover pyroxylin porous propellant 6/7 П – 5 6 Ф П, produced of high-nitrogen pyroxylin with deterrent oligoestervinylate containing in surface layers of propellant. The propellant 6/7 П – 5 6 Ф П as meant as a propellant for 30mm cartridges for gun 2A42 convention designation of grain, seven channels flashless deterrented moderated propellant with addition of porous generating agent – 5%; 6/7П-5 6ПФ л TY 84-813-82.

**1. TECHNICAL REQUIREMENTS**

- 1.1 Pyroxylin propellant 6/7П-5БФл shall correspond with requirement of these specifications and to be produced as per technical documents, agreed with customer and approved in established order.
- 1.2 Raw materials and materials (Appendix I), used for production of propellant, shall satisfy requirement of standard documents in force, be accompanied by certificate of manufacturer factory and subjected to incoming inspection.
- 1.3 Physical parameters and chemical composition of propellant shall correspond with requirements, indicated in table-I

**TABLE-I**

S. No.	Description of parameters	Norm	Test Procedure
1	General appearance	7 channels grain cylindrical, graphitized with polished surface.	Para 4.7
2	Mass portion of volatile, % total max Non persistent ones Persistent ones min.	3.5 1.0 – 1.6 0.8	GOST 8660 – 80
3	Mass fraction of diphenylamine, %	1.0 – 2.0	GOST 7103 – 72
4	Mass fraction of potassium sulfide, % while adding in propellant mass as per analysis	5.0 0.5	
5	Mass portion of oligoester vinylate % max., while adding in propellant mass as per analysis	3.2 – 3.8 2.2 – 4.1	Determination is obligatory as per para 4.3
6	Mass fraction of graphite, % max while adding in propellant mass as per analysis	0.1 0.05 – 0.15	Determination is obligatory with estimation as per GOST 7102-80
7	Specification heat of combustion KJ/Kg (K Cal/kg)	3517 – 3831 (840 – 915)	GOST B 8676 – 72
8	Chemical stability by using reaction for litmus, hours: a) after the first test b) after repeat test, (sum of hours after 9-10 sequence tests), min	7 60	GOST 11857 – 77
9	Pour density of propellant Kg/dm <sup>3</sup> , minimum	0.950	GOST 7100 – 72
10	Mean size propellant grain, MM Wall thickness Hole diameter length	0.65 – 0.73 0.15 – 0.25 4.2 – 5.2	GOST 5131 – 68
11	Mass portion of foreign inclusion as threads from base, small chips, rubber, metal chipping of container, pieces of solder: % max	0.003	OST B 84-1514-98
12	Mass portion of individual grains of other grades of propellant (7/7max): % max	0.05	OST B 84-1514-78
13	Mass portion of grain struck together : % max	0.1	OST B 84-1514-78
14	Density and porosity, % ( for each small batch of not deterrented powder)	Not specified	Determination is obligatory, with estimation as per OST B-84-1927-81 optional during 1 <sup>st</sup> year of introducing of specification and Norms up to 1.12.89
15	Total mass portion of small and big grains: % max	1.0	OST B 84-1514-78
16	Presence of glass, sand and grains of conversion and trial propellants	Not Permitted	OST B 84-1514-78

**NOTE:** For individual batch in case of ensuring of requirements of limit allotted mass of charge and ballistic parameters the following deviations from established limits upon agreement with customer, are allowed;

For poured density	-	minus 0.02kg/dm <sup>3</sup>
For wall thickness, diameter of hole ± 5%, for length	-	+5%, -10%

Deviations for graphite from specified limits are allowed ensuring requirements of capacity and ballistic parameters.

