**Ref No.: NWSDB/SBD/CIVIL-Major(GOSL)/Ver1**

***Revised on 07-04-2021***

**GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC**

# OF SRI LANKA

**MINISTRY OF WATER SUPPLY**

# NATIONAL WATER SUPPLY AND DRAINAGE BOARD

### ……………………….. WATER SUPPLY/SEWERAGE SCHEME

**BID FOR …………………………………………………..…**

**(BUILDING & CIVIL MAJOR WORKS)**

*For the bidding documents prepared by the P&D section Head Office:*

**CONTRACT No.: NWSDB/**..*(1)..***/P&D***(2)***/CP***(3)***/A..***(4*)**../GOSL/2021/..***(5)***..**

*For the bidding documents prepared by RSCs:*

**CONTRACT No.: NWSDB/…***(1)***…/CP***(3)***/A..***(4*)**../GOSL/2021/..***(5)***..**

*(1)Name of the RSC*

*(2)P&D means the head office P&D*

*(3)CP means Corporate Plan 2020-25 projects*

*(4)Ref.no. in Annex of Cooperate plan 2020- 2025*

*(5)Number of the Contract*

***Revised on 07-04-2021***

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**GALLE ROAD**

**RATMALANA.**

**……………………..**

**MONTH & YEAR**

#### DOCUMENT ISSUANCE CERTIFICATE

(To be filled at the time of issue by the authorized issuing officer)

1. STANDARD DOCUMENT REFERENCE NUMBER:

NWSDB/SBD/Civil-Major(GOSL)/Ver1

2. CONTRACT NUMBER : ………………….…………..…………………….

3. a) ISSUED TO : ………..........................……...............................

b) ADDRESS : ………….................................…….....................

c) TELEPHONE NUMBER : ....……...............................…..................

d) FACSIMILE NUMBER : ………………………………..………..

4. a) TENDER FEE : Rs. ........ RECEIVED/NOT RECEIVED

IN CASH/BANK DRAFT

b) RECEIPT/BANK DRAFT NUMBER : .....................…….............

5. NUMBER OF COPIES ISSUED : ..................…….…....................…...........

6. NUMBER OF CANCELLED COPIES ISSUED : …….....................…........

7. CANCELLED COPY FEE : Rs...............…….... RECEIVED/NOT RECEIVED (IN CASH/BANK DRAFT)

8 BUSINESS REGISTRATION NUMBER : ..........................………................

9. a) ISSUING OFFICER : ................................................…….........

b) DESIGNATION : ....................................................………..

c) SIGNATURE : ..................................................………..

10. PLACE OF ISSUE : ........................................................….….

11. SEAL : ………………..………………………………………….…….

12. DATE : ............................ TIME : …..............................……

# T A B L E O F C O N T E N T S

##### VOLUME 1

**Volume - 1 of this document is the Volume – 1 of Standard Bidding Document, Procurement of Works, Major Contracts, ICTAD publication No. ICTAD/SBD/02 Second Edition – January 2007, and available for purchasing at CIDA, WijeramaMawatha, Colombo 7.**

Volume 1 includes following sections

Section 1 - Instructions to Bidders

Section 3 - Conditions of Contract

Section 5 - Standard Forms (Contract) are not used – Refer Section 12 of Volume II

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**CHECK LIST BEFORE SUBMISSION OF BIDS**

Bidders are advised to fill the following table:

|  |  |  |
| --- | --- | --- |
| **ITEM** | **REFERENCE** | **REMARKS** |
| Documentary evidence to establish eligibility of bidder. | ITB Clause 4 |  |
| Signatory to the BID |  |  |
| Evidence for authority for Signatory(ies)  enclosed? | ITB Clause 20 |  |
| Form of Bid |  |  |
| Addressed to the Employer? |  |  |
| Completed? |  |  |
| Signed? |  |  |
| Bid Security |  |  |
| Addressed to the Employer? | ITB Clause 17 |  |
| Format as required? | ITB Clause 17 |  |
| Issuing Agency as specified? | ITB Clause 17 |  |
| Validity **as mentioned in the bidding**  **data** | ITB Clause 17 |  |
| Qualification Information |  |  |
| All relevant information completed? | ITB Clause 4 |  |
| Signed? | ITB Clause 4 |  |
| Addendum |  |  |
| Contents of the addendum (if any) taken in  to account? | ITB Clause 11 |  |
| BID package |  |  |
| All the documents given in ITB Clause 13  enclosed in the original and copy? | ITB Clause 13 |  |
| ITB Clause 21 followed before Sealing the  Bid Package? | ITB Clause 21 |  |
| Copy of VAT registration certificate | ITB Clause 14.3 |  |
| Bio data of engineers and technical officers | Appendix 4A |  |
| Summary of Assets and liabilities for the last  three financial years | Appendix 2A |  |
| Evidence of credit facilities available | Appendix 2B |  |
| Quality Management System Certificate  ISO 9001:2015 | ITB Clause 4 |  |
| Product Conformity Certificate | ITB Clause 4 |  |

VOLUME 1

Standard Bidding Document, Procurement of works, Major Contracts, ICTAD/SBD/02 Second Edition, - January 2007 Published by Construction Industry Development Authority (CIDA) is applicable in respect of this Contract. Any changes to these Clauses in the Instructions to Bidders & Conditions of Contracts are indicated in Bidding data and Contract data in Section 4 and 5 respectively.

**ICTAD/SBD/02 Second Edition – January 2007 is not provided with this Bidding document, and it is available for purchasing at CIDA, WijeramaMawatha, Colombo 7.**

VOLUME 2

**INVITATION FOR BIDS**

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

**MINISTRY OF …………………………**

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**CONTRACT No.: …………………………………..**

**…………………………….. ……. Water Supply/Sewerage Scheme**

**Bid for …………………………………………….**

**INVITATION FOR BIDS (IFB)**

* 1. The Chairman, Standing Cabinet Appointed Procurement Committee,Ministry of …………………… ……………………………….., No. 35, “Lakdiya Madura”, New Parliament Road,Pelawatta, Battaramulla, Sri Lanka on behalf of the National Water Supply and Drainage Board (NWSDB) invites sealed bids from eligible and qualified bidders for ……..…………….…………………………………of ……………………………………… Water Supply/Sewerage Scheme.

1. Bidding will be conducted through National Competitive Bidding Procedure.
2. Alternative bids shall not be accepted.
3. To be eligible for Contract award, the successful bidder shall not have been blacklisted and shall have Registration with CIDA in the field of …………………………………………. in Grade …………… at time of submission of the bid.
4. The estimated cost for this Bid is Rs………………………………. Million without VAT and the construction period is ……………… Days

6 Interested bidders may obtain further information from Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana, Sri Lanka over the telephone, number 011-2635885 or 011-2638999 Ext. 1750 or facsimile number 011-2635885 and bidding documents may be inspected free of charge at the office of the Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana, Sri Lanka.

* 1. A complete set of Bidding documents in English language may be purchased by interested bidders on the submission of a written application on a business letterhead to the Assistant General Manager (Tenders and Contracts), NWSDB, Galle Road, Ratmalana,Sri Lankaor RSC(…..), ………………………………………………………. from ……………….. until …………from 09:00 hours to 15:00 hours on normal working days upon payment of a non refundable tender fee of Rs………………………./= Plus applicable VAT in cash.

8 Bids shall be delivered to the Chairman,Cabinet Appointed Procurement Committee, Procurement Division,Ministry of ……………………………………………………., No. 35, “Lakdiya Madura”, New Parliament Road,Pelawatta, Battaramulla, Sri Lankaon or before …………………hrs on ………………Late Bids will be rejected. Bids will be opened soon after closing in the presence of thebidders’ representatives who choose to attend.

9 All Bids shall be accompanied by a bid security of Rupees…………………………and valid upto ………………………*(Specify the Date).*

**Chairman**

National Water Supply and Drainage Board

Galle Road, Ratmalana. Sri Lanka

Revised on 01-01-2021

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

**MINISTRY OF ………………………………**

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**CONTRACT No.: …………………………………..**

**…………………………….. ……. Water Supply/Sewerage Scheme**

**Bid for …………………………………………….**

**INVITATION FOR BIDS (IFB)**

1. The Chairman, Ministry Procurement Committee, Ministry of ………………………… …………………………………, No. 35, “Lakdiya Madura”, New Parliament Road,Pelawatta, Battaramulla, Sri Lanka on behalf of the National Water Supply and Drainage Board (NWSDB) invites sealed bids from eligible and qualified bidders for……………………………………………...……….……of ………………………………… Water Supply/Sewerage Scheme.
2. Bidding will be conducted through National Competitive Bidding Procedure.
3. Alternative bids shall not be accepted.
4. To be eligible for Contract award, the successful bidder shall not have been blacklisted and shall have Registration with CIDA in the field of …………………………………………. in Grade ……………at time of submission of the bid.
5. The estimated cost for this Bid is Rs………………………………. Million without VAT and the construction period is ……………… Days

6 Interested bidders may obtain further information from Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana, Sri Lanka over the telephone, number 011-2635885 or 011-2638999 Ext. 1750 or facsimile number 011-2635885 and bidding documents may be inspected free of charge at the office of the Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana, Sri Lanka.

7 A complete set of Bidding documents in English language may be purchased by interested bidders on the submission of a written application on a business letterhead to the Assistant General Manager (Tenders and Contracts), NWSDB, Galle Road, Ratmalana,Sri Lankaor RSC(…..), ………………………………………………………. from ……………….. until …………from 09:00 hours to 15:00 hours on normal working days upon payment of a non refundable tender fee of Rs………………………./= Plus applicable VAT in cash.

8 Bids shall be delivered to the Chairman, Ministry Procurement Committee, Ministry of …… ……………………………………………, No. 35, “Lakdiya Madura”, New Parliament Road,Pelawatta, Battaramulla, Sri Lanka on or before …………………hrs on ……………… Late Bids will be rejected. Bids will be opened soon after closing in the presence of the bidders’ representatives who choose to attend.

