

SOP FOR INPUT MATERIAL INSPECTION

1.0 INSPECTION OF INPUT MATERIALS :

1.1 EXISTING PROCEDURE FOR INPUT MATERIAL INSPECTION

Presently following category of materials are inspected by factory:

- All indirect materials irrespective of value
- Direct materials in cases where SO value is upto Rs.1 lakh and where store is required urgently to meet production commitments.
- Raw-material, Half-wroughts etc.
- Input materials for 7 self-certification items and for 16 items under new inspection criteria approved by M of D.
- Input materials in case of OCFC.
- Input materials in case of VFJ except critical stores.

All the remaining input materials are being inspected by Area Inspector of DGQA.

MOD vide Order No. 16(2) /2004/ D(QA) dated 31st March, 2005 has directed that DGQA shall not inspect input material, including raw material, required by the manufacturers in the case of Ordnance Factories & DPSU. However, DGQA will continue to do Quality Audit and surveillance and the manufacturer shall be duty bound to furnish all the test records and record of other quality checks carried out by the manufacturer for inspection to the DGQA. Further DGQA shall not vet indents from OFB & Sample rooms maintained by DGQA shall be wound up. MOD has also issued clarification vide Order No. 16(2)/04/D (QA) dated 15th June, 2005 which are relevant for implementing the orders.

1.2 Accordingly, the SOP for input material inspection to be carried out by Ordnance Factory concerned is enumerated in succeeding paras.

Factory shall arrange inspection as per following categories:

1. Self- Certification Category:

This status may be awarded to the firms at the discretion of GM for the item fulfilling following criteria:

- No rejection found in past three years supplies for the particular item.
- The firm should have executed minimum three supply orders during past three years.
- Firm is ISO 9001:2000 certified.
- Firm is of national and/or International repute i.e. firm must have supplied /exported their goods to reputed firms.
- Turn over should be more than Rs. 2 Crore.
- The status of self-certification can be granted only when Sr. GM/ GM is fully satisfied regarding quality of stores of the Firm. The responsibility for accepting items on self-certification will be that of Sr. GM/GM and Addl. GM/QC.

2. Inspection at Firm Premises Category:

This status may be awarded to the firms at the discretion of GM for the item fulfilling following criterion:

- Rejection found in past three years supplies for the particular item does not exceed 5% of total supplies made.
- The firm should have executed minimum two supply orders during past three years.

3. Inspection on Receipt Category:

This status shall be awarded to the firms for the item not falling in above two categories. In other words Firms with following conditions will be in this category.

- Rejection found in past three years supplies for the particular item exceeds 5% of total supplies made.
- New source / Executing Development Order.
- Supplying non-critical stores.

The above categorization shall be proposed by a sub-committee and approved by GM.

DETAILED INSPECTION PROCEDURE FOR INPUT MATERIAL INSPECTION

1.0 Self- Certification Category:

1.1 THE SUPPLY ORDER WILL STIPULATE THE FOLLOWING:

1. Inspection Authority: Inspection Authority is not required to be mentioned in the supply orders.
2. Inspection Officer: Authorized officer nominated by General Manager (normally QC Officer) shall be Inspection Officer.
3. Criterion of inspection: Relevant Product Specification & Drawings.
4. S.O shall clearly stipulate that “GM reserves the right to change the inspection agency to suit the convenience of the Factory and in the interest of State”.
5. The copy of Supply orders will be endorsed to respective SQAOs of the receiving factory and concerned AHSP.

1.2 ACTION BY FIRM:

- The Firm shall give Warranty/ Guarantee, pre-inspection report & Test certificate of Lot tendered and dispatch the stores to consignee end factory.
- The Firm shall forward its Bills for Payment with pre-inspection report, Test Certificate, a covering declaration as per format given below and Warranty / Guarantee certificates in place of I-Note and other necessary documents as per existing payment procedure.

1.3 ACTION BY ACCOUNTS OFFICE

Account Office shall make Payments on the basis of Warranty/ Guarantee Certificate, pre-inspection report, and Test certificate and a covering declaration by vendor jointly signed by supplier's Quality control Manager and Proprietor/ Managing Director/ General Manager in prescribed format in place of I-Note. There is no other change in Payment procedure.