- 1.4 Grains with length less than 2.0 mm are considered as small ones. Grains with length of 11 to 19 mm are considered as big ones. Grains, stuck together, shall not content more than three grains.
- 1.5 Deviations of length of individual grains from average value more than 25% are not allowed. One grain with deviation of ± 50% of average value or one grain belonging to big or small grains is allowed.
- 1.6 **Ballistic requirements:**
  - 1.6.1 The propellant shall correspond with requirement for ballistic characteristics, specified in drawing of charge.
  - 1.6.2 Ballistic test of propellant shall be carried out after expiring of 5 days after production of batch of propellant (Packing of propellant in to the last container in the batch) and in case of correspondence of physical Parameters, chemical Composition, tests results with requirements of these specifications and charge drawing.
- 1.8 **Packing and Marking**
  - 1.8.1 Propellant shall be packed in air-tight metal container of type IV (Modification I) GOST B-20854 – 77, placed in wood Case of GOST 3378-77. Reusing of package is allowed.
  - 1.8.2 Batch of propellant shall be packed into containers of one size and one category. (New or Used)
  - 1.8.3 Each container shall be filled with propellant by 70% of volume min. The last container of the batch shall be filled by 50% of volume min.
  - 1.8.4 In to each container should be placed printed Label with the following information:
    - Container Number;
    - Abbreviated name of gun;
    - Convention designation of propellant, convention designation of manufacturing factory (6/7л-5БПфл 1/81К)
    - Net mass in kg,
    - Name of person, who checked the container for air-tightness.
    - Date of packing,
    - The label shall be returned to the factory in case of detecting any defects.
  - 1.8.5 The following information shall be marked with black paint on side horizontal strip of side wise/on which locks of wood case are secured. ;
    - \* Number of case,
    - \* Abbreviation of Gun,
    - \* Convention designation of propellant, number of batch, year of production, convention designation of propellant producing factory;
    - \* Net Weight , Kg
    - \* Gross Weight, kg
  - 1.8.6 Number within equilateral triangle identification category of cargo shall be marked with the same paint on one of two strips of wood case cover.
  - 1.8.8 Metal containers with propellant in wood cases shall be sealed by QID seal.

All containers, opened for acceptance tests, shall be sealed by QID and customer's seals.

## **2. SAFETY REQUIREMENTS**

- 2.1 Propellant 6/7 – П 5БлфП—is inflammable, can burn without air. Flash point 180°C min.
- 2.2 Propellant 6/7 – П 5БлфП —is sensitive to mechanical actions, strikes, friction, fire pencils .  
Strike sensitivity with the help of impact test device K-44-11 as follows;

### Zone limit:

50mm	- 0%
70mm	-- 4%
Probability of blasting at H	= 250mm
Weight of 5 kg	- 100%
Weight of 2 kg	- 20%

Sensitivity to friction, when impact testing device K-44-11 using (lower limit)  $\mu\alpha$  (kgf/cm<sup>2</sup>) 833.10 (850)- 4%

Minimum energy of propellant ignition - 0.5 J max.

Specific resistance -  $10^4$  -  $10^5$  ohm.m.

- 2.3 All operations for production of propellant 6/7 - П-5ФЛ shall be carried out in correspondence with “regulations of manufacturing, filling, testing and storage of explosives, propellants pyrotechnic compositions, initiating means, and compositions on their base”.

“Regulations of protection against static electricity at production of explosive”.

### 3. ACCEPTANCE RULES

- 3.1 Propellant shall be submitted for acceptance in finally packed state as batches.

- 3.2 The batch of propellant is made by mixing of one or several small batches.

Mass of total batch shall be 10 tones min. Mass of total batch less than 10 tons is allowed, depending on factory plan.

Propellant batch, independent of quantity, is a mixture of the same brand propellants, produced of pyroxylin BA, grade on the base of the same process schedule with physio and chemical parameters, corresponding with specifications requirements.

Small batches, included in total batch, shall correspond with requirements of these specifications for mass portion of diphenylamine, graphite, potassium sulfate oligoesteracrylate, volatile substances, stability of first sample and dimensions

As an exception in individual small batches the deviations from norms of mass portion of volatile are allowed as follows;

Non persistent volatile by 05% less,

Persistent volatile by 0.3%;

Total mass portion of volatile matter by 0.2% more.

- 3.3 Order of submitting and acceptance of propellant batch by QID.

- 3.3.2 when submitting the batch of propellant for acceptance, it is necessary to present to the QID representative notification, signed by foreman, data card (technological certificate) with results of physio -and-chemical analysis results of small batches.

- 3.3.3 While accepting the QID representative shall carry out the tests in scope, specified in table 2. Specific heat of combustion shall be determined for the every fifth batch.