9 All Bids shall be accompanied by a bid security of Rupees…………………………and valid upto ………………………*(Specify the Date).*

**Chairman**

National Water Supply and Drainage Board

Galle Road, Ratmalana.Sri Lanka

Revised on 26-01-2021

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

**MINISTRY OF ………………………………**

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**CONTRACT No.: …………………………………..**

**…………………………….. ……. Water Supply/Sewerage Scheme**

**Bid for …………………………………………….**

**INVITATION FOR BIDS (IFB)**

1. The Chairman, Department Procurement Committee, National Water Supply and Drainage Board (NWSDB), Galle Road, Ratmalana on behalf of the National Water Supply and Drainage Board (NWSDB) now invites sealed bids from eligible and qualified bidders for…….………….…………..………….……of……………………Water Supply Scheme.
2. Bidding will be conducted through National Competitive Bidding Procedure.
3. Alternative bids shall not be accepted.
4. To be eligible for Contract award, the successful bidder shall not have been blacklisted and shall have Registration with CIDA in the field of …………………………………………. in Grade …………… at time of submission of the bid.
5. The estimated cost for this Bid isRs………………………………. Million without VAT and the construction period is ……………… Days

6 Interested bidders may obtain further information from Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana over the telephone, number 011-2635885 or 011-2638999 Ext. 1750 or facsimile number 011-2635885 and bidding documents may be inspected free of charge at the office of the Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana.

7 A complete set of Bidding documents in English language may be purchased by interested bidders on the submission of a written application on a business letter headto the Assistant General Manager (Tenders and Contracts), NWSDB, Galle Road, Ratmalana or RSC(…..), ………………………………………………………………………. from …………… until …………….09:00 hours to 15:00 hours on normal working days upon payment of a non refundable tender fee of Rs……………………………./= Plus applicable VAT in cash.

8 Bids shall be delivered to the Assistant General Manager (Tenders and Contracts), NWSDB, Galle Road, Ratmalana on or before …………………hrs on …… …………Late Bids will be rejected. Bids will be opened soon after closing in the presence of the bidders’ representatives who choose to attend.

9 All Bids shall be accompanied by a bid security of Rupees…………………………and valid upto ………………………*(Specify the Date).*

**Chairman**

National Water Supply and Drainage Board

Galle Road, Ratmalana. Sri Lanka

Revised on 26-01-2021

*[For Below 50 Million works]*

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

MINISTRY OF ………………………..

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**CONTRACT No.: …………………………………..**

**……………………………..………………. Water Supply Scheme**

**Bid For …………………………………………….**

**INVITATION FOR BIDS (IFB)**

1. The Chairman, Department Procurement Committee, National Water Supply and Drainage Board (NWSDB), Galle Road, Ratmalana on behalf of the National Water Supply and Drainage Board (NWSDB) now invites sealed bids from eligible and qualified bidders for…….………….…………..………….……of……………………Water Supply Scheme.
2. Bidding will be conducted through National Competitive Bidding Procedure. As the Total Cost Estimate of this procurement is below Rs.50 Million, regional preference and CIDA grade preference shall apply as stipulated in Public Finance Circular No. 04/2016(ii).
3. Alternative bids shall not be accepted.
4. To be eligible for Contract award, the successful bidder shall not have been blacklisted and shall have Registration with CIDA in the field of …………………………………………. in Grade ……………at time of submission of the bid.
5. The estimated cost for thisBid isRs………………………………. Million without VAT and the construction period is ……………… Days

6 Interested bidders may obtain further information from Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana over the telephone, number 011-2635885 or 011-2638999 Ext. 1750 or facsimile number 011-2635885 and bidding documents may be inspected free of charge at the office of the Assistant General Manager, (Tenders and Contracts), NWSDB, Galle Road, Ratmalana.

7 A complete set of Bidding documents in English language may be purchased by interested bidders on the submission of a written application on a business letter headto the Assistant General Manager (Tenders and Contracts), NWSDB, Galle Road, Ratmalana or RSC(…..), ………………………………………………………………………. from …………… until …………….09:00 hours to 15:00 hours on normal working days upon payment of a non refundable tender fee of Rs……………………………./= Plus applicable VAT in cash.

8 Bids shall be delivered to the Assistant General Manager (Tenders and Contracts), NWSDB, Galle Road, Ratmalana on or before …………………hrs on …… …………Late Bids will be rejected. Bids will be opened soon after closing in the presence of the bidders’ representatives who choose to attend.

9 All Bids shall be accompanied by a bid security of Rupees…………………………and valid upto ………………………*(Specify the Date).*

**Chairman**

National Water Supply and Drainage Board

Galle Road, Ratmalana. Sri Lanka

Revised on 26-01-2021

**2. BIDDING DATA**

The Bidding Data is a part of Instructions to Bidders and should be read in conjunction with the Instructions to Bidders.

If there is a discrepancy found in the Instructions to Bidders and the Bidding Data,the Content in the Bidding Data shall supersede the Content in the Instructions to Bidders.

*(Note: What is typed in italic letters are guide lines to prepare the Bidding Data and they shall be removed after preparation of the Bidding Data.)*

**Bidding Data**

(Please note that the Clause numbers given here under are that of Instructions to Bidders)

