

Note No. #1

Attachment:PR DOCS – MAIN –1900141242-FRAME WORK – PIPECLAMP.pdf

FRAMEWORK AGREEMENT FOR FGD FPS PROJECTS

R00-30.10.2020

Un-Priced Price Bid Format

Item: PIPE CLAMP

PR No: 1900141242

| Sl No | PR No | Material Code | Material Description | UOM | PR Qty (No.s) | Technical Specification | Price Weightage Factor | Bidder Confirmation (Quoted) |
|--------------|------------|---------------|----------------------|-----|---------------|-------------------------|------------------------|------------------------------|
| 1 | 1900141242 | PY9752281010 | MS PIPE CLAMP 25NB | EA | 340 | PY52281 | 0.09494 | |
| 2 | 1900141242 | PY9752281028 | MS PIPE CLAMP 50NB | EA | 7500 | PY52281 | 0.53210 | |
| 3 | 1900141242 | PY9752281036 | MS PIPE CLAMP 80NB | EA | 130 | PY52281 | 0.02167 | |
| 4 | 1900141242 | PY9752281044 | MS PIPE CLAMP 100NB | EA | 1900 | PY52281 | 0.35130 | |
| 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-1
- 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.

Note No. #1

Attachment:PR DOCS - MAIN -1900141242-FRAME WORK - PIPECLAMP.pdf

DISTRIBUTION OF FRAMEWORK ITEMS ACROSS PROJECTS

Annexure-A to Price Bid Format

ITEM: PIPE CLAMPS

PR NO 1900141242

| Sl No | Material No | Material Desc | UOM | PMD No | UWT | KOTHAGUDEM | BHADRADRI | NORTH KARANPURA | BARH-1 | BARH-2 | MAUDA | BRSCL NABINAGAR | MPGL NABINAGAR | RAMAGUNDAM | KORBA | NSPL BILLAI | TUTICORIN | UDANGUDI | SAGARDIGHI | ENMORE | BHUSAWAL | YADADRI | PATRATU | PANKI | CONTINGE NCY |
|-------|--------------|----------------------|-----|-----------|-----|------------|-----------|--------------------|--------|--------|-------|--------------------|----------------|------------|-------|-------------|-----------|----------|------------|--------|----------|---------|---------|-------|-----------------|
| 1.00 | PI9752281010 | IMS PIPE CLAMP 25NB | EA | PE.MP.044 | 0.2 | | | | | | | | | | | | | 178 | | | | | | 300 | |
| 2.00 | PI9752281028 | IMS PIPE CLAMP 50NB | EA | PE.MP.044 | 0.3 | 482 | 482 | 340 | 482 | 482 | 482 | 340 | 340 | 340 | 340 | 482 | 482 | 736 | 2254 | | | | 2200 | 400 | |
| 3.00 | PI9752281036 | IMS PIPE CLAMP 80NB | EA | PE.MP.044 | 0.4 | | | | | | | | | | | | | 182 | | | | | | | |
| 4.00 | PI9752281044 | IMS PIPE CLAMP 100NB | EA | PE.MP.044 | 0.5 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 130 | 805 | | | | 200 | 400 | |

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 – 1900141242-FRAME WORK – PIPECLAMP.pdf
BULK PROCUREMENT OF GENERIC PIPING ITEMS
Pre-Qualification Criteria (Technical)

Package Name : PIPE CLAMPS
PR No : 1900141242

Manufacturers of **PIPE CLAMP**, 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 **Pipe clamps** and should have successfully completed Manufacture, Supply of **Pipe clamps**.
2. The Bidder should have successfully completed supply of Pipe clamps 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.