- 3.3.4 If the results of the tests for parameters as per Para 1 of table 2 are satisfactory, QID representative shall take samples out of the same containers, to carry out physio, chemical and ballistic tests of batch of propellant.

**Table-2**

Sl. No.	Parameter to be checked	Para no. of specifications	Para No. of test procedure	QID volume of sample
1	Visual Inspection	Para 1.8.2		100%
1.1	Correspondence of quantity of submitted cases with number indicated in notification	1.8.4 1.8.7		
1.2	Presence and correctness of filling of labels and their correspondence with marking on the case	1.8.4		100%
1.3	General appearance of packing, quality of marking and sealing			100%
1.4	Air-tightness of packing (of container with propellant)	Para 1.8.1	4.6	10%
1.5	Checking of mass of propellant in packing	Para 1.8.3	4.8	5%
1.6	Presence of foreign inclusions, as threads, pieces of bags, small wood chips, rubber pieces, zinc flakes, solder, glasses, sand, grains of trial propellant other grades propellant grains and rectified propellant.	Para 1.3 (11,12,15)		5%
1.7	Presence of small, big and stuck together grains.	Para 1.3 (13,15)	Para 4.4	5%
2	Physical parameters and Chemical composition	1.3	4.3 4.3	Not less than 5 cases from batch
3	Ballistic requirements	1.6	4.5	10 cases or 10air-tight containers with capacity 20kg mim.
4	Pour density	1.3	4.4	1 case of 10 cases, taken for ballistic tests.

**Notes:** 1. For acceptance tests as per Para 1 , the batch of propellant may be submitted in portions of shift output, but not less than 35 cases.

2. To determine ballistic requirements as per Para 3, is allowed to take of 3 to 5 samples out of cases after their soaking for 5 days.

- 3.3.5 In case of unsatisfactory results of physical – and - chemical tests of one or several parameters (except of chemical stability) it is allowed to carry out repeat test with double quantity from the same samples for the parameters, which faulted during primary tests, or to carry out repeat tests from double number of cases.. Results of repeat tests, with noting the primary test result, are final and cover all batch and shall correspond with requirement of table 1.
- 3.3.6 On agreement with customer, it is allowed to take samples by QID and (customer representative jointly for ballistic tests, determination of poured density with specific heat of combustion.
- 3.3.7 The case of discrepancy between test results and requirement of para 1 of table 2 of these specifications the batch shall be returned for correction with indication of rejection reasons.  
Manufacturing factory must do correction of propellant batch and submit it again.
- 3.3.8 While repeat submitting of batch of propellant it is necessary to present notification, (with indication about repeat submitting of batch, type of correction, fulfilled analysis, and detected reasons of defect) to QID representative. The notification should be signed by chief of production department.
- 3.3.9 Batch of propellant failed the repeat tests shall be rejected and return to production shop.  
Decision of next submitting of the batch shall be taken by director of factory and QID chief.
- 3.3.10 When the batch of propellant is accepted by QID, it shall be submitted to customer representative.
- 3.4 Order of submitting and acceptance of propellant by customer representative.
- 3.4.1 Acceptance test shall be carried out by customer representative as per Pare 1 of table 2 by man power and facilities of manufacturing factory in presence of QID representative by using sample of 2% (If the batch is submitted by shift output portions, volume of samples shall be by 2.5 times more) as per para2,3,4 in volume of table 2.  
(When submitting the batch of propellant, the notification, signed by director of factory and QID chief (when submitting with portions, the notification shall be signed by foreman and QID representative) shall be given to customer representative.
- 3.4.2 If results of tests corresponds with requirement of these specifications as per indices of para 1 table 2, the customer representative shall take samples for physical parameters , chemical compositions and ballistic requirements test of propellant.
- 3.4.3 While discrepancy between acceptance tests results (table2 para 1.1, 1.4, 1.6, 2, 3, 4) and requirements of these specifications the batch of propellant shall be return to factory. Repeat tests from double number of cases for parameters of table 2 para 1 sub para 1.2, 1.3, 1.5, 1.7, are allowed.  
Results of repeat tests are final and cover the all batch.  
Repeat submitting of batch of propellant to customer representative is allowed after acceptance by QID with presenting of notification, signed with director of factory and QID chief and report about analysis and eliminating of defects.  
In case of unsatisfactory results of repeat tests, the batch shall be rejected.
- 3.4.4 In case of unsatisfactory results of acceptance inspection the following documents shall be submitted to customer representative: notification, data cards and certificates signed by director of factory and QID chief to make an entry on correspondence of batch with requirements of these specifications and charge drawing.