**Instructions to Bidders**

**Clause Reference**

Revised on 15-03-2021

|  |  |
| --- | --- |
| **(1.1)** | **The Employer’s Name and Address**  Name : National Water Supply and Drainage Board  Address: Galle Road,  Ratmalana, Sri Lanka |
| **(1.1)** | **Scope of works** |
|  | The Works consists of *(Detail description of scope of work to be written)* ………………………………………………………………….………… ..……………………………………………………………………………  located at ……………………………………………………. |
| **(1.2)** | **Time for completion** |
|  | Intended Completion Date is ………………..Days from the Commencement Date. |
| **(1.3)** | The office for collection of bid forms is  Assistant General Manager (Tenders &Contracts)  Tenders &Contract Section,  NWSDB, Galle Road,  Ratmalana.  or  RSC (………),  ……………………,  …………………..  The non-refundable fee is Rupees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Plus VAT, payable in cash.  The Bid forms will be issued until\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **(2.1)** | **Source of Funds**  The source of funds is …………………………………………..  *(give GOSL or name of donor)* |
| **(4.1)** | **Eligibility and Qualification Requirement**  All bidders shall include the following information and documents with their Bid (Refer Section 13 – Appendices).   1. Bidder shall not be a blacklisted Contractor at the time of bidding and the time of awarding. 2. CIDA registration as stated in Clause 4.2a (Appendix-1). 3. Properly signed Form of Bid. 4. Legal status of the company (Appendix-1). 5. Joint Venture agreement if applicable (Appendix-1). 6. Bidders Authorization to sign the Bid (Appendix-7). 7. Registration as per Act No.3 of 1987. 8. Valid Bid security as stated in Clause 17.2. 9. Audited financial reports (Appendix-2A). 10. Evidence of Adequacy of Working capital (Appendix-2B & 2C). 11. Annual volume of Construction work (Appendix-3A, 3B, 3C, 3D & 3E). 12. Experience in work of a similar nature and size (Appendix-3A, 3B, 3C, 3D & 3E). 13. Major items of Construction equipment proposed (Appendix-5A & 5B). 14. Details of Contract Management & Key Technical Staff (Appendix-4A) 15. Time Schedule for Keya staff (Appendix-4B). 16. Proposed Work Programe (Appendix-6) 17. List of manufactures details for goods to supply under the contract (Appendix-8). 18. Quality Management System Certificates (ISO 9001:2015) for the factories of Manufactures proposed to supply goods under the Contract. 19. Valid Product Conformity Certificate BS/BSEN for the goods supplied under the Contract. 20. Certificate for the confirmation from WRAS(UK) or NSF International laboratories for the suitability for the drinking water purposes for PE Pipes &fittings. 21. The materials, equipment and services, which are impossible or uneconomical to purchase from the country of origin, may be procured from countries other than the country of origin (the “country of manufacture”) with the prior consent of the Employer. However, the country of origin or country of manufacture shall have supplied records and end user certificates to developed countries. The Bidder shall submit the documentary evidence for his supplied records and end user certificates to developed countries with the Bid. The “developed countries” are defined as those countries having a Human Development Index (HDI) exceeding 0.800 (as of year 2020), as listed by the IMF as indicated in Appendix-AA to Bidding Data. 22. Functional Guarantee for DI/PE pipes, fittings, specials, rubber rings and Accessories (Appendix-9). 23. Manufacturer’s authorization to sign the Contract and confirmation of capability of production of goods & supply of goods according to delivery schedule (Appendix-10). 24. Manufacturer’s warranty for the goods supplied under the Contract (Appendix-12). 25. Local accredited agent’s confirmation of supply of goods according to work programe (Appendix-14). 26. Details of Local accredited agent (Appendix-16).   *\* Add if Any other.* |
| **(4.2 a)** | **CIDA registration required for this Contract**  Specialty :Water Supply & Sewerage  Grade : ……………  Revised on 15-03-2021 |
| **(4.2 b)** | **Average annual volume of construction work**  Average annual volume of construction work performed in last five years is Rs………………….   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **Oneof the Partners** | | Minimum average annual construction turnover of LKR**……million** calculated as total certified payments received for contracts in progress or completed, within the last **five(05)**years. | must meet requirement | must meet requirement | must meet  **25% of the requirement** | must meet  **40% of the requirement** | Appendix-3A, 3B, 3C, 3D & 3E |  1. *If Contract period is less than one year, the value of the Engineers estimate,* 2. *If Contract period is more than one year, 1.5 times annual value of the proposed work \*1*   *\*1 Annual Value of proposed work,*  *= 12 x Engineer’s estimate*  *Contract duration in months* |
| **(4.2 c)** | **Minimum Qualification**  Add to the Clause;  **“Construction”** means construction according to the specification, testing, cleaning, disinfection and handing over.  **“Laying”** means Laying of Pipes according to the Specifications, testing, backfilling, compaction, disinfection and handing over.  Minimum qualification to qualify for the award of the Contract:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **One of the Partners** | | Participation as a Contractor, Joint Venture, or subcontractor, in at contract that have been successfully or substantially completed within the last **ten(10)** years, and that are **similar to the proposed works**, where the value of the bidder’s participation under each Contract similarity of the bidder’s participation shall be LKR …………….. | must meet requirement | must meet requirement | Not applicable | Not applicable | Appendix-3A, 3B, 3C, 3D & 3E |   Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder.  Revised on 15-03-2021   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Requirement** | **Single Entry or Its Specialist Subcontractors** | **All Partners Combined** | **Submission Requirement** | | For the above or other contracts exceeded during last **ten(10)** years minimum experience is required in following **key activities**; | must meet requirement | must meet requirement | Appendix-3A, 3B, 3C, 3D & 3E | | *Construction of ……..* | ……… | ………. | ………. | | *Laying of ………..* | ………. | ………. | ………. | | *Mechanical requirement* | ………. | ………. | ………. | | *Electrical requirement* | ………. | ………. | ………. |   *(Specify the appropriate works based on the scope of the Contract)*  *Guideline for Construction of T/ plant – Water retaining structures of a corresponding value:*  *For Water Tower –*  *1. Below 300 m3 capacity– Any type of Water Tower.*  *2. Above 300 m3  and below 1000 m3 capacity– Similar type Water*  *Tower.*  *3. Above 1000 m3 capacity - Similar type but min. of 1000 m3capacity.*  *For Reservoirs –*  *above 450 m3 capacity – minimum of 450 m3 capacity reservoir.*  *below 450 m3 capacity – same capacity reservoir.*  *Guideline for Pipe laying –*  *Pipe Laying length of this Contract (50% or 10 km whichever is less) (aggregate of pipe lengths under different Contract should be considered)*  May be complied by the bidder or by specialized Subcontractor. If Subcontractors are proposed by the bidder for key activities, each specialized Subcontractor must have experience in related key activity as a single entity.  Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder. |
| **(4.2 d)** | **Essential Equipment**  \* Proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed shall be as given in Appendix 5A & 5B.  (Bidder shall include any additional equipment, plant, etc. to the  Appendix 5A & 5B depending on his construction methodology). |
| **(4.2 e)** | **Key Technical Staff**  Details of qualifications and experience of the Contract Manager and Key Technical staff as Appendix-4A & 4B. |
| **(4.2 f)** | **Liquid Assets and/or Credit Facilities required**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **Oneof the Partners** | | Working Capital\*1 + present available credit facilities for the company\*2 + credit facilities exclusively for this Contract - 0.1 x current work commitments\*3>LKR……………\*4.  \*1 Working Capital = Current Assets – Current Liabilities  \*2A letter to prove the availability of credit facilities issued by a Bank within a month prior to date of closing of Bids.  \*3Current work commitment = work remaining uncompleted | must meet requirement | must meet requirement | must meet  **25% of the requirement** | must meet  **40% of the requirement** | Appendix-2A, 2B &2C |   *\*4(i) For Major Contracts (more than Rs. 100 million)- Financial requirement for 4 months period*  *(ii) For Other Contracts (less than Rs. 100 million)- Financial requirement for 3 months period.*  Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder.  Revised on 08-03-2021 |
| **4.2 (h)** | **Add to the end of Sub-Clause 4.2:**  **If any item comes under the NWSDB Pre-qualified manufacturers’ list or NWSDB recommended M&E manufacturers’ list; which have to be supplied under the Contract, shall be from the NWSDB pre-qualified/ recommended M&E manufacturers. Lists of those manufacturers are given in Appendix 17A &17B.** |
| **(9.1)** | **Content of Bidding Documents**  Delete the Sub-Clause 9.1 and substitute with the following;  The bidding documents consists of two volumes as stated below and should be read in conjunction with any addenda in accordance with Clause 11 of Instructions to Bidders:  **Volume 1**  Section 1 : Instructions to Bidders  Section 3 : Conditions of Contract  Section 5 : Standard Forms(Contract) – not used |
|  | **Volume 2**  Invitation for Bids  Section 2 : Bidding Data  Section 4 : Form of Bid  Section 5 : Contract Data  Section 6 : Specifications  Section 7 : Schedule of Particulars  Section 8 : Deviations from Specifications  Section 9 : Schedules of Day Work Rates  Section 10 : List of Drawings  Section 11 : Bill of Quantities  Section 12 : Standard Forms  Section 13 : Appendices |

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| **(10.1)** | **Clarification of Bidding Documents**  Employer’s address for the purpose of clarification is ;  Assistant General Manager (Tenders and Contracts),  National Water Supply and Drainage Board,  Galle Road, Ratmalana, Sri Lanka.  Tel: 94-011-2605328.  Fax: 94-011-2635885. |

Revised on 04-03-2021

Revised on 08-03-2021

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| **(13.0)** | **Document Comprising the Bid** |
| **(13.1)(A)(j)** | Additional information is ……………………………………………  …………………………………………………………………………  ………………………………………………………………………… |
| **(13.1) (A) (k)** | Add to the Clause 13.1 (A);  All Appendices given under Section 13. |
| **(13.1) (B)** | Delete (a), (b), (c), (d) and add the following;  Copy of all documents listed in 13.1 (A) should be included in the envelope and marked as “Copy”. |
| **(14.0)** | **Bid Pricing** |
| **(14.3)** | VAT component shall not be included in the rates. The amount written in the Form of Bid shall be without VAT. However VAT component shall be shown separately in the Summary of the Bills. |
| **(14.5)** | **Add to the end of Clause 14:**  If a Bidder has given a discount of his bid price, the discount shall be distributed to each and every item excluding provisional sums in the Bills of Quantities by adjusting the rates in the Bills of Quantities by the percentage of discount offered. This rate is applicable for all extra works to complete the works in the Contract. |
| **(16.1)** | **Period of Bid Validity:** |
|  | The Bid shall be valid for 210Days from the date of closing of the bids (excluding closing date) as specified in the IFB. |
| **(17.1)** | **Amount of Bid Security:** |
|  | The amount of Bid Security is LKR ………………….. |
| **(17.2)** | **Validity of Bid Security:** |
|  | Bid Security shall be valid up to ……………… *(give a date).*  Delete text in Clause 17.2 and add the following ;  Bid Security (unconditional) which is encashable on demand equivalent to the sum stated in Clause 17.1 Bidding Data, shall be furnished in one of the following forms. Bid Security shall be as per the format given in Volume 2 Section 12- Standard Forms in the Bidding Document.   1. Bank Guarantee issued by a reputed bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka. 2. Sri Lanka rupee cash deposit to the National Water Supply and Drainage Board, (The original receipt for such deposit shall be attached to the original tender document). 3. A certified cheque issued by a reputed Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka, in favour of National Water Supply and Drainage Board. |
| **(19.1)** | **Pre Bid Meeting:**  Pre Bid meeting *will /will not* be held.  Pre Bid meeting - Venue …………………………………………  Date …………….. Time …………………….. |
| **(21.2) (a)** | **The Employer’s address for Bid submission:**  Chairman, Cabinet Appointed Procurement Committee,  Procurement Division,  Ministry of …………………………………,  No. 35,“Lakdiya Madura”, New Parliament Road,  Pelawatta, Battaramulla,  Sri Lanka. |
| **(21.2 b)** | **Identification Number of Contract:**  Contract name: ………………………………………………………..  Contract no. ………………………………………………………… |
| **(22.1)** | **Deadline for submission of Bids:**  The deadline for submission of Bids shall be ……………………….. |
| **(25.1)** | **Bid Opening**  Venue, time and date of bid opening:  Venue : Procurement Division,  Ministry of …………………………………,  No. 35, “Lakdiya Madura”, New Parliament Road,  Pelawatta, Battaramulla, Sri Lanka.  Date ………………………………..  Time ………………………. |
| **(28.4)** | **Add to the end of Clause 28;**  If the Employer will determine that the bidder does not provide the proofing documents for the minimum qualification of technical and financial capacity (mentioned in Appendix 2A, 2B, 3A, 3B, 3C, 3D & 3E) the Bid is considered as non-responsive and it will be rejected. |
| **(32.1)** | **Add to the end of this Sub-Clause;**  The Bidder who has pending litigation or poor past performance will not be considered for awarding the Contract.  The unsuccessful bidders if they so wish, within one week, 07 working days of such notice may make representation to the Chairmen at the address given below by registered post or handed over to the office of PAB. Such representation shall be self-contained to enable the Secretary to arrive at a conclusion and a cash deposit to amount given below shall be made. The Employer may request the bidder who had made representation to submit further evidence during the investigation of such representation. The Appeal Board may request the bidder who had made representation to submit further evidence during the investigations. The cash deposit will be forfeited unless the Employer has changed the original Contract award decision in favor of the bidder who has made such representation.  Address: The Chairmen,  Procurement Appeal Board,  Presidential Secretariat,  Colombo 01.  Cash Deposit: Rs. 100,000/= (Non- refundable fee) |
| **(32.2)** | **Add to the end of this Sub-Clause;**  (c) To ensure that the bids made not unrealistic, following criteria will be adopted;   1. If the Bid value is 11% to 19% less than the Engineer’s estimate, the performance bond should be increased by 5% of the Initial Contract Price. 2. If the Bid value is 20% to 29% less than the Engineer’s estimate, the performance bond should be increased by 10% of the Initial Contract Price. 3. If the Bid value is 30% or higher percentage less than the Engineer’s estimate, the bid will be rejected. |