Note No. #1 Attachment:PR DOCS – MAIN –1900141242-FRAME WORK – PIPECLAMP.pdf

Bulk Procurement of Pipe clamps
Price Variation Formula–PIPE CLAMPS
PVC-MS-PIPECLAMPS-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 PICE 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.labourbureaunew.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: PE DOCS - MAIN - 1900741842 - FRAME WORK - PIPECLAMP.pdf BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION | PY 52 281 | |
| | | | TECHNICAL SPECIFICATION | | Rev. No. 00 |
| | | | MS PIPE CLAMPS FOR FPS PIPING | | Page 1 of 2 |

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MS PIPE CLAMPS FOR FPS PIPING

1.0 INTRODUCTION & SCOPE

- 1.1 The intent of this document is to specify minimum specification requirements for procurement MS Piping Clamps as Per fig-1.
- 1.2 The purpose of these clamps is to support the pipe using threaded Rods from roof.
- 1.3 All the codes/standards mentioned in this specification shall be of latest issue.

2.0 DESIGN & MATERIAL

- 2.1 MS clamps shall be as per the dimensions in FIG -1 and shall be suitable for the pipe sizes as indicated in the Table-1.
- 2.2 MS clamps shall be HOT- DIP Galvanized.
- 2.3 MS clamp material shall be as per IS 2062 Grade E250 Sub-quality A.
- 2.4 The ends of clamp Strip shall be overlapped and shall have a hole of DIA 10 mm (unless otherwise specified) as indicated in the fig-A , for inserting the threaded rod. There shall be overlap of the both ends of clamp, and hole shall be passing through the overlap portions of the clamp as indicated in FIG-1.
- 2.5 MS strip used for the clamp shall be minimum 2 mm thick for all sizes.
- 2.6 Nuts & rods indicated in fig-1 are not in supply scope.

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 G | 02.11.19 |

Note No. #1

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| Form No: |  PE&SD | Attachment: PE DOCS - MAIN - 1900141842 - FRAME WORK - PIPECLAMP.pdf BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION | PY 52 281 |
| | TECHNICAL SPECIFICATION | | Rev. No. 00 |
| | MS PIPE CLAMPS FOR FPS PIPING | | Page 2 of 2 |

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TABLE-1

| DIMENSIONS DETAILS OF THE CLAMP | | | |
|---------------------------------|------------------------|------------------------|---------------------------|
| PIPE SIZE | DIMENSION-A (IN MM) | DIMENSION-B (IN MM) | WIDTH OF CLAMP (IN MM) |
| 25 NB | 35 | 70 | 25 |
| 50 NB | 62 | 120 | 25 |
| 80 NB | 90 | 180 | 50 |
| 100 NB | 116 | 240 | 50 |
| 150 NB | 170 | 340 | 50 |