#### **4. TEST PROCEDURE**

- 4.1 Sampling for physical parameters and chemical compositions test shall be taken as per GOST-7098-73
- 4.2 Samples: For density test (Para 14 of table 1) shall be taken in correspondence with process schedule of manufacturing factory after completing of drying of non deterrented (non moderated) propellant (simultaneously with taking of samples for volatile matter analysis and diphenylamine content analysis, stability tests).
- 4.3 Mass portion of digoesteracrylate determination shall be carried out by method of extracting of propellant by methylene chloride with subsequent weighing of the extract.
- 4.3.1 Apparatus, materials, reagents:
- Laboratory beam balance , 2<sup>nd</sup> class of accuracy.
  - Extraction unit with packing ( fig. 1)
  - Extraction unit with packing ( fig. 2)
  - 100 ml. conical flask
  - Thermometer, mercury, electric contact, the scale reads 2°C.
  - desiccators with calcium chloride.
  - drying cabinet

- Methylene chloride.
- Laboratory filter paper.
- Medical Gauge.
- Cotton threads.
- Water bath.

Another types of apparatus, materials and reagents may be used while ensuring the same accuracy of analysis.

#### 4.3.2 **Preparation for test:**

Prepare gauge or paper cases of strips with dimension of 8 x 12 cm. wrap the strip around cylindrical mandrel (template) of dia 24mm so, that edge of the strip shall project beyond the mandrel face. This edge shall be bound with thread, after this, remove it from the mandrel.

#### 4.3.3 **Carrying out of Test;**

Weigh 2 g of propellant with accuracy up to 0.0002 g. extract it in gauge or paper cases with methylene chloride (50 – 70 ml) with the help of extraction unit (fig-1) for 5 hours min. in to preliminary weighed flask at temperature of water bath of 60 - 70°C.

On completing the extraction (fig-2) the flask with remainder shall be dried in drying cabinet for 2 hours at temperature 70±10°C, then cooled in desicator for 30 – 410 minutes and weighed up to accuracy of 0.0002 g.

Determine the mass portion of diphenylamine as per GOST 7104-73 in the residue containing in the case after extraction while doing this, add 5 ml of extractant into flask after completing decomposition of propellant by 10 – 20 ml of 30% solution of alkalis.

#### 4.3.4 **Processing of Results:**

Mass portion of digoesteraorylate (x) in % shall be calculated by formula;

$$X = \frac{(M_2 - M_1) \times 100}{M} = (A_1 - A_2)$$

- Where,
- M - is mass of propellant in 'g'.
  - M<sub>1</sub> - is mass of extracting flask in 'g'.
  - M<sub>2</sub> - is mass of extracting flask with extract 'g'.
  - A<sub>2</sub> - is mass of portion of diphenylamine in propellant after extraction 'g'.
  - A<sub>1</sub> - is mass of portion of diphenylamine in propellant 'g'.

Result of analysis shall be taken as arithmetic mean of two parallel determinations, permissible difference shall not exceed 0.3%

- 4.4 The rest parameters shall be determined as per standards indicated in table 1.
- 4.5 Ballistic requirements shall be determined as per procedure of Air Force No. 426-9 and charge drawing.
- 4.6 Air-tightness of container with propellant shall be determined as per GOST 20854-77, during this test, the air pressure of 9.3 mPa ( 70mm of Hg column) should not lower during 1 min.
- 4.7 General appearance of propellant, packing, quality of marking and sealing shall be inspected visually.
- 4.8 Mass of propellant in container shall be checked with the help of technical balances with error ±0.2 kg.

### **5. Transporting and storage**

- 5.1 Transporting and storage of the propellant shall be fulfilled in correspondence with “ Regulation of transporting of ammunition, explosive and toxic agents by railways and by ships”.
- 5.2 Manufacturing factory bear responsibility for storage of propellant batches, accepted by QID and customer upto the moment of their shipment.