Revised on 16-03-2021

Revised on 26-01-2021

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| **(35.1)** | **Amount of Performance Security:**  The amount of Performance Security is 5% of the Initial Contract Price and issued by an agency stipulated below using the Form for Performance Security included in Volume 2 Section 12- Standard Forms in the Bidding Document.   1. Bank guarantee from Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka. 2. Sri Lanka rupee cash deposit to the National Water Supply and Drainage Board. 3. Certified cheque issued by a Bank operating in Sri Lanka in favour of National Water Supply and Drainage Board.   Performance Security shall be valid until the issuance of Performance Certificate. |
| **(37.0)** | **Not Applicable.** |

**Bidding Data**

(Please note that the Clause numbers given here under are that of Instructions to Bidders)

**Instructions to Bidders**

**Clause Reference**

Revised on 15-03-2021

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| --- | --- |
| **(1.1)** | **The Employer’s Name and Address**  Name : National Water Supply and Drainage Board.  Address: Galle Road,  Ratmalana, Sri Lanka. |
| **(1.1)** | **Scope of works** |
|  | The Works consists of*(Detail description of scope of work to be written)* ..…………………………………………………………………………………………………………………………………………..………………  located at ……………………………………………………. |
| **(1.2)** | **Time for completion** |
|  | Intended Completion Date is **………………..**Days from the Commencement Date. |
| **(1.3)** | The office for collection of bid forms is;  Assistant General Manager (Tenders &Contracts),  Tenders &Contract Section,  NWSDB, Galle Road,  Ratmalana.  Or  RSC (………),  ……………………,  …………………..  The non-refundable fee is Rupees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Plus VAT, payable in cash.  The Bid forms will be issued until\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **(2.1)** | **Source of Funds**  The source of funds is …………………………………………..  *(give GOSL or name of donor)* |
| **(4.1)** | **Eligibility and Qualification Requirement**  All bidders shall include the following information and documents with their Bid (Refer Section 13 – Appendices).   1. Bidder shall not be a blacklisted Contractor at the time of bidding and the time of awarding. 2. CIDA registration as stated in Clause 4.2a (Appendix-1). 3. Properly signed Form of Bid. 4. Legal status of the company (Appendix-1). 5. Joint Venture agreement if applicable (Appendix-1). 6. Bidders Authorization to sign the Bid (Appendix-7). 7. Registration as per Act No.3 of 1987. 8. Valid Bid security as stated in Clause 17.2. 9. Audited financial reports (Appendix-2A). 10. Evidence of Adequacy of Working capital (Appendix-2B & 2C). 11. Annual volume of Construction work (Appendix-3A, 3B, 3C, 3D & 3E). 12. Experience in work of a similar nature and size (Appendix-3A, 3B, 3C, 3D & 3E). 13. Major items of Construction equipment proposed (Appendix-5A & 5B). 14. Details of Contract Management & Key Technical Staff (Appendix-4A) 15. Time Schedule for Keya staff (Appendix-4B). 16. Proposed Work Programe (Appendix-6) 17. List of manufactures details for goods to supply under the contract (Appendix-8). 18. Quality Management System Certificates (ISO 9001:2015) for the factories of Manufactures proposed to supply goods under the Contract. 19. Valid Product Conformity Certificate BS/BSEN for the goods supplied under the Contract. 20. Certificate for the confirmation from WRAS(UK) or NSF International laboratories for the suitability for the drinking water purposes for PE Pipes &fittings. 21. The materials, equipment and services, which are impossible or uneconomical to purchase from the country of origin, may be procured from countries other than the country of origin (the “country of manufacture”) with the prior consent of the Employer. However, the country of origin or country of manufacture shall have supplied records and end user certificates to developed countries. The Bidder shall submit the documentary evidence for his supplied records and end user certificates to developed countries with the Bid. The “developed countries” are defined as those countries having a Human Development Index (HDI) exceeding 0.800 (as of year 2020), as listed by the IMF as indicated in Appendix-AA to Bidding Data. 22. Functional Guarantee for DI/PE pipes, fittings, specials, rubber rings and Accessories (Appendix-9). 23. Manufacturer’s authorization to sign the Contract and confirmation of capability of production of goods & supply of goods according to delivery schedule (Appendix-10). 24. Manufacturer’s warranty for the goods supplied under the Contract (Appendix-12). 25. Local accredited agent’s confirmation of supply of goods according to work programe (Appendix-14). 26. Details of Local accredited agent (Appendix-16).   *\* Add if Any other.* |
| **(4.2 a)** | **CIDA registration required**  CIDAregistrationrequired for this Contract:  Specialty : Water Supply & Sewerage.  Grade : …………………………………………  Revised on 15-03-2021 |
| **(4.2 b)** | **Average annual volume of construction work**  Average annual volume of construction work performed in last five years is Rs………………….   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **One of the Partners** | | Minimum average annual construction turnover of LKR**……million** calculated as total certified payments received for contracts in progress or completed, within the last **five(05)**years. | must meet requirement | must meet requirement | must meet  **25% of the requirement** | must meet  **40% of the requirement** | Appendix-3A, 3B, 3C, 3D & 3E |  1. *If Contract period is less than one year, the value of the Engineers estimate,* 2. *If Contract period is more than one year, 1.5 times annual value of the proposed work \*1*   *\*1 Annual Value of proposed work,*  *= 12 x Engineer’s estimate*  *Contract duration in months* |
| **(4.2 c)** | **Minimum Qualification**  Add to the Clause;  **“Construction”** means construction according to the specification, testing, cleaning, disinfection and handing over.  **“Laying”** means Laying of Pipes according to the Specifications, testing, backfilling, compaction, disinfection and handing over.  Minimum qualification to qualify for the award of the Contract:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **One of the Partners** | | Participation as a Contractor, Joint Venture, or subcontractor, in at contract that have been successfully or substantially completed within the last **ten(10)** years, and that are **similar to the proposed works**, where the value of the bidder’s participation under each Contract similarity of the bidder’s participation shall be LKR …………….. | must meet requirement | must meet requirement | Not applicable | Not applicable | Appendix-3A, 3B, 3C, 3D & 3E |   Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder.  Revised on 15-03-2021   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Requirement** | **Single Entry or Its Specialist Subcontractors** | **All Partners Combined** | **Submission Requirement** | | For the above or other contracts exceeded during last **ten(10)** years minimum experience is required in following **key activities**; | must meet requirement | must meet requirement | Appendix-3A, 3B, 3C, 3D & 3E | | *Construction of ……..* | ……… | ………. | ………. | | *Laying of ………..* | ………. | ………. | ………. | | *Mechanical requirement* | ………. | ………. | ………. | | *Electrical requirement* | ………. | ………. | ………. |   *(Specify the appropriate works based on the scope of the Contract)*  *Guideline for Construction of T/ plant – Water retaining structures of a corresponding value:*  *For Water Tower –*  *1. Below 300 m3 capacity– Any type of Water Tower*  *2. Above 300 m3  and below 1000 m3 capacity– Similar type Water*  *Tower*  *3. Above 1000 m3 capacity - Similar type but min. of 1000 m3capacity.*  *For Reservoirs –*  *above 450 m3 capacity – minimum of 450 m3 capacity reservoir*  *below 450 m3 capacity – same capacity reservoir*  *Guideline for Pipe laying –*  *Pipe Laying length of this Contract (50% or 10 km whichever is less) (aggregate of pipe lengths under different Contract should be considered)*  May be complied by the bidder or by specialized Subcontractor. If Subcontractors are proposed by the bidder for key activities, each specialized Subcontractor must have experience in related key activity as a single entity.  Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder. |
| **(4.2 d)** | **Essential Equipment**  \* Proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed shall be as given in Appendix 5A & 5B.  (Bidder shall include any additional equipment, plant, etc. to the Appendix 5A & 5B depending on his construction methodology)  Revised on 01-01-2021 |
| **(4.2 e)** | **Key Technical Staff**  Details of qualifications and experience of the Contract Manager and Key Technical staff as Appendix-4A & 4B*.* |
| **(4.2 f)** | **Liquid Assets and/or Credit Facilities required**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **One of the Partners** | | Working Capital\*1 + present available credit facilities for the company\*2 + credit facilities exclusively for this Contract - 0.1 x current work commitments\*3> LKR……………\*4.  \*1 Working Capital = Current Assets – Current Liabilities  \*2A letter to prove the availability of credit facilities issued by a Bank within a month prior to date of closing of Bids.  \*3Current work commitment = work remaining uncompleted | must meet requirement | must meet requirement | must meet  **25% of the requirement** | must meet  **40% of the requirement** | Appendix-2A, 2B &2C |   *\*4(i) For Major Contracts (more than Rs. 100 million)- Financial requirement for 4 months period*  *(ii) For Other Contracts (less than Rs. 100 million)- Financial requirement for 3 months period.*  Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder.  Revised on 26-01-2021 |
| **4.2 (h)** | **Add to the end of Sub-Clause 4.2:**  **If any item comes under the NWSDB Pre-qualified manufacturers’ list or NWSDB recommended M&E manufacturers’ list; which have to be supplied under the Contract, shall be from the NWSDB pre-qualified/ recommended M&E manufacturers. Lists of those manufacturers are given in Appendix 17A & 17B.** |
| **(9.1)** | **Content of Bidding Documents**  Delete the Sub-Clause 9.1 and substitute with the following;  The bidding documents consists of two volumes as stated below and should be read in conjunction with any addenda in accordance with Clause 11 of Instructions to Bidders:  **Volume 1**  Section 1 : Instructions to Bidders.  Section 3 : Conditions of Contract.  Section 5 : Standard Forms(Contract) – not used. |
|  | **Volume 2**  Invitation for Bids  Section 2 : Bidding Data  Section 4 : Form of Bid  Section 5 : Contract Data  Section 6 : Specifications  Section 7 : Schedule of Particulars  Section 8 : Deviations from Specifications  Section 9 : Schedules of Day Work Rates  Section 10 : List of Drawings  Section 11 : Bill of Quantities  Section 12 : Standard Forms  Section 13 : Appendices |