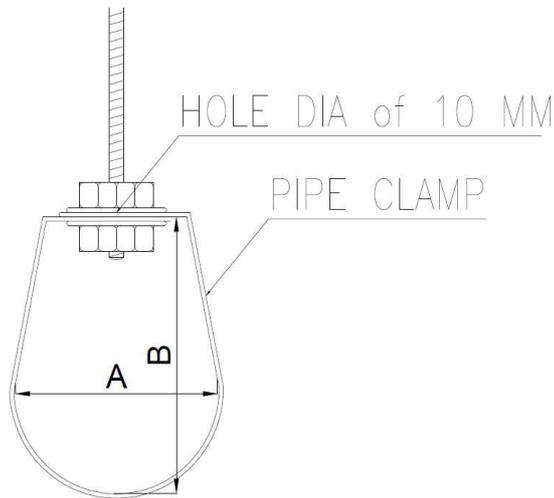


FIG-1

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

| Note No. #1 | VENDOR'S NAME & ADDRESS: | | MANUFACTURING QUALITY PLAN -1900141242-FRAME WORK-PIPECLAMP.pdf | | | | | | Rev No:00 | | DATE: | | | | |
|---|---------------------------------|---------------------------------|--|---------------|------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------|-------------|-------|---|---------|--|--|
| | CUSTOMER: BHEL, HYDERABAD - 32. | | | BHEL P.O No.: | | | | | | | | | | | |
| | PROJECT: VARIOUS | | | P.O DATE : | | | | | | | | | | | |
| PRODUCT: Swivel Hanger/ MS Pipe Clamp | | | BHEL SPEC : | | | | | | | PAGE 1 OF 1 | | | | | |
| Sl No | Components | Characteristics | Class | Type Of Check | Quantum of Check | Reference Document | ACCEPTANCE NORMS | FORMAT OF RECORD | * D | AGENCY | | | REMARKS | | |
| 1.0 RAW MATERIALS & BOUGHT OUT ITEMS | | | | | | | | | | | | | | | |
| 1.1 | Mild Steel Sheet | Chemical Composition | Major | Chemical | Lot | IS 1079 | IS 1079 | Raw Material Test Certificate | √ | 2 | 2 | 1 | | | |
| | | Tensile Test | Major | Mechanical | | | | | √ | 2 | 2 | 1 | | | |
| | | Bend Test | Major | Mechanical | | | | | √ | 2 | 2 | 1 | | | |
| | | Visual Check for Surface finish | Major | Visual | 10% | | | | √ | 2 | 2 | 1 | | | |
| | | Dimensions | | | | | | | | | | | | | |
| | | | Sheet Thickness | Major | Measure | 10% | IS 1852 | IS 1852 | Internal Test Reports | √ | 2 | 2 | 1 | | |
| 2.0 INPROCESS INSPECTION | | | | | | | | | | | | | | | |
| 2.1 | Fabrication | Shearing/Cutting | Major | Measure | 5% | Approved Drawing | Approved Drawing | Internal Test Reports | √ | 2 | 2 | 1 | | | |
| | | Forming / Hole Punching | Major | Measure | 5% | Approved Drawing | Approved Drawing | Internal Test Reports | √ | 2 | 2 | 1 | | | |
| 2.2 | Surface Coating | Hot Dip Galvanising | Major | Measure | 100% | IS 4759 / IS 2629 | IS 4759 / IS 2629 | Internal Test Reports | √ | 2 | 2 | 1 | | | |
| 3.0 FINAL INSPECTION & TESTING | | | | | | | | | | | | | | | |
| 3.1 | Swivel Hanger/ MS Pipe Clamp | Dimension | Major | Measure | 1% | Approved Drawing | Approved Drawing | Internal Test Reports | √ | 2 | 1 | 1 | | | |
| | | Coating Thickness | Major | Measure | 1% | IS 4759 / IS 2629 | IS 4759 / IS 2629 | Internal Test Reports | √ | 2 | 2 | 1 | | | |
| | | Mass of Zinc Coating | Major | Measure | Sample | | | | √ | 2 | 2 | 1 | | | |
| | | Preece Test | Major | Test | Sample | | | | √ | 2 | 2 | 1 | | | |
| | | Adhesion Test | Major | Test | Sample | | | | √ | 2 | 2 | 1 | | | |
| | | Visual Check for Surface finish | Major | Visual | 10% | | | | √ | 2 | 2 | 1 | | | |
| 4.0 PRESERVATION & PACKING | | | | | | | | | | | | | | | |
| 4.1 | Packing | Painting & Packing | Major | | Random | BHEL Specs./ Approved Drawing | BHEL Specs./ Approved Drawing | | | 2 | 1 | 1 | | | |

| | | | | |
|---|----------------------------|-----------------------------|---------------------------|------------------------------|
| LEGEND: P: PERFORM, W: WITNESS, V: VERIFICATION. INDICATE 1 FOR BHEL/BHEL NOMINATED TPIA & 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. | PREPARED BY | APPROVED BY | | APPROVED BY |
| | VENDOR'S SIGNATURE & STAMP | BHEL ENGG SIGNATURE & STAMP | BHEL QA SIGNATURE & STAMP | CUSTOMER'S SIGNATURE & STAMP |