DECLARATION

We hereby declare that the productsquantity supplied by our companyvide 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.

Quality control Manager

Supplier's stamp

Managing Director/ General Manager

1.4 CONSIGNEE END INSPECTION:

1.4.1 ACTION BY INSPECTION OFFICER:

On Receipt of stores in the Factory, Inspection Officer shall carry out Consignee end Inspection, obtain production section acceptability/comments, if required and sentence the MIS for taking it to stock charge. Any discrepancy noticed shall be immediately intimated to the firm for settlement as per procedure in vogue. MIS should be sentenced within 15days from the date of receipt of stores in the factory.

1.5 ACTION BY ACCOUNTS OFFICE

Balance Payment shall be made by Account Office as per existing procedure.

1.6 In case the lot tendered by firm is found rejected, the bulk of the same should be stamped rejected with rejection stamp suitably to avoid mixing of

such lots in future supply. The firm will be asked to tender fresh lot as per procedure in vogue.

2.0 Inspection at Firm Premises Category:

2.1 THE SUPPLY ORDER WILL STIPULATE THE FOLLOWING:

1. Inspection Authority: Inspection Authority is not required to be mentioned in the supply orders.
2. Inspection Officer: Authorized officer nominated by General Manager (normally QC Officer) shall be Inspection Officer.
3. Criterion of inspection
 - Relevant Product Specification & Drawings
 - The samples drawal system i.e. whether it will be drawn by representative of consignee factory or by representative of nearest available Ordnance factory.
 - Material or other Tests to be conducted according to the conditions of Supply Order i.e. NABL accredited LAB where tests will be conducted.
 - To avoid delays in testing the samples, Factory will enter in to Rate contract in advance with NABL accredited Labs wherever warranted.
 - Procedure of selection of proof sample.
4. S.O shall clearly stipulate that “GM reserves the right to change the inspection agency to suit the convenience of the Factory and in the interest of State”.
5. The copy of Supply orders will be endorsed to respective SQAOs of the receiving factory and concerned AHSP.

- 2.2 The DGM/Standard Cell on receipt of copy of Supply Order shall prepare detailed Inspection Criteria and monitoring instructions and issue to Inspecting Officer.
- 2.3 The Firm shall intimate to Inspection Officer with a copy to Sample drawal factory regarding readiness of material for inspection with following details:
1. Supply order No. & Date
 2. Date of readiness of material
 3. Item description and item code as per supply order
 4. Quantity being tendered with pre-inspection report
 5. Quantity within Delivery schedule or not. If not Firm should take DP Extension from Purchase Officer and submit the copy of DP amendment letter / quote the reference to the Inspection Officer.
- 2.4 The Inspection Officer shall depute sample drawal / Inspection team to the Firm on receipt of inspection call letter from Firm.

2.5 Procedure For Drawing Samples:

2.5.1 ACTION BY VISITING TEAM

The Ordnance Factory representatives shall visit the Firm and take following actions:

- Every factory shall provide individual & distinctive metal seals to the inspectors considered for the work of inspection / drawal of samples at Firm's premises. The Ordnance Factory representative (inspector) visiting the firm shall carry his assigned metal seal.
- Draw requisite number of random samples as per relevant standard & sampling Plan and seal & bond the bulk.

- **Sealing Procedure for samples:** The samples drawn shall be sealed by both Firm and the OF representative visiting Firm. Separate sealed packet shall be made if samples are to be handed over to NABL Accredited Lab for Testing by Quality control Officer of Near by Ordnance Factory.

- **Sealing & Bonding Procedure for Bulk:** Ordnance Factory representative visiting the firm shall seal the Material. The Ordnance Factory representative shall emboss seal and also sign on the paper pasted at the joints of the packing. Sealed material shall be kept in bond room. Small items can be bonded in a container named as “Bonding Container”. The bond room (or Bonding container) shall be locked with a lock to be operated by two keys like Lockers in the Bank or put two locks. One Key should be with the representative visiting firm & other with the Firm. In case of two locks, keys of one lock will be with the firm and keys of other lock shall be with representative visiting Firm. The Ordnance Factory representative-visiting firm shall deposit the key with the Inspection Officer in case he comes from consignee factory. In case Ordnance Factory representative comes from near by factory, he shall deposit key immediately with the Officer responsible for Quality Control in his (near-by factory) Factory.