Revised on 08-03-2021

|  |  |
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| **(10.1)** | **Clarification of Bidding Documents**  Employer’s address for the purpose of clarification is ;  Assistant General Manager (Tenders and Contracts),  National Water Supply and Drainage Board,  Galle Road, Ratmalana, Sri Lanka.  Fax . 94-011 – 2635885  Tel: 94-011-2605328 |
| **(13.0)** | **Document Comprising the Bid** |
| **(13.1)(A)(j)** | Additional information is ……………………………………………  …………………………………………………………………………  ………………………………………………………………………… |
| **(13.1) (A) (k)** | Add to the Clause 13.1 (A);  All Appendices given under Section 13. |
| **(13.1) (B)** | Delete (a), (b), (c), (d) and add the following;  Copy of all documents listed in 13.1 (A) should be included in the envelope and marked as “Copy”. |
| **(14.0)** | **Bid Pricing** |
| **(14.3)** | VAT component shall not be included in the rates. The amount written in the Form of Bid shall be without VAT. However VAT component shall be shown separately in the Summary of the Bills. |
| **(14.5)** | **Add to the end of Clause 14:**  If a Bidder has given a discount of his bid price, the discount shall be distributed to each and every item excluding provisional sums in the Bills of Quantities by adjusting the rates in the Bills of Quantities by the percentage of discount offered. This rate is applicable for all extra works to complete the works in the Contract. |
| **(16.1)** | **Period of Bid Validity** |
|  | The Bid shall be valid for 119Days from the date of closing of the bids (excluding closing date) as specified in the IFB. |
| **(17.1)** | **Amount of Bid Security**  The amount of Bid Security is LKR ………………….. |
| **(17.2)** | **Validity of Bid Security**  Bid Security shall be valid up to ……………… *(give a date)*  Delete text in Clause 17.2 and add the following;  Bid Security (unconditional) which is encashable on demand equivalent to the sum stated in Clause 17.1 Bidding Data, shall be furnished in one of the following forms. Bid Security shall be as per the format given in Volume 2 Section 12- Standard Forms in the Bidding Document.   1. Bank Guarantee issued by a reputed bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka. 2. Sri Lanka rupee cash deposit to the National Water Supply and Drainage Board, (The original receipt for such deposit shall be attached to the original tender document). 3. A certified cheque issued by a reputed Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka, in favour of National Water Supply and Drainage Board. |
| **(19.1)** | **Pre Bid Meeting**  Pre Bid meeting *will /will not* be held.  Pre Bid meeting - Venue …………………………………………  Date …………….. Time …………………….. |
| **(21.2 a)** | **The Employer’s address for the purpose of Bid submission is;**  Chairman, Ministry Procurement Committee,  Ministry of …………………………………………….…,  No. 35, “Lakdiya Madura”,  New Parliament Road,Pelawatta,  Battaramulla, Sri Lanka. |

Revised on 26-01-2021

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| **(21.2 b)** | **Identification Number of Contract**  Contract name: ………………………………………………………..  Contract no. ………………………………………………………… |
| **(22.1)** | **Deadline for submission of Bids**  The deadline for submission of Bids shall be ……………………….. |
| **(25.1)** | **Bid Opening**  Venue, time and date of bid opening:  Venue : Ministry Procurement Committee,  Ministry of ……………………………………….….,  No. 35, “Lakdiya Madura”, New Parliament Road,  Pelawatta, Battaramulla, Sri Lanka.  Date ………………………………..  Time ………………………. |
| **(28.4)** | **Add to the end of Clause 28;**  If the Employer will determine that the bidder does not provide the proofing documents for the minimum qualification of technical and financial capacity (mentioned in Appendix 2A, 2B, 3A, 3B, 3C, 3D & 3E) the Bid is considered as non-responsive and it will be rejected. |
| **(32.1)** | **Add to the end of this Sub-Clause;**  The Bidder who has pending litigation or poor past performance will not be considered for awarding the Contract.  The unsuccessful bidders if they so wish, within one week of such notice may make representation to the Secretary to the Ministry at the address given below. Such representation shall be self-contained to enable the Secretary to arrive at a conclusion and a cash deposit to amount given below shall be made. The Employer may request the bidder who had made representation to submit further evidence during the investigation of such representation. The cash deposit will be forfeited unless the Employer change the original Contract award decision in favour of the bidder who has made such representation.  Address: The Secretary,  Appeal Board,  Ministry of …………………………………………….…,  No. 35, “Lakdiya Madura”, New Parliament Road,  Pelawatta, Battaramulla,  Sri Lanka.  Cash Deposit : Rs. 25,000.00 |
| **(32.2)** | **Add to the end of this Sub-Clause;**  (c) To ensure that the bids made not unrealistic, following criteria will be adopted;   1. If the Bid value is 11% to 19% less than the Engineer’s estimate, the performance bond should be increased by 5% of the Initial Contract Price. 2. If the Bid value is 20% to 29% less than the Engineer’s estimate, the performance bond should be increased by 10% of the Initial Contract Price. 3. If the Bid value is 30% or higher percentage less than the Engineer’s estimate, the bid will be rejected. |

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| **(35.1)** | **Amount of Performance Security**  The amount of Performance Security is 5% of the Initial Contract Price and issued by an agency stipulated below using the Form for Performance Security included in Volume 2 Section 12- Standard Forms in the Bidding Document.   1. Bank guarantee from Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka. 2. Sri Lanka rupee cash deposit to the National Water Supply and Drainage Board. 3. Certified cheque issued by a Bank operating in Sri Lanka in favour of National Water Supply and Drainage Board.   Performance Security shall be valid until the issuance of Performance Certificate. |
|  |  |
| **(37.0)** | **Not Applicable.** |

Revised on 26-01-2021

**Bidding Data**

(Please note that the Clause numbers given here under are that of Instructions to Bidders)

