

Note No. #1

Attachment:PR DOCS – MAIN –1900141240-FRAME WORK – THREADED ROD.pdf

FRAMEWORK AGREEMENT FOR FGD FPS PROJECTS

R00-01.11.2021

Un-Priced Price Bid Format

Item: THREADED ROD

PR No: 1900141240

| Sl No | PR No | Material Code | Material Description | UOM | PR Qty (No.s) | Technical Specification | Price Weightage Factor | Bidder Confirmation (Quoted) |
|-------|------------|---------------|----------------------------|-----|---------------|-------------------------|------------------------|------------------------------|
| 1 | 1900141240 | PY9752278027 | MS THREADED ROD M10 L=1000 | EA | 10700 | PV52278 | 1.00000 | |
| Total | | | | | | | 1.00000 | |

NOTES:

- 1) Vendor to Quote Lumpsum Price for the Total Package.
- 2) Line Item Rates of the individual items shall be derived by multiplying the "Price Weightage Factor" with the Lumpsum Price quoted.
- 3) Unit Rates of the Individual items thus arrived, shall be binding on the bidder, for the total period of Framework Agreement.
- 4) Observations / Objections, if any, of the Bidder, to the "Price Weightage Factor" shall be brought to the notice of BHEL, during Pre-Bid Stage.
- 5) No Observations / Objections shall be entertained after the Techno-Commercial Bid is opened.
- 6) Bidder to indicate "Quoted" in the column "Bidder's Confirmation" as a confirmation of their bid to the respective item.
- 7) The Bid Evaluation is on Overall L1 Basis. Each and Every item of the Package shall be quoted by the bidder.
- 8) Partial offers will not be considered for evaluation and the same are liable for rejection.
- 9) The details of the Projects for which Framework Agreement is proposed are given elsewhere in the NIT. The distribution of the line items across the projects is attached as **Annexure-A**.
- 10) The permissible ordering limits specified in NIT are strictly applicable on the Total Framework Value. The same are not applicable at the Individual Project level.
- 11) The Total Lump price quoted shall be INCLUSIVE of Freight, Packing & Forwarding and Testing Charges.
- 12) The Total Lump price quoted shall be EXCLUSIVE of GST, Third party inspection (TPI) & Insurance Charges.

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DISTRIBUTION OF FRAMEWORK ITEMS ACROSS PROJECTS

Annexure-A to Price Bid Format

ITEM: THREADED ROD

PR NO 1900141240

| SL NO | Material No | Material Desc | UOM | PMD No | UWT | KOTHAGUDEM | BHADRADRI | NORTH KARANPURA | BARH-1 | BARH-2 | MAUDA | BRBCL NABINAGAR | NPGCL NABINAGAR | RAMAGUNDAM | KORBA | NSPCL BILLAI | TUTICORIN | UDANGUDI | SAGARDIGHI | ENMORE | BHUSAWAL | YADADRI | PATRATU | PANKI | CONTINGENCY |
|-------|--------------|----------------------------|-----|-----------|-----|------------|-----------|-----------------|--------|--------|-------|-----------------|-----------------|------------|-------|--------------|-----------|----------|------------|--------|----------|---------|---------|-------|-------------|
| 1.00 | PI9752278027 | MS THREADED ROD M10 L=1000 | EA | PE.MP.611 | 1.5 | 482 | 482 | 510 | 482 | 482 | 482 | 510 | 510 | 510 | 510 | 482 | 482 | 1482 | 3239 | | | | 3600 | 1100 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

1. The quantities indicated are total quantity with additional 50 % qty variation considered
2. The above list of Quantity , project/customer is tentative only. Final details of quantity, Project/ Customer shall be informed at the time of PO
3. The Project/ Customer are subject to change based on buisness scenario of BHEL.

Note No. #1 Attachment: **PR DOCS - MAIN - 1900141240 - FRAME WORK - THREADED ROD.pdf**
BULK PROCUREMENT OF GENERIC PIPING ITEMS
Pre-Qualification Criteria (Technical)

Package Name : THREADED ROD
PR No : 1900141240

Manufacturers of **THREADED ROD**, qualified as per the Pre-qualification criteria laid down below, are allowed to bid. Documentary evidence shall be provided by such bidders to establish their claim. **However, offer consideration is subjected to approval from end Customer.**

The bid evaluation shall be on Overall L1 basis. The Bidder shall meet the Pre-Qualification Criteria (listed below).

Non-compliance to any of the criteria listed below will lead to disqualification of bidder for the subject item of the tender.