- Forward the requisite number of samples duly sealed by Firm and OF representative visiting Firm to the Inspection Officer of Concerned Ordnance Factory by speed post / courier service or take it personally.

- Submit samples duly sealed by Firm and himself to designated QC Officer of nearby Factory in case the samples are required to be sent to NABL Accredited Lab for Testing by designated QC officer.

2.5.2 Action by designated QC Officer of Near-by Ordnance Factory

- Check the seals of samples received from OF representative visiting Firm & Open the samples.
- Pack the samples along with Test button/ Test Slabs/Test Piece as required and seal the packet.
- Forward samples to concerned NABL / authorized Lab. along with Test button/ Test Slabs/Test Piece through different person (Not the person who had drawn the samples from Firm's premises) as applicable as per directives of consignee factory / Inspection Officer.
- **Secrecy of Samples** To maintain the secrecy of samples, a random reference Number will be given along with sample to the NABL Lab. The Name of Firm whose sample is being tested shall not appear on the requisition handed over to the NABL Lab. The same reference number along with other details of supply order and firm name etc. will be sent to the Inspection Officer by confidential speed post by designated QC Officer to enable linking.
- NABL Lab shall forward the report directly to Inspection Officer in sealed cover.
- Designated QC Officer of nearby factory shall arrange to receive keys of Bonded bulk and arrange to keep in safe custody and arrange to depute another representative (Not the same person who visited to draw samples) with acceptance stamp on receipt of instructions from Inspecting Officer.

2.5.3 ACTION BY INSPECTION OFFICER

- On receipt of samples from Rep. deputed, the inspection officer of consignee Factory shall carry out visual and dimensional inspection and shall arrange testing of samples including proof of empty / Fitment trial wherever applicable.
- In case consignee Factory representative brings samples personally to the factory that are required to be tested in own/NABL Accredited Lab, the inspection Officer shall arrange to send these samples to own/NABL Accredited Lab as per procedure laid down at 2.5.2 above.
- A report shall be prepared by inspection Officer based on above inspection and own/NABL Accredited Lab report wherever applicable.
- Inspection Officer shall obtain comments of acceptability from concerned production section, if required, before sentencing the material.
- Inspection Officer shall sentence I-Note based on Test Results and feedback from user section, wherever applicable.
- Inspection officer shall forward I-Note to sample drawal factory in case samples drawn by latter.

- The computerized record of person being deputed should be maintained by the inspection Officer with Supply Order No., Firms name, Item code, Item Nomenclature, quantity etc.
- Inspection Officer shall depute another representative (**not the same person who had drawn the samples & sealed**) to the Firm from consignee Ordnance factory. In case samples are drawn by sample drawal factory the inspection Officer with the help of Quality control officer of sample drawal factory shall depute another representative (**not the same person who had drawn the samples & sealed**) to the Firm. The representative shall carry the key to open the bond room (in case item bonded) along with copy of I-Note. The representative shall check the seal of bulk, stamp@ acceptance mark and hand over I-Note to the firm.

@: Every Ordnance factory shall provide individual & distinctive stamp acceptance / stamp rejection to the inspectors(representatives) considered for this job. In case the item is stamped by representative of sample drawal factory (near-by Factory) the stamp mark will be that of the individual visiting as assigned to him.

2.5.4 ACTION BY FIRM :

The firm shall dispatch the accepted stores with seal intact duly stamped with acceptance mark. The Firm shall forward its Bills for Payment with I-Note and other documents as per procedure in vogue.

2.5.5 ACTION BY ACCOUNTS OFFICE

Account Office shall make Payments as per procedure in vogue.