**Instructions to Bidders**

**Clause Reference**

Revised on 15-03-2021

|  |  |
| --- | --- |
| **(1.1)** | **The Employer’s Name and Address**  Name : National Water Supply and Drainage Board.  Address: Galle Road,  Ratmalana, Sri Lanka. |
| **(1.1)** | **Scope of works** |
|  | The Works consists of*(Detail description of scope of work to be written)* ..…………………………………………………………………………………………………………………………………………..………………  located at ……………………………………………………. |
| **(1.2)** | **Time for completion** |
|  | Intended Completion Date is **………………..**Days from the Commencement Date. |
| **(1.3)** | The office for collection of bid forms is;  Assistant General Manager (Tenders &Contracts),  Tenders &Contract Section,  NWSDB, Galle Road,  Ratmalana.  Or  RSC (………),  ……………………,  …………………..  The non-refundable fee is Rupees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Plus VAT, payable in cash.  The Bid forms will be issued until\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **(2.1)** | **Source of Funds**  The source of funds is …………………………………………..  *(give GOSL or name of donor)* |
| **(4.1)** | **Eligibility and Qualification Requirement**  All bidders shall include the following information and documents with their Bid (Refer Section 13 – Appendices).   1. Bidder shall not be a blacklisted Contractor at the time of bidding and the time of awarding. 2. CIDA registration as stated in Clause 4.2a (Appendix-1). 3. Properly signed Form of Bid. 4. Legal status of the company (Appendix-1). 5. Joint Venture agreement if applicable (Appendix-1). 6. Bidders Authorization to sign the Bid (Appendix-7). 7. Registration as per Act No.3 of 1987. 8. Valid Bid security as stated in Clause 17.2. 9. Audited financial reports (Appendix-2A). 10. Evidence of Adequacy of Working capital (Appendix-2B & 2C). 11. Annual volume of Construction work (Appendix-3A, 3B, 3C, 3D & 3E). 12. Experience in work of a similar nature and size (Appendix-3A, 3B, 3C, 3D & 3E). 13. Major items of Construction equipment proposed (Appendix-5A & 5B). 14. Details of Contract Management & Key Technical Staff (Appendix-4A) 15. Time Schedule for Keya staff (Appendix-4B). 16. Proposed Work Programe (Appendix-6) 17. List of manufactures details for goods to supply under the contract (Appendix-8). 18. Quality Management System Certificates (ISO 9001:2015) for the factories of Manufactures proposed to supply goods under the Contract. 19. Valid Product Conformity Certificate BS/BSEN for the goods supplied under the Contract. 20. Certificate for the confirmation from WRAS(UK) or NSF International laboratories for the suitability for the drinking water purposes for PE Pipes &fittings. 21. The materials, equipment and services, which are impossible or uneconomical to purchase from the country of origin, may be procured from countries other than the country of origin (the “country of manufacture”) with the prior consent of the Employer. However, the country of origin or country of manufactures hall have supplied records and end user certificates to developed countries. The Bidder shall submit the documentary evidence for his supplied records and end user certificates to developed countries with the Bid. The “developed countries” are defined as those countries having a Human Development Index (HDI) exceeding 0.800 (as of year 2020), as listed by the IMF as indicated in Appendix-AA to Bidding Data. 22. Functional Guarantee for DI/PE pipes, fittings, specials, rubber rings and Accessories (Appendix-9). 23. Manufacturer’s authorization to sign the Contract and confirmation of capability of production of goods & supply of goods according to delivery schedule (Appendix-10). 24. Manufacturer’s warranty for the goods supplied under the Contract (Appendix-12). 25. Local accredited agent’s confirmation of supply of goods according to work programe (Appendix-14). 26. Details of Local accredited agent (Appendix-16).   *\* Add if Any other.* |
| **(4.2 a)** | **CIDA registration required**  CIDA registration required for this Contract:    Specialty: Water Supply & Sewerage.  Grade : ………………  Revised on 15-03-2021 |
| **(4.2 b)** | **Average annual volumeof construction work**  Average annual volume of construction work performed in last five years is Rs………………….   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **One of the Partners** | | Minimum average annual construction turnover of LKR**……million** calculated as total certified payments received for contracts in progress or completed, within the last **five(05)**years. | must meet requirement | must meet requirement | must meet  **25% of the requirement** | must meet  **40% of**  **the requirement** | Appendix-3A, 3B, 3C, 3D & 3E |  1. *If Contract period is less than one year, the value of the Engineers estimate,* 2. *If Contract period is more than one year, 1.5 times annual value of the proposed work \*1*   *\*1 Annual Value of proposed work,*  *= 12 x Engineer’s estimate*  *Contract duration in months* |
| **(4.2 c)** | **Minimum Qualification**  Add to the Clause;  **“Construction”** means construction according to the specification, testing, cleaning, disinfection and handing over.  **“Laying”** means Laying of Pipes according to the Specifications, testing, backfilling, compaction, disinfection and handing over.  Minimum qualification to qualify for the award of the Contract:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **One of the Partners** | | Participation as a Contractor, Joint Venture, or subcontractor, in at contract that have been successfully or substantially completed within the last **ten(10)** years, and that are **similar to the proposed works**, where the value of the bidder’s participation under each Contract similarity of the bidder’s participation shall be LKR …………….. | must meet requirement | must meet requirement | Not applicable | Not applicable | Appendix-3A, 3B, 3C, 3D & 3E |   Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder.  Revised on 15-03-2021   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Requirement** | **Single Entry or Its Specialist Subcontractors** | **All Partners Combined** | **Submission Requirement** | | For the above or other contracts exceeded during last **ten(10)** years minimum experience is required in following **key activities**; | must meet requirement | must meet requirement | Appendix-3A, 3B, 3C, 3D & 3E | | *Construction of ……..* | ……… | ………. | ………. | | *Laying of ………..* | ………. | ………. | ………. | | *Mechanical requirement* | ………. | ………. | ………. | | *Electrical requirement* | ………. | ………. | ………. |   *(Specify the appropriate works based on the scope of the Contract)*  *Guideline for Construction of T/ plant – Water retaining structures of a corresponding value:*  Revised on 08-03-2021  *For Water Tower –*  *1. Below 300 m3 capacity– Any type of Water Tower*  *2. Above 300 m3  and below 1000 m3 capacity– Similar type Water*  *Tower*  *3. Above 1000 m3 capacity - Similar type but min. of 1000 m3capacity.*  *For Reservoirs –*  *above 450 m3 capacity – minimum of 450 m3 capacity reservoir*  *below 450 m3 capacity – same capacity reservoir*  *Guideline for Pipe laying –*  *Pipe Laying length of this Contract (50% or 10 km whichever is less) (aggregate of pipe lengths under different Contract should be considered)*  May be complied by the bidder or by specialized Subcontractor. If Subcontractors are proposed by the bidder for key activities, each specialized Subcontractor must have experience in related key activity as a single entity.  Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder. |
| **(4.2 d)** | **Essential Equipment**  \* Proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed shall be as given in Appendix 5A & 5B.  (Bidder shall include any additional equipment, plant, etc. to the  Appendix 5A & 5B depending on his construction methodology) |
| **(4.2 e)** | **Key Technical Staff**  Details of qualifications and experience of the Contract Manager and Key Technical staff as Appendix 4A & 4B*.* |
| **(4.2 f)** | **Liquid Assets and/or Credit Facilities required**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **Compliance Requirements** | | | | **Documents** | | **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** | | **All Partners Combined** | **Each Partner** | **Oneof the Partners** | | Working Capital\*1 + present available credit facilities for the company\*2 + credit facilities exclusively for this Contract - 0.1 x current work commitments\*3> LKR……………\*4.  \*1 Working Capital = Current Assets – Current Liabilities  \*2A letter to prove the availability of credit facilities issued by a Bank within a month prior to date of closing of Bids.  \*3Current work commitment = work remaining uncompleted | must meet requirement | must meet requirement | must meet  **25% of the requirement** | must meet  **40% of the requirement** | Appendix-2A, 2B &2C |   *\*4(i) For Major Contracts (more than Rs. 100 million)- Financial requirement for 4 months period*  *(ii) For Other Contracts (less than Rs. 100 million)- Financial requirement for 3 months period.*  Documentary evidence to justify shall be submitted. None submission of documentary evidence may cause of rejection of the bidder.  Revised on 26-01-2021 |
| **4.2 (h)** | **Add to the end of Sub-Clause 4.2:**  **If any item comes under the NWSDB Pre-qualified manufacturers’ list or NWSDB recommended M&E manufacturers’ list; which have to be supplied under the Contract, shall be from the NWSDB pre-qualified/ recommended M&E manufacturers. Lists of those manufacturers are given in Appendix 17A & 17B.** |
| **4.2 (i)** | **Irrespective of region, to call open bids and to grant a 5% preference (regional preference) for the regional contractors whose bids have become as responsive bids when the estimated cost of the Bid is less than Rs.50 Million as stipulated in Public Finance Circular No. 04/2016(ii).** |
| **(9.1)** | **Content of Bidding Documents**  Delete the Sub-Clause 9.1 and substitute with the following;  The bidding documents consists of two volumes as stated below and should be read in conjunction with any addenda in accordance with Clause 11 of Instructions to Bidders:  **Volume 1**  Section 1 : Instructions to Bidders.  Section 3 : Conditions of Contract.  Section 5 : Standard Forms(Contract) – not used. |
|  | **Volume 2**  Invitation for Bids  Section 2 : Bidding Data  Section 4 : Form of Bid  Section 5 : Contract Data  Section 6 : Specifications  Section 7 : Schedule of Particulars  Section 8 : Deviations from Specifications  Section 9 : Schedules of Day Work Rates  Section 10 : List of Drawings  Section 11 : Bill of Quantities  Section 12 : Standard Forms  Section 13 : Appendices |

Revised on 26-01-2021

Revised on 01-01-2021

|  |  |
| --- | --- |
| **(10.1)** | **Clarification of Bidding Documents**  Employer’s address for the purpose of clarification is ;  Assistant General Manager (Tenders and Contracts),  National Water Supply and Drainage Board,  Galle Road, Ratmalana, Sri Lanka.  Fax . 94-011 – 2635885  Tel: 94-011-2605328 |
| **(13.0)** | **Document Comprising the Bid** |
| **(13.1)(A)(j)** | Additional information is ……………………………………………  …………………………………………………………………………  ………………………………………………………………………… |
| **(13.1) (A) (k)** | **Add to the Clause 13.1 (A);**  All Appendices given under Section 13. |
| **(13.1) (B)** | Delete (a), (b), (c), (d) and add the following;  Copy of all documents listed in 13.1 (A) should be included in the envelope and marked as “Copy”. |
| **(14.0)** | **Bid Pricing** |
| **(14.3)** | VAT component shall not be included in the rates. The amount written in the Form of Bid shall be without VAT. However VAT component shall be shown separately in the Summary of the Bills. |
| **(14.5)** | **Add to the end of Clause 14:**  If a Bidder has given a discount of his bid price, the discount shall be distributed to each and every item excluding provisional sums in the Bills of Quantities by adjusting the rates in the Bills of Quantities by the percentage of discount offered. This rate is applicable for all extra works to complete the works in the Contract. |
| **(16.1)** | **Period of Bid Validity**  The Bid shall be valid for 91 Days from the date of closing of the bids (excluding closing date) as specified in the IFB. |
| **(17.1)** | **Amount of Bid Security**  The amount of Bid Security is LKR ………………….. |
| **(17.2)** | **Validity of Bid Security** |
|  | Bid Security shall be valid up to ……………… *(give a date)*  Delete text in Clause 17.2 and add the following;  Bid Security (unconditional) which is encashable on demand equivalent to the sum stated in Clause 17.1 Bidding Data, shall be furnished in one of the following forms. Bid Security shall be as per the format given in Volume 2 Section 12- Standard Forms in the Bidding Document.   1. Bank Guarantee issued by a reputed bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka.   Revised on 08-03-2021   1. Sri Lanka rupee cash deposit to the National Water Supply and Drainage Board, (The original receipt for such deposit shall be attached to the original tender document). 2. A certified cheque issued by a reputed Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka, in favour of National Water Supply and Drainage Board. |
| **(19.1)** | **Pre Bid Meeting**  Pre Bid meeting *will /will not* be held.  Pre Bid meeting - Venue …………………………………………  Date ……………..  Time …………………….. |
| **(21.2 a)** | **The Employer’s address for the purpose of Bid submission is**  Asst. General Manager (Tenders & Contracts)  National Water Supply and Drainage Board,  Galle Road, Ratmalana. |