### **6 Guarantee of Producer**

- 6.1 The batch of propellant shall be accepted by QID of the factory and customer representative.
- 6.2 Manufacturing factory guarantees correspondence of batch of propellant with requirement of these specifications in case of observing by user all conditions of using, delivering and storage, stipulated by specifications. Guarantee term is established of 16 years from the moment of accepting of batch propellant by customer representative. Guarantee obligations shall be indicated by manufacturing factory in the data card and in certificate.
- 6.3 After expiring of period of storage, the batch of propellant shall be tested for requirements of these specifications.

**SCHEDULE OF PROOF AND SENTENCING CRITERIA**

**STORE**

Propellant powder 6/7 for 30mm BMP-II Ammn (HE/HET and AP/T)

**TYPE of PROOF** :

2. Ballistic proof for velocity, pressure and determination of ACM for Filling

**LOT SIZE:**

3. 5.00MT

**LABORATORY TEST :**

4. Lot should meet requirement of physical/chemical parameters and laboratory tests and duly recommended as fit for dynamic proof by QAE (ME)/CQA (ME)

**SAMPLE SIZE:**

5. Not Applicable.

**PROOF SAMPLE IDENTIFICATION:**

6. Round filled with propellant lot under proof will be marked as 1A, 2A..... and so on for, first lot, 1B.2B..... for second lot and 1C, 2C, ..... for third ballistic series. Maximum 3 lots shall be proved at one time. Rounds from the standard Cartg. lot will be marked as 1S, 2S,..... and so on. These marking will be addition to other service markings.

**PROOF ESTABLISHMENT:**

7. SQAE (A), KHAMARIA, JABALPUR-482005

**CONDUCT OF PROOF:**

8. The proof will be conducted as follows;

**(a) Loadability Trials:** The Loadability trials for all the versions viz, HE/I, HE/T, and AP/T to arrive at maximum Loadability and three charge masses for assessment firings shall be estimated in the following manner:-

$$\text{Maximum Loadability} = \frac{\text{Tapped Loadability} + \text{Untapped Loadability}}{2}$$

First charge mass	A	=	Maximum Loadable Charge Mass
Second charge mass	B	=	A-3.0 g
Third charge mass	C	=	A-6.0 g

- NOTE:-**
- (i) The Laboratory trials shall be conducted separately for each version.
  - (ii) Subsequent firings for each version will be conducted separately, with the charge masses estimated from the Load ability trials.
  - (iii) Load ability trials shall be under taken for imported lots/consignment also.

- (b) Charge Assessment firing:** The charge assessment firings shall be conducted at three charge masses estimated from Load ability trials above, comparatively agents standard lot. Adopting following order of fire corrected. Velocity will be corrected for the day ;-

$$2WS + 3S + AIC + 5C + AIB + 5B + AIA + 5A + AIS + 3S$$

Where,

- WS & S - Standard rounds filled with standard propellant lot filled at Charge mass Allotted to it.
- AIA & A - Rounds assembled with lot under proof at first charge mass estimated from Loadability Trial.
- AIB & B - Rounds assembled with lot under proof at second charge mass estimated from Loadability Trial.
- AIC & C - Rounds assembled with lot under proof at third charge mass estimated from Loadability Trial.

**NOTE:**

- (i) All the rounds will be conditioned at +15°C for a period of 24 hrs prior to commencement of firings.
- (ii) Three additional Rds shall be assembled and subjected to Bullet Pull of test before undertaking charge assessment firings. During and after the conduct of bullet pull of test, following parameters be measured and included in the proof report / proof slip.

Sl. No.	PARAMETER	MAX	MIN	SPECIFIED
aa	Mass complete rd (g)			
ab	Pull Of value (Kg. F)			
ac	Depth of cap (mm)			
ad	Exact charge mass of recovered prop (g)			

(iii) Results shall be homogenized using 'Discarding Factor Method'.

(iv) Muzzle correction is calculated as per formula:-

$$\Delta V_d = \frac{i \times d^2 \times h \times 10^4}{q \times \Delta D (V)}$$

**Where;**

i = is the coefficient of the projectile formula, according to the Law for the Air Resistance of 1943

d = is the projectiles diameter in meter.

h = is the distance from the muzzles end – face up to the mid- point between the blocking device in meter.

Q = is the projectiles weight in kg.