Qualification Criteria of the Bidder:

1. The bidder should be an established manufacturer of **Threaded rod** and should have successfully completed Manufacture, Supply of **Threaded rod**.
2. The Bidder should have successfully completed supply of **Threaded rod** for similar specification with a total minimum quantity of **7000 No.s** through a single Purchase Order or multiple Purchase Orders in the last 5 years ending on original due date of this tender, with at least one order executed after 01.01.2019.
3. Detailed BOQ of the items supplied, satisfying the criteria laid down above, shall be provided in the format enclosed as Annexure-1, with details like Project & Customer, Description & Quantity of Items supplied, PO details etc. as a minimum for assessing pre-qualification. **PO Copies, Inspection Reports and Dispatch documents shall be enclosed for the references provided.**
4. The bidder should not have been under suspension for business or blacklisted by any of the BHEL units.

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Annexure-1 PQC Criteria**Supply References for the Last 5 Years (dispatch date) from the Original due date of this tender**

Enquiry Item No & Description: (To be filled by Bidder)

| Sl No | Project Name along with name of Customer | Description Item(s) supplied | Purchase Order No & Date (Copy to be enclosed) | Delivery Date as per Order | Value of Order | Inspection Reports / Dispatch Documents (Copy to be enclosed) | Remarks |
|-------|--|------------------------------|--|----------------------------|----------------|---|---------|
| | | | | | | | |
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| | | | | | | | |

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Bulk Procurement of Threaded rod
Price Variation Formula-THREADED ROD
PVC-MS-THRDROD-GALV

$$PO = PA \times \left(\left[0.50 \times \frac{MO}{MA} \right] + \left[0.10 \times \frac{GO}{GA} \right] + \left[0.15 \times \frac{FO}{FA} \right] + \left[0.10 \times \frac{LO}{LA} \right] + 0.15 \right)$$

| | |
|----|---|
| PO | Purchase Order Value, adjusted in accordance with above Price Variation Formula |
| PA | Purchase Order Value, as per Original Framework Agreement Price |

Escalation for Raw Material:

| | |
|--|--|
| MO | JPC Retail Market Price of "PIG IRON", as on the date of respective Project PO Placement, <i>calculated as an Average of the Prices for Kolkata, Delhi, Mumbai, Chennai regions.</i> |
| MA | JPC Retail Market Price for "PIG IRON", as on the date of Part-1 bid opening of Framework Agreement Tender, <i>calculated as an Average of the Prices for Kolkata, Delhi, Mumbai, Chennai regions.</i> |
| As published under the Item "PIG IRON" by Joint Plant Committee, Ministry of Steel, Govt of India, in their subscription based bimonthly publication "JPC MARKET PRICE RETAIL". | |

Escalation for Galvanizing:

| | |
|---|--|
| GO | Wholesale Price Index for "Zinc", as on the date of respective Project PO Placement |
| GA | Wholesale Price Index for "Zinc", as on the date of Part-1 bid opening of Framework Agreement Tender |
| As published under the Index "Zinc metal/Zinc blocks" by Office of the Economic Adviser, Ministry of Commerce and Industry, Govt of India, on their website www.eaindstry.nic.in | |

Escalation for Fuel & Power:

| | |
|--|--|
| FO | Wholesale Price Index for "Fuel & Power", as on the date of respective Project PO Placement |
| FA | Wholesale Price Index for "Fuel & Power", as on the date of Part-1 bid opening of Framework Agreement Tender |
| As published under the Index "II Fuel & Power" by Office of the Economic Adviser, Ministry of Commerce and Industry, Govt of India, on their website www.eaindstry.nic.in | |

Escalation for Labour:

| | |
|--|--|
| LO | All-India Average Consumer Price Index Number for Industrial Workers (Base_2016=100), as on date of respective Project PO Placement |
| LA | All-India Average Consumer Price Index Number for Industrial Workers (Base_2016=100), as on the date of Part-1 bid opening of Framework Agreement Tender |
| As published by Labour Bureau, Ministry of Labour and Employment, Govt of India, on their website www.labourbureau.gov.in | |

Overheads and Margin:

| | |
|------|-----------------------------------|
| 0.15 | Constant for Overheads and Margin |
|------|-----------------------------------|

NOTE: Latest Index Values, as published by respective agencies, **Available as on the date** of Part-1 bid opening of FA Tender / date of PO, shall be considered, for all the factors.

| | | | | |
|-------------|----------|--|---|---|
| Note No. #1 | Form No: |  PE&SD | Attachment: PR DGS - MAIN - 1900141240-FRAME WORK - THREADED ROD.pdf BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION TECHNICAL SPECIFICATION MS THREADED RODS | PY 52 278 Rev. No. 00 Page 1 of 2 |
|-------------|----------|--|---|---|

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MS THREADED RODS

1.0 INTRODUCTION & SCOPE

- 1.1 The intent of this document is to indicate minimum specification requirements for procurement of **MS threaded Rods** (metric ISO standard thread).
- 1.2 The purpose of these MS Threaded Rods is to support the HVAC ducts/ Pipe supports/ Cable tray supports and other service utilities by screwing into the Flush Anchor fastener.
- 1.3 All the codes/standards mentioned in this specification shall be of latest issue.