Revised on 26-01-2021

|  |  |
| --- | --- |
| **(21.2 b)** | **Identification Number of Contract**  Contract name: ………………………………………………………..  Contract no. ………………………………………………………… |
| **(22.1)** | **Deadline for submission of Bids**  The deadline for submission of Bids shall be ……………………….. |
| **(25.1)** | **Bid Opening**  Venue, time and date of bid opening;  Venue : Department Procurement Committee,  Assistant General Manager (Tenders &Contracts),  Tenders &Contract Section,  NWSDB, Galle Road,  Ratmalana.  Date :……………………………….. Time :………………………. |
| **(28.4)** | **Add to the end of Clause 28;**  If the Employer will determine that the bidder does not provide the proofing documents for the minimum qualification of technical and financial capacity (mentioned in Appendix 2A, 2B, 3A, 3B, 3C, 3D & 3E) the Bid is considered as non-responsive and it will be rejected. |
| **(32.1)** | **Add to the end of this Sub-Clause;**  The Bidder who has pending litigation or poor past performance will not be considered for awarding the Contract. |
| **(32.2)** | **Add to the end of this Sub-Clause;**  (c) To ensure that the bids made not unrealistic, following criteria will be adopted;   1. If the Bid value is 11% to 19% less than the Engineer’s estimate, the performance bond should be increased by 5% of the Initial Contract Price. 2. If the Bid value is 20% to 29% less than the Engineer’s estimate, the performance bond should be increased by 10% of the Initial Contract Price. 3. If the Bid value is 30% or higher percentage less than the Engineer’s estimate, the bid will be rejected. |

|  |  |
| --- | --- |
| **(35.1)** | **Amount of Performance Security**  The amount of Performance Security is 5% of the Initial Contract Price and issued by an agency stipulated below using the Form for Performance Security included in Volume 2 Section 12- Standard Forms in the Bidding Document.   1. Bank guarantee from Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka. 2. Sri Lanka rupee cash deposit to the National Water Supply and Drainage Board. 3. Certified cheque issued by a Bank operating in Sri Lanka in favour of National Water Supply and Drainage Board.   Performance Security shall be valid until the issuance of Performance Certificate. |
| **(37.0)** | **Not Applicable.** |

Revised on 26-01-2021

**APPENDICES TO BIDDING DATA**

**Appendix -AA**

**CURRENT LIST OF DEVELOPED COUNTRIES (IMF/HDI) EXCEEDING**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Rank** | **Country/Territory** | **HDI** | **Rank** | **Country/Territory** | **HDI** |
|  | Norway | 0.954 | 32. | Greece | 0.872 |
|  | Switzerland | 0.946 | 33. | Poland | 0.872 |
|  | Ireland | 0.942 | 34. | Lithuania | 0.869 |
|  | Germany | 0.939 | 35. | United Arab Emirates | 0.866 |
|  | Hong Kong | 0.939 | 36. | Andorra | 0.857 |
|  | Australia | 0.938 | 36. | Saudi Arabia | 0.857 |
|  | Iceland | 0.938 | 38. | Slovakia | 0.857 |
|  | Sweden | 0.937 | 39. | Latvia | 0.854 |
|  | Singapore | 0.935 | 40. | Portugal | 0.850 |
|  | Netherlands | 0.933 | 41. | Qatar | 0.848 |
|  | Denmark | 0.930 | 42. | Chile | 0.847 |
|  | Finland | 0.925 | 43. | Brunei | 0.845 |
|  | Canada | 0.922 | 44. | Hungary | 0.845 |
|  | New Zealand | 0.921 | 45. | Bahrain | 0.838 |
|  | United Kingdom | 0.920 | 46. | Croatia | 0.837 |
|  | United States | 0.920 | 47. | Oman | 0.834 |
|  | Belgium | 0.919 | 48. | Argentina | 0.830 |
|  | Liechtenstein | 0.917 | 49. | Russia | 0.824 |
|  | Japan | 0.915 | 50. | Belarus | 0.817 |
|  | Austria | 0.914 | 51. | Kazakhstan | 0.817 |
|  | Luxembourg | 0.909 | 52. | Bulgaria | 0.816 |
|  | Israel | 0.906 | 53. | Montenegro | 0.816 |
|  | South Korea | 0.906 | 54. | Romania | 0.816 |
|  | Slovenia | 0.902 | 55. | Palau | 0.814 |
|  | Spain | 0.893 | 56. | Barbados | 0.813 |
|  | Czech Republic | 0.891 | 57. | Kuwait | 0.808 |
|  | France | 0.891 | 58. | Uruguay | 0.808 |
|  | Malta | 0.885 | 59. | Turkey | 0.806 |
|  | Italy | 0.883 | 60. | Bahamas | 0.805 |
|  | Estonia | 0.882 | 61. | Malaysia | 0.804 |
|  | Cyprus | 0.873 | 62. | Seychelles | 0.801 |

**Source:** https://en.wikipedia.org/wiki/Developed\_country

## FORM OF BID

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

## MINISTRY OF ………………………………………..

## NATIONAL WATER SUPPLY AND DRAINAGE BOARD

**…………………………….. ……. Water Supply/Sewerage Scheme**

**Bid for …………………………………………….**

## Contract No.: …………………………………..

## FORM OF BID

To: The Chairman,

Standing Cabinet Appointed Procurement Committee

Ministry of …………………………………………….…,

No. 35, “Lakdiya Madura”, New Parliament Road,

Pelawatta, Battaramulla,

Sri Lanka

Gentleman,

1. Having examined the Bidding Document Volume I [ICTAD/SBD/02 - Second Edition, January 2007] and Volume II, including Procurement of Works Bidding data, Contract data, Condition of Contract, Specifications, Drawings and Bills of Quantities etc and Addenda for the execution of the above-named Works, we the undersigned, offer to execute and complete such Works and remedy any defect therein in conformity with the aforesaid Contract data, Conditions of Contract, Specifications, Drawings, Bills of Quantities and addenda for the sum of ……….…………….......……………………………………………………………………. ………………………………………………………*in words*(………...............…*in figures*) (excluding VAT) or such other sums as may be ascertained in accordance with the said Conditions.

2. We acknowledge that the Contract Data forms part of our Bid.

3. We undertake, if our Bid is accepted, to commence the Works as stipulated in the Contract Data, and to complete the whole of the Works comprised in the Contract within the time stated in the Contract Data.

4. We agree to abide by this Bid until the date specified in ITB Clause 16………………(*date*) or any extended period and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

5. Unless and until a formal agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us*.(add following in case of joint venture bid. “We undertake the responsibility to enter in to a joint venture agreement among the joint venture partners. We are also well aware that in the event we failed to enter in to a joint venture agreement, the Contract formed between us is null and void and our bid bond will be forfeited by you”)*

6. We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this ............. day of ............ 20... in the capacity of ..........…………………….... duly authorized to sign tenders for and on behalf of ....................................………….....................................

(IN BLOCK CAPITALS)

Signature : ………………………………….

Name : ………………………………..

Address : ………………………………….

…………………………………..

Witness:

Signature .............................….…......................... Name ……………………………

Address …………………………........

Revised on 04-03-2021

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

## MINISTRY OF ……………………………………….

## NATIONAL WATER SUPPLY AND DRAINAGE BOARD

**…………………………….. ……. Water Supply/Sewerage Scheme**

**Bid for …………………………………………….**

## Contract No.: …………………………………..

## FORM OF BID

To: The Chairman,

Ministry Procurement Committee,

Ministry of …………………………………………….…,

No. 35, “Lakdiya Madura”, New Parliament Road,

Pelawatta, Battaramulla,

Sri Lanka.

Gentleman,

1. Having examined the Bidding Document Volume I [ICTAD/SBD/02 - Second Edition, January 2007] and Volume II, including Procurement of Works Bidding data, Contract data, Condition of Contract, Specifications, Drawings and Bills of Quantities etc and Addenda for the execution of the above-named Works, we the undersigned, offer to execute and complete such Works and remedy any defect therein in conformity with the aforesaid Contract data, Conditions of Contract, Specifications, Drawings, Bills of Quantities and addenda for the sum of ……………. ...... ……………………………………………………………………. ………………………………………………………*in words*(………...............…*in figures*) (excluding VAT) or such other sums as may be ascertained in accordance with the said Conditions.

2. We acknowledge that the Contract Data forms part of our Bid.

3. We undertake, if our Bid is accepted, to commence the Works as stipulated in the Contract Data, and to complete the whole of the Works comprised in the Contract within the time stated in the Contract Data.

4. We agree to abide by this Bid until the date specified in ITB Clause 16………………(*date*) or any extended period and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

5. Unless and until a formal agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us*.(add following in case of joint venture bid. “We undertake the responsibility to enter in to a joint venture agreement among the joint venture partners. We are also well aware that in the event we failed to enter in to a joint venture agreement, the Contract formed between us is null and void and our bid bond will be forfeited by you”)*

6. We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this ............. day of ............ 20... in the capacity of ..........…………………….... duly authorized to sign tenders for and on behalf of ....................................………….....................................

(IN BLOCK CAPITALS)

Signature : ………………………………….

Name :.…..……………………………..

Address : ………………………………….

…………………………………..

Witness:

Signature .............................….…......................... Name ……………………………

Address …………………………........

Revised on 04-03-2021

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

## MINISTRY OF ……………………………………….

## NATIONAL WATER SUPPLY AND DRAINAGE BOARD

**…………………………….. ……. Water Supply/Sewerage Scheme**

**Bid for …………………………………………….**

## Contract No.: …………………………………..

## FORM OF BID

To: The Chairman,

Department Procurement Committee,

National Water Supply & Drainage Board,

Galle Road, Ratmalana.

Gentleman,

1. Having examined the Bidding Document Volume I [ICTAD/SBD/02 - Second Edition, January 2007] and Volume II, including Procurement of Works Bidding data, Contract data, Condition of Contract, Specifications, Drawings and Bills of Quantities etc and Addenda for the execution of the above-named Works, we the undersigned, offer to execute and complete such Works and remedy any defect therein in conformity with the aforesaid Contract data, Conditions of Contract, Specifications, Drawings, Bills of Quantities and addenda for the sum of ……………. ...... ……………………………………………………………………. ………………………………………………………*in words*(………...............…*in figures*) (excluding VAT) or such other sums as may be ascertained in accordance with the said Conditions.

2. We acknowledge that the Contract Data forms part of our Bid.

3. We undertake, if our Bid is accepted, to commence the Works as stipulated in the Contract Data, and to complete the whole of the Works comprised in the Contract within the time stated in the Contract Data.