2.6 CONSIGNEE END INSPECTION:

2.6.1 ACTION BY INSPECTION OFFICER:

On Receipt of stores in the Factory the seal and acceptance stamp should be checked. Inspection Officer shall carry out Consignee end Inspection, obtain production section acceptability/ comments, if required and sentence the MIS for taking the item in to stock charge. MIS should be sentenced within 15 days from the date of receipt of stores in the factory. Any discrepancy noticed shall be immediately intimated to the firm for settlement.

2.6.2 ACTION BY ACCOUNTS OFFICE

Balance Payment shall be made by Account Office based on sentenced MIS as per procedure in vogue.

2.7 In case the samples tendered by firm are found rejected, the bulk of the same should be stamped rejected with rejection stamp suitably to avoid mixing of such lots in future supply. The firm will be asked to tender fresh lot as per procedure in vogue.

3.0 Inspection on Receipt Category:

3.1 THE SUPPLY ORDER WILL STIPULATE THE FOLLOWING:

1. Inspection Authority: Inspection Authority is not required to be mentioned in the supply orders.
2. Inspection Officer : Authorized officer nominated by General Manager (normally QC Officer) shall be Inspection Officer.
3. Criterion of inspection
 - Relevant Product Specification & Drawings

- Material or other Tests to be conducted according to the conditions of Supply Order i.e. NABL accredited LAB where tests will be conducted.
 - To avoid delays in testing the samples, Factory will enter in to Rate contract in advance with NABL accredited Labs wherever warranted.
 - Procedure of selection of proof sample (if required).
4. S.O shall clearly stipulate that “GM reserves the right to change the inspection agency to suit the convenience of the Factory and in the interest of State”.
5. The copy of Supply orders will be endorsed to respective SQAOs of the receiving factory and concerned AHSP.

3.2 **ACTION BY FIRM:**

The Firm shall dispatch the Bulk stores for inspection and payment to the Consignee end Factory as per Delivery schedule. In case Delivery schedule is expired the Firm shall take approval & DP Extension from Purchase Officer before dispatching the store.

3.3 **ACTION BY INSPECTION OFFICER:**

On Receipt of stores in the Factory, the inspection Officer shall arrange for inspection of the store against MIS as following:

- The inspection officer of consignee Factory shall arrange for drawal of samples as per relevant standards & sampling plans. He shall arrange to carry out
 - Visual and dimensional inspection
 - Proof of empty / Fitment trial wherever applicable.

- Forward samples to own/ NABL accredited Lab wherever warranted.
- A report shall be prepared by inspection Officer based on above inspection and NABL Accredited Lab reports.
- Inspection Officer shall obtain comments of acceptability from concerned production section, if required, before sentencing the material.
- Inspection Officer shall sentence MIS based on Test Results as per above paragraphs. MIS should be sentenced within 15 days from the date of receipt of stores in the factory.

3.4 **ACTION BY ACCOUNTS OFFICE:**

Accounts Office shall make payment to the Firm as per procedure in vogue.

- 3.5 In case the lot tendered by firm is found rejected, the bulk of the same should be stamped rejected with rejection stamp suitably to avoid mixing of such lots in future supply. The firm will be asked to tender fresh lot as per procedure in vogue.

4.0 **IFD ITEMS** :-

- 4.1 The present practice of quality audit and surveillance by way of control point check and surveillance check carried out by DGQA shall continue.
- 4.2 The inspection note for inter factory transfers shall be issued by quality Control Wing of the factory.
- 4.3 DGQA will issue certificate of having carried out control point checks and surveillance audit.

5.0 **Imported Stores:**

- 5.1 The present practice of PDI by DGQA for items being procured through orders placed by DOD including those under TOT shall continue.
- 5.2 As far as spares and input material procured directly by OFB, the responsibility of inspection shall rest with OFs.

6.0 **Quality Audit and surveillance of input material and manufacturing process :**

- 6.1 Factory will provide test report and other relevant papers on demand for quality audit by DGQA.
- 6.2 DGQA will allow use of its lab for testing whenever requested by OFs.
- 6.3 Relevant records and tests reports, as may be required, are to be produced before DGQA at the time of final inspection.
- 6.4 In case of critical items to be identified mutually by OF and concerned Controllers/SQAO, selective sampling of input material collected from consignee end will be done by DGQA and tested in the facility available with OF or lab of DGQA without affecting the production schedule. The test results shall be shared with the concerned OF. The frequency of sampling will be initially decided while identifying the critical items and frequency will be increased/decreased depending on the performance. In case of difference of opinion in identification of critical items and frequency of sampling, same shall be referred to OFB whose decision in this regard shall be final.