2.0 DESIGN & MATERIAL

- 2.1 MS Rods shall be Threaded for full length.
- 2.2 MS Threaded Rod Size & Length shall be as per variant table / BHEL enquiry.
- 2.3 Each MS Threaded Rod shall be supplied along with suitable Hexagonal nuts (3 nos) & Washers (2 nos).
- 2.4 Rods, Washers and Nuts shall be HOT-DIP Galvanized.
- 2.5 Rod material shall be - IS2062, Grade E250 Sub-quality A.
- 2.6 Nut and Washer material shall be - CS 5.8 Grade.
- 2.7 The thread should enable the fixing of rods into the flush anchor of the same size.
- 2.8 No damage should happen to the thread when fastening.

3.0 INSPECTION




Scope of inspection shall be as called for in the data sheets enclosed / specified in the purchase order / approved quality plan. Inspection agency shall be BHEL / BHEL Third Party Inspection agency.

4.0 TEST CERTIFICATES

Three copies of the test certificates covering results of the Chemical analysis and the Mechanical tests as per the material standard, shall be furnished.

5.0 PACKING AND MARKING

- 5.1 All the items shall be packed suitably in closed wooden cases / hard cardboard boxes, enclosed in a moisture resistant wrapping in order to avoid damage, ingress of moisture & corrosion during transit and storage. Suitable supports shall be provided inside the cases in order to avoid internal movement. Each packing case must contain 2 copies of the shipping list giving details of all the contents of the case.
- 5.2 The following marking shall be done on each packing case minimum on two sides and also at the top:
 - Complete address of the consignee and destination as per BHEL Purchase Order.
 - BHEL Purchase Order Number (c) Number of pieces in each packing case
 - Net Weight
 - Gross Weight
 - Packing case number and total number of packing
 - Arrow indicating top of the packing case.

| | | | | | |
|----------|---|---|--|---|----------|
| Form No: | LAYOUTS & PIPING ENGINEERING | PREPARED | CHECKED | APPROVED | DATE |
| | PROJECT ENGINEERING & SYSTEMS DIVISION |  PARAMESH |  V UDAY |  SRIKANTH | 02.11.19 |

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Form No:



PE&SD

BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING & SYSTEMS DIVISION

PY 52 278

TECHNICAL SPECIFICATION FOR

Rev. No. 00

MS THREADED RODS

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RECORD OF REVISIONS

| Rev. No. | Date | Revision Details | Revised | Approved |
|----------|------------|------------------|---------|----------|
| 00 | 02.11.2019 | First Issue | -- | -- |

Note No. #1


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|  PROJECT ENGINEERING & SYSTEM DIVISION | STANDARD MANUFACTURING QUALITY PLAN | | | | | | QP. NO.:PESD/QA/ FASTENER/01/18-19 | | | | | | | |
|---|-------------------------------------|-----------------|-------|---------------|------------------|--------------------|---------------------------------------|------------------|-------------|-----------------|------------------|--|--|---------|
| | PRODUCT: FASTENER | | | | | | BHEL SPEC: AS PER P.O | | REV NO: 00 | | DATE: 23-02-2019 | | | |
| | | | | | | | | | PAGE 1 OF 3 | | | | | |
| SL NO | COMPONENTS | CHARACTERISTICS | CLASS | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | ACCEPTANCE NORMS | FORMAT OF RECORD | * D | AGENCY P W V | | | | REMARKS |

| | | | | | | | | | | | | | |
|--|-----------|---|-------|---------------------------------------|--|---|---|----------------------------|--|---|----|----|---|
| 1.0 BOUGHT OUT ITEMS | | | | | | | | | | | | | |
| 1.1 | FASTENERS | Material batch identification, dimensions and GO & NO-GO check | Major | Visual, dimensional, GO & NO-GO check | Sampling plan IS 1367 : Part 17 (AQL=1, LQ10 = 12, sample size = 32, Ac = 1) | BHEL specification or IS Standard IS 1367 : Part 17 | BHEL specification or IS Standard IS 1367 : Part 17 | MTC and inspection reports | √ | 2 | 2 | -- | Inspection shall be carried out by main supplier. |
| 2.0 FINAL INSPECTION & TESTING | | | | | | | | | | | | | |
| 2.1 | FASTENERS | Visual, Dimensions, GO & NO-GO check | Major | Visual, dimensional, GO & NO-GO check | Sampling plan IS 1367 : Part 17 (AQL=0.65, LQ10 = 25, sample size = 8, Ac = 0) | BHEL Specification /BOQ/ IS Standard | BHEL Specification /BOQ/ IS Standard | Inspection reports | √ | 2 | 1 | -- | |
| 2.2 | | Chemical & Mechanical Properties, Impact test and Heat Treatment (heat treatment if applicable) | Major | TC Review | One sample per Lot | | | MTC | √ | 2 | -- | 1 | |
| LEGEND: P: PERFORM, W: WITNESS, V: TC REVIEW. INDICATE 1 FOR BHEL CQS /BHEL NOMINATED INSPECTION AGENCY/END USER & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS. | | | | | | APPROVED BY  BHEL QA SIGNATURE & STAMP | | | APPROVED BY -NA- CUSTOMER'S SIGNATURE & STAMP (if applicable) | | | | |