$\Delta D (V)$  = is the function growth/corresponding to the projectiles speed change with 10m/sec.

(v) Based on the above firings, charge mass for the confirmatory firings required to meet the stipulated ballistics, shall be estimated, using following formula:-

$$\Delta W = \frac{4}{3} \times W \times \frac{\Delta V_o}{y_o}$$

**Where,**

W - Powder charge Wt. fired (g)

$V_o$  - The projectiles initial velocity (MV)/ specified MV (m/s)

$\Delta W$  - Powder Charge Wt. Adjustment required (g)

$\Delta V_o$  - The difference between velocity recorded & specified velocity (m/s)

(vi) Piston of crusher gauge will be checked for the following aspects:-

(a) Piston stem will be coated lightly with oil.

(b) Piston in the lower most position, the port will be firmly closed with the finger. Piston will be raised slowly with the help of distance plate. On its release, the piston should set down indicating satisfactory functioning of piston.

(vii) After firing two rounds, Copper Crusher gauge will be replaced by another gauge or use same gauge duly cleaned / oiled.

(viii) Each unscrewed radial crusher gauge after firing will be inspected and oiled for free movement of piston.

(ix) After firing, darkening of piston head and copper cylinder, if any indicates gas leakage in which case gauge is rejected and not to be used.

(x) After firing a series of 10 rounds, the barrel will be cooled with the cold water.

**(c) Confirmatory Firings:-**

The confirmatory firings shall be conducted as per the order of fire given below:-

**2WS+5S+AIA+10A+ AIB +10B + AIS + 5S**

**Where,**

AIS, WS & S - Standard rounds filled at to it.

A & AIA - Rounds filled with propellant first lot under proof at the assessed charge mass from Para 8(b) above or at QAD charge mass in case of first imported lot.

B & AIB - Rounds filled with propellant second lot under proof at the assessed charge mass from Para 8(b) above or at QAD charge mass in case of second imported lot.

**NOTE:**

(i) Note given under Para 8(b) for ch. Assessment firing, are applicable for confirmatory also.

(ii) The charge mass to realise specified MV should be estimated using formula given at Para 8 (b) (v) above. Corrected MV, corrected, Pmean, Pmax and Probable Error shall be considered for comparison with specified ballistics. If found in conformity, the lot shall be sentenced serviceable. For marginal cases, Proof Authority shall use discretion. The decision on repeat confirmatory from two barrels, release prop lot /sentence on prop lot based on small O/T lot shall be taken by SQAE (A) Khamaria.

(iii) Before sentencing the Prop lot, the ACM estimated shall be compared with the maximum Loadability and be ensured that the estimated ACM is less than the maximum Loadability.

**(d) Temp. Coefficient Firing:-**

As mentioned at Para 8 (C) (iii) above, the temp. Coefficient firings should be conducted at ACM finalized at confirmatory proof above, as follows'-

$$2WA + 10A + 2AB + 10B + 2AIC + 10C$$

Where,

WA & A- Rds filled with propellant lot under proof at ACM estimated above & conditioned at -50°C for 24 Hrs.

AIB & B - Rds same as 'A' above but conditioned at + 15°C for 24 Hrs

AIC & C - Rds same as 'A' & 'B' above but conditioned at + 50°C for 24 Hrs

**NOTE:**

(i) The ballistic values at + 15°C, uncorrected, should be compared to specified ballistic and will give fair idea about the performance of the lot under proof.

(ii) The firing is to be conducted during initial stage of production or whenever the production process is modified or change in material / ingredients or production is started after a gap of one year.

**GENERAL PERFORMANCE REQUIRED.**

9. (a) Exact Met data at the time of firing.
- (b) Temperature of round at the time of firings to be ensured for minimum variation from the specified charge temperature.
- (c) All relevant information as per format of Proof Report enclosed to this Proof Schedule.
- (d) All the MVs are to be homogenized and discarding of wild round using 'Discarding Factor Method'.
- (e) Dispersion in MV viz. 'Probable Error' should be calculated for each ballistic series including standard rounds.
- (f) Exact charge mass to realise V of A to be worked out. Also ACP mean and ACP max to be exactly worked out.