4. We agree to abide by this Bid until the date specified in ITB Clause 16………………(*date*) or any extended period and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

5. Unless and until a formal agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us*.(add following in case of joint venture bid. “We undertake the responsibility to enter in to a joint venture agreement among the joint venture partners. We are also well aware that in the event we failed to enter in to a joint venture agreement, the Contract formed between us is null and void and our bid bond will be forfeited by you”)*

6. We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this ............. day of ............ 20... in the capacity of ..........…………………….... duly authorized to sign tenders for and on behalf of ....................................………….....................................

(IN BLOCK CAPITALS)

Signature : ………………………………….

Name :.…..……………………………..

Address : ………………………………….

…………………………………..

Witness:

Signature .............................….…......................... Name ……………………………

Address …………………………........

Revised on 04-03-2021

**5. CONTRACT DATA**

* **Contract Data**
* **Appendix A – For Contract Data**

The Contract Data is a part of General Conditions of Contract and should be read in conjunction with the General Conditions of Contract.

If there is a discrepancy found in the General Conditions of Contract and the Contract Data, the Content in the Contract Data shall supersede the Content in the General Conditions of Contract.

*(Note: What is typed in italic letters are guide lines to prepare the Bidding Data and they shall be removed after preparation of the Bidding Data.)*

**Contract Data**

Contract Data is a part of Condition of Contact and shall be read together. If any discrepancy is founds content of the Contract Data shall supersede the Conditions of Contract

**(Please note that the Clause numbers given hereunder are that of Conditions of Contract)**

Revised on 04-03-2021

|  |  |  |
| --- | --- | --- |
| **Conditions of Contract Clause Number/s** | **Title** |  |
| 1.1.1.6 | The Contract | **Delete paragraph 1.1.1.6 and replace with the following.**  “Appendices” means document(s) titled Appendices and given in Volume 2: Section 13 and “Schedule of Particulars” given in Volume 2: Section 7, which shall be completed by the bidder and submitted with the Bid, as included in the Contract. |
| 1.1.2.2 & 1.3 | **Employer’s name** and address  Authorized Representative | Name: National Water Supply & Drainage Board  Address: Galle Road, Ratmalana, Sri Lanka  Chairman, National Water Supply & Drainage Board |
| 1.1.2.3 &1.3 | **Contractor’s name** and address | Name: …………………………………………  Address: ……………………………………….. |
| 1.1.2.4 & 1.3 | **Engineer’s name** and address | Name General Manager  National Water Supply & Drainage Board  Address: Galle Road, Ratmalana, Sri Lanka |
| 1.1.2.9 | Adjudicator | **Not Applicable.** |
|  |  |  |
| 1.3.3 | Time for Completion of the Works | Time for Completion is ……. Days from the Commencement Date. |
| 1.1.3.7 | Defects Notification Period | Defects Notification Period is ….. Days |
|  |  |  |
|  |  |  |
| 1.5 | Priority of Documents | The documents forming the Contract shall be interpreted in the following order of priority:   1. Agreement 2. Letter of Acceptance, 3. Memorandum of understanding /Addenda / Minutes of negotiations 4. Form of Bid. 5. Contract Data, 6. Conditions of Contract 7. Specifications (Specifications given in this document supersedes the CIDA specifications). 8. Drawings 9. Bills of Quantities 10. Schedule of Particulars 11. Appendices 12. Any other document listed in the Contract Data as forming part of the Contract. 13. Any other document (if any) |
| 1.14 | Joint and Several Liability | **Add to the Sub-Clause:**  Contractor shall submit the Joint Venture Agreement. |
| 2. 1 | Right of access to the Site | 21 Days from the date of Letter of Acceptance. |
| 3.1 | Engineer’s Duties and Authority | Add following paragraphs at the end of this Sub-Clause; |
|  |  | Engineer shall not allow the Contractor to store any excess pipes, fittings and accessories along road sides in addition to the material required for the daily work or after completion of Work. |

Revised on 08-03-2021

|  |  |  |  |  |
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| 3.6 | **Provision of office/mobile office and other related facilities to the Engineer’s Representative and his staff by the Contractor** | **Add followings at the end of Clause 3.0 as**  **Sub-Clause 3.6.**  (C*an be amended to suit specific requirements when preparing the Bidding Document)*  **Project office:**  The office shall be well lighted, lockable and fully weather proof. A covered parking space for one vehicle shall be provided.  The office shall have two rooms with a total floor area of at least 30m2. The office shall have overhanging eaves and be provided with windows with lockable shutters for security. | | |
|  |  | Doors shall be fitted with a mortise lock at least with two keys and the Contractor shall hand over all keys to the Engineer’s Representative. The office shall be provided with a wash basin with cold running water and two ceiling fans. The Contractor shall provide electricity, air condition facilities, toilet facilities, potable drinking water facilities and the following furniture & equipment to the office until maximum of 6 months in the Defect Notification Period where necessary. | | |
|  |  | **Item** | **Required No** | |
|  |  | Table 0.9m x 1.5m with four lockable drawers | 01 | |
|  |  | Table 0.9m x 1.5m with one lockable drawer | ………… | |
|  |  | Chairs | …………. | |
|  |  | Chairs with arm rest | …………. | |
|  |  | Lockable four drawer steel filing cabinet | …………. | |
|  |  | Computer with UPS & requires software | …………. | |
|  |  | Photocopy + Printing machine | …………. | |
|  |  | Binding machine | ………… | |
|  |  | Set of shelving 1.2m high by 0.9m long with shelves for keeping the drawings | …………. | |
|  |  | Domestic water filter | …………. | |
|  |  | Stand fans | ………… | |
|  |  | Personal Protection Equipment (PPE) | ………… | |
|  |  | Partitioned first aid box with the regular prescribed medicines and general medical dressings. | 1 | |
|  |  | …….. |  | |
|  |  | All office building and fittings in good condition and the equipment and furnishings installed therein shall be provided and well maintained during the above period by the Contractor. Equipment and furnishing of office shall become the property of the Contractor thereafter.  The Contractor shall be provided provide janitorial services to maintain a good working environment and security of the project office. At the end of the given period, the Contractor shall remove the office building as per the instructions given by the Engineer.  Revised on 15-03-2021 | | |
|  |  | **Sub office/s or Site office/s:**  The Contractor shall provide and maintain sub office/s or site office/s for the use of the Engineer’s staff in numbers stated in the BOQ. Each office shall be established at the sites as directed by the Engineer maintained by the Contractor until the completion of construction works. | | |
|  |  | The sub office/s shall be provided with sufficient ventilation, light, weather proofed, insulated and painted internally and externally. Floor to ceiling height shall be at least 2.7 meters with minimum floor area 15m2. The office shall have external lockable doors and windows as necessary. | | |
|  |  | Water Supply, electricity supply, Air condition facility, sanitation facility and telephone shall be provided and maintained throughout the Contract period.  All necessary facilities & equipment such as stationeries, consumables and office utilities shall also be provided by the Contractor. | | |
|  |  | Each sub office/site office shall be supplied with the following new furniture, equipment and services: | | |
|  |  | **Item** | | **Quantity** |
|  |  | Steel tables 1.2m x 0.75m with two lockable drawers | | 4 |
|  |  | Steel four drawer lockable filing cabinet | | 2 |
|  |  | Arm chairs | | 10 |
|  |  | Water filters | | 1 |
|  |  | Stand fans | | 2 |
|  |  | File Trays | | 5 |
|  |  | Leveling instrument | | 1 |
|  |  | Computers with UPS & required software | | ………… |
|  |  | Binding machine | | ………… |
|  |  | Personal Protection Equipment (PPE) | | ………… |
|  |  | Partitioned first aid box with the regular prescribed medicines and general medical dressings.  Revised on 15-03-2021 | | 1 |
|  |  | All office building and fittings in good condition and the equipment and furnishings installed therein shall be provided and well maintained during the above period by the Contractor. Equipment and furnishing of office shall become the property of the Contractor thereafter.  The Contractor shall be provided a janitorial services to maintain a good working environment and security of the project office. At the end of the given period, the Contractor shall remove the office building as per the instructions given by the Engineer. | | |

Revised on 15-03-2021

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| --- | --- | --- | --- | --- | --- |
|  | |  | **Mobile Office/s**  The Contractor shall provide and maintain mobile office/s for the use of the Engineer’s staff in numbers stated in the BOQ. Each office shall be established at locations as directed by the Engineer and shall be maintained by the Contractor until the completion of construction works.  The mobile office/s shall be provided with sufficient ventilation, weather proofed, insulated and painted internally and externally. Floor to ceiling height shall be at least 2.7 meters with minimum floor area 7.4m2. The office shall have external lockable doors and windows as necessary. The office shall be well lighted and ventilated.  Water Supply, electricity supply, air condition facility, sanitation facility and telephone shall be provided and maintained by the Contractor throughout the contract period.  Each mobile Office shall be supplied with the following new furniture, equipment and services: | | |
|  | |  | **Item** | **Quantity** | |
|  | |  | Steel tables 1.2m x 0.75m with two lockable drawers | 2 | |
|  | |  | Steel four drawer lockable filing cabinet | 1 | |
|  | |  | Arm chairs | 6 | |
|  | |  | Computers with UPS & required software | 1 | |
|  | |  | Water filters | 1 | |
|  | |  | Stand fans | 2 | |
|  | |  | File Trays | 4 | |
|  | |  | Leveling instrument | 1 | |
|  | |  | Personal Protection Equipment (PPE) | ………… | |
|  | |  | Partitioned first aid box with the regular prescribed medicines and general medical dressings. | 1 | |
|  | |  | All office building and fittings in good condition and the equipment and furnishings installed therein shall be provided and well maintained during the above period by the Contractor. Equipment and furnishing of office shall become the property of the Contractor thereafter.  The Contractor shall be provided a janitorial services to maintain a good working environment and security of each office. At the end of the given period, the Contractor shall remove each office building as per the instructions given by the Engineer. | | |
|  |  | | Transport :  The Contractor is required to provide ……… nos. Vehicles (Double Cabs not less