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|---|------------|---|-------|---------------|----------------------|--------------------|--------------------|---------------------------------------|-----|-----------------|----|------------------|--|---------|
| | | PRODUCT: FASTENER | | | | | | BHEL SPEC: AS PER P.O | | REV NO: 00 | | DATE: 23-02-2019 | | |
| | | | | | | | | | | PAGE 2 OF 3 | | | | |
| SL NO | COMPONENTS | CHARACTERISTICS | CLASS | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | ACCEPTANCE NORMS | FORMAT OF RECORD | * D | AGENCY P W V | | | | REMARKS |
| 2.3 | | PMI# | Major | PMI test | Random | | | IR/TC | √ | 2 | 1 | 1 | # If applicable 10 sets shall be witnessed randomly by "1" | |
| 2.4 | | Galvanization* (mass of zinc coating Thickness of Coating, embrittlement, adherence, finish appearance, etc) | Major | Measurement | As per specification | | | IR/TC | √ | 2 | - | 1 | | |
| 2.5 | | BOM Check | Major | Visual | 100% | | | Inspection reports | √ | 2 | 1 | -- | | |
| 3.0 PRESERVATION & PACKING | | | | | | | | | | | | | | |
| 3.1 | FASTENERS | Packing# and markings | Major | Visual | Random | BHEL Specification | BHEL Specification | Packing List | √ | 2 | -- | 1 | #Seaworthy packing for export orders refer note-5. | |

LEGEND: P: PERFORM, W: WITNESS, V: TC REVIEW. INDICATE 1 FOR BHEL CQS /BHEL NOMINATED INSPECTION AGENCY/END USER & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS.

APPROVED BY



BHEL QA SIGNATURE & STAMP


APPROVED BY

-NA-

CUSTOMER'S SIGNATURE & STAMP
(if applicable)

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|---|------------|-------------------------------------|-------|------------------|---------------------|---------------------------------------|---------------------|---------------------|--------|---------------------|------------------|--|---------|
|  PROJECT ENGINEERING & SYSTEM DIVISION | | STANDARD MANUFACTURING QUALITY PLAN | | | | QP. NO.:PESD/QA/ FASTENER/01/18-19 | | | | | | | |
| | | PRODUCT: FASTENER | | | | BHEL SPEC: AS PER P.O | | | | REV NO: 00 | DATE: 23-02-2019 | | |
| | | | | | | | | | | PAGE 3 OF 3 | | | |
| SL NO | COMPONENTS | CHARACTERISTICS | CLASS | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | ACCEPTANCE NORMS | FORMAT OF RECORD | * D | AGENCY P W V | | | REMARKS |

Notes:-

1. This Standard MQP should be read along with specification (Latest revision as per PO), approved drawings & approved datasheet.
2. Drawing/datasheet shall prevail over quality plan for contradiction if any.
3. Any project/customer specific requirements which shall be notified have to be fulfilled by the vendor at the time of execution of order.
4. **NACE requirement:** For items coming under **NACE category**, all tests, reports, MTC and certificates shall be submitted as per **NACE MR0103** requirements.
5. Seaworthy packing shall be **witnessed** BHEL/BHEL nominated inspection agency for overseas project.

Abbreviations:-

| | | | | | |
|-----|---|----------------------------------|----|---|------------------|
| MTC | - | Material Test certificate | TC | - | Test Certificate |
| NDE | - | Non Destructive Examination | CS | - | Carbon Steel |
| PMI | - | Positive Material Identification | | | |
| SS | - | Stainless Steel | | | |
| IR | - | Inspection Report | | | |

| | | | |
|--|-------------|--|-------------|
| LEGEND: P: PERFORM, W: WITNESS, V: TC REVIEW. INDICATE 1 FOR BHEL CQS /BHEL NOMINATED INSPECTION AGENCY/END USER & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS. | APPROVED BY |  BHEL QA SIGNATURE & STAMP | APPROVED BY |
| | | | -NA- |