6.5 DGQA shall continue to perform control point checks and surveillance audit as being carried out at present.

7.0 **Documentation** : Standard Office of the Factory and SQAIE shall jointly prepare/review comprehensive inspection/Quality Assurance Plan for each product. While undertaking the above exercise, identification of critical items and frequency of sampling as mentioned in para 6.4 above will also be decided. This exercise will be completed latest by 31st December, 2005.

8.0 **Inspection Officer**: Sr. General Manager/ General manager shall nominate an Officer in the Rank of Jt. GM/ DGM (normally Quality control Officer) who shall function as Inspection Officer.

9.0 **Sample Room**:

Sample Rooms maintained by DGQA shall be wound up. Therefore Ordnance Factories shall maintain the sample rooms. Sample room should maintain sealed samples and certified samples.

Certified samples must be used as guidance samples for inspection.

Sealed Samples : Sealed sample form a part of paper particulars governing supplies.

Certified Samples: Certified samples are similar to sealed sample, which is issued for guidance in inspection.

10.0 **Vigilance Check Sample**:

General Manager shall arrange for drawal of samples from the bonded/ sealed lots at the Firm's premises on random basis independently. These samples shall be tested and compared with the samples drawn by representative deputed by Inspection Officer. This exercise must be ensured before payment to the Firm is made.

11.0 **Standard Cell**: A cell shall be created in all Ordnance factories under the overall control of AGM/QC and headed by DGM/standards, which shall perform following functions:

- Shall vet indents placed on OFB concerning the Factory
- Shall vet extracts placed by OFB on Factory
- Shall vet IFDs
- Shall vet the Tender enquiries
- Shall vet Supply Orders placed by the factory
- Shall issue monitoring instructions for inspection
- Shall maintain all records in computer for deviations granted and price reduction imposed.
- Shall initiate action for continual improvement through Alteration committee where better material at competitive rates is available than design/specification.
- Shall maintain & upkeep Drawings for input materials.
- Shall maintain & upkeep sample room.
- Shall prepare in association with SQAE the critical stores list and sampling frequency of these critical stores for drawal of samples by SQAE.
- Shall supply the latest drawings and specifications to demanding shops / sections and will withdraw superceded drawing / specifications from the shop / section.

12.0 **Deviations**:

Circumstances arise when the supplier of a store may request permission to depart from the particular guiding production specifications. Such requests

may be made either prior to the commencement of production or entail grant of a concession to accept errors made during the manufacturing of a store. The authorization of an intentional departure from store specification, in order to facilitate production, will be made by the issue of a deviation permit.

12.1 **Deviation Permit:**

A deviation permit constitutes permission to use material or to manufacture components and stores, which differ from design or specification and is limited in its application to cover a definite quantity or period or a particular S.O. Authority for granting a Deviation Permit rests with the appropriate authority. Full particulars of the departure authorized must be stated in the permit.

- All records of deviation granted shall be maintained on computer.
- The standard cell shall periodically review the deviations granted in respect of a particular store and in consultation with AHSP will consider whether particulars could be amended to incorporate such deviations persistently occurring to make the specifications more realistic.
- In case better material is available at competitive rates than design/specification, the proposal for continual improvement through Alteration committee shall be initiated by standard cell.

In the past system was existing where deviation were granted in following categories:

Category of Deviation	Nature of Deviation
'A'	Major deviations in design and material affecting serviceability/function, interchangeability or durability, but not safety.
'B'	Major Deviations in design and material affecting durability but not affecting serviceability/function, interchangeability or safety.
'C'	Deviations in design and material causing minor changes in durability, but not affecting serviceability /function, interchangeability or safety.
'D'	Minor deviations in design and material but not affecting durability, serviceability/function, interchangeability or safety.
'E'	Minor deviations in manufacturing details not affecting design, material, serviceability/ functions, interchangeability, durability or safety.