**CLASSIFICATION OF DEFECTS:**

10. Not Applicable

**SENTENCING CRITERIA**

11.1	(a) <u>Specification data</u>	<u>HE/T &amp; HE/I</u>	<u>AP/T</u>
	(i) <u>V of A</u> (m/s)	960.00	970.00
	(ii) <u>P.E. in MV</u> (m/s)	Not greater than 5.00	Not greater than 5.00
	(iii) <u>AC Pressure</u>		
	<u>Mean</u> (Kg/CM <sup>2</sup> )	Not greater than 3500	Not greater than 3550
	<u>Max</u> (Kg/CM <sup>2</sup> )	Not greater than 3700	Not greater than 3750

(b) **Allotted Ballistic of Standard Lot**

Standard lot of same ammunition version of lot under proof is preferable. However, in case of non availability, the standard lot of any other version may be taken for comparative firing of 30mm propellant APT/HEI/HET and current allotted Ballistic of the standard lot is to be followed.

- 11.2. **Sentencing:** Lot will be sentenced serviceable if the conditions given below are met:-

- (i) Adjustment in charge mass in times of velocity should be within 1% of V of A.
- (ii) P.E. In velocity, ACP mean & ACP max should be within specification limits. The day's correction of standard lot in velocity shall not be more than 18 m/s and for pressure shall not be more than 150 Kg/cm<sup>2</sup>. The P.E. In velocity of standard lot shall also be within specified limits. If deviates from above stipulations, the 'Reproof' for lot under proof shall be carried out at same fired charge mass instead of at arrived charge mass.
- (iii) In case of any abnormality from above stipulations, reproof shall be carried out to adjusted charge mass, arrived at to realize at the Specified MV. If reproof results are found to be in-conformity with the stipulations, then the lot shall be sentenced serviceable.
- (iv) Whenever probable error (P.E) in lot under proof is found more than specified but lot found meeting the ballistics requirement, then lot be subjected to reproof at the same fired charge mass instead of at arrived charge mass.



### SENTENCING AUTHORITY

12. SQAE (A) KHAMARIA, JABALPUR- 482005

### COMPONENTS :

13. Assembly of the rounds shall be done using serviceable components :-

COMPONENTS	VERSIONS		
	APT	HEI	HET
Case Cartridge	3-0105575	3-0105575	3-0105575
Shell filed inert	Бω-5.500.113 c b / c	Бω-3.501.585 c b / c	Бω-5.500.114 c b / c
Primer (KB-30)	34.340.012 c b / c	34.340.012 c b / c	34.340.012 c b / c
Fuze (A-670M)	NO FUZE	Бω. 13.140.039 c b / c	Бω. 13.140.39 c b / c
Weight of the Shell	0.400 ± 0.001 kg	0.389± 0.001 kg	0.385 ± 0.001 kg

### EQUIPMENT

14. (a) **Proof barrel** : Crusher Barrel K2-TK Б-689.000 for 30mm BMP-II  
(b) **Quarter of life** : Barrel in 1<sup>st</sup> quarter of its life.  
(c) **Elevation of Gun** : Horizontal

### INSTRUMENT

15. (a) **Velocity** : Doppler Radar / Drello / Milligun  
(b) **Pressure** :-  
(i) Screw Crusher Gauge with cylindrical copper crusher column (4 x 6.5 mm) repressed at 3100 Kg/cm<sup>2</sup> or 3300 Kg/cm<sup>2</sup>.  
(OR)  
(ii) Transducer in M10 hole of crusher barrel may also be used for measurement of pressure, in which case the specified AC pressure vide Para 11.1 (a) (iii) have to be enhanced by 12%

### QUALITY SURVEILLANCE

16. Accepted propellant lots shall be taken up for filling a period of 2 years from the date of last proof. Lots recommended for check proof shall be subjected to firings as per Para 7 for confirmation of old ACM. The results shall be deferred to CQA (A), Kirkee for further clearance.

### DOCUMENTATION

17. Seven copies of proof report completed in all respect, sentence duly endorsed by Competent Authority will be forwarded to all concerned as under. In case, results are deferred to CQA (A), Kirkee, copies of all Proof Reports shall be forwarded to CQA (A), Kirkee.

### SAFETY PRECAUTIONS

18. Normal safety precautions should be observed during proof.