CVC has issued guidelines that sub-standard material should not be accepted even with price reduction. Accordingly material falling in A, B & C categories shall normally not be granted any deviation. However there may be need to accept material with minor deviations that do not

affect serviceability / function, durability, interchangeability or safety. In such cases GM may authorise the officer in charge of quality control (AGM/QC) to approve minor deviations in manufacturing details not affecting design, material, serviceability / functions, interchangeability, durability and safety. DGQA will provide list of minor deviations allowed during the preceding 05 years to OFs which will be used as guide for allowing minor deviations. The vendors should improve the quality of the product so that grant of deviations is not perpetuated. Deviations granted shall be intimated to the concerned AHSP giving full details of the supply order, manufacturer, date of inspection, deviation granted. Deviations in design/use of alternate material shall not be allowed by OFs. However, in case deviations in design/use of alternate material is required to be granted in specific supply order keeping in view the immediate requirements, the same may be allowed after due consultations between OFs and AHSP concerned and with the approval of AHSP.

12.2 The Format of PD Form is given below at 12.4. The production/QC section shall intimate the need to accept the material on deviation to Material Management section, who in turn, shall fill and initiate PD Form given at 12.4 along with Deviation Discount (DD) form, wherever required, given at 12.5 below. The Deviation in PD form shall be filled up and approved by the sanctioning authority authorised by General Manager.

12.3 There may be cases where deviation, so granted, have significant bearing on the cost of the material. In such cases, General Manager may like to obtain suitable discount from the firm. A Standing Committee as given in table 12.6 below may be formed for deciding

the amount of discount. The Standing Committee will decide the quantum of discount and Material Management Section shall intimate the discount decided by the committee to the firm. On receipt of written agreement from firm, the Supply Order shall be amended by Material Management Section to indicate the amount of discount and the MIS will be sentenced and accepted on deviation.

12.4 **PRODUCTION DEVIATION FORM**

(Use one form for only one item)

S.O/IFD No. _____ date _____

MIS No. _____ date _____

- i) Name of Supplier _____
- ii) Nomenclature of Store _____
- iii) Particulars quoted _____
Drawing No. _____
Specifications _____
Other Particulars _____
- iv) Period, quantity or lot Nos. for which deviation required _____
- v) Description of deviation required _____
- vi) Details of specified and suggested material (Chemical & Physical) (in cases of materials only), including a comparative statement of value per unit of specified and of suggested material readily available.

<u>Specified</u>	<u>Suggested</u>
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- vii) Category for deviation:

Jt. GM/DGM/WM / Material Management

Approved by AGM/QC.

12.5 DEVIATION DISCOUNT FORM

12.5.1 PART I

S.O.NO. : Date : Supplier :

Item : Item Code:

Qty on order : Rate : Qty. of Deviation

Qty accepted under original requirement :

Details of stores accepted earlier under deviation :

Sl..No.	Supplier	Qty. accepted	Nature of deviation	Category	Ref. No.
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M.I.S No. & Date :

Category of deviation :

Deviation sanctioned by : enclose sanctioned PDF Form

DO/MM

12.5.2 PART II

RECOMMENDATION OF STANDING COMMITTEE

Quantum of Deviation Discount recommended (justification for the quantum of DD to be given)

Qty. acceptable :

Reference under which firm has accepted Deviation discount :

Remarks :

Date :

DGM/Standard

DO/QC

DO/Prodn.

AO

DO/MM

12.6 STANDING COMMITTEE FOR GRANT OF DEVIATION DISCOUNT

STANDING COMMITTEE	QUANTUM OF DISCOUNT	SANCIONING AUTHORITY
GO/DO QC DGM/ Standard GO/DO PV(MM) GO/DO PROD. A.O Rep.	Committee to decide	AGM/QC up to 5%, Sr.GM/GM beyond that

13.0 Dispute:

In case of dispute between Firm and inspection Officer, the case shall be referred to General Manager for appropriate test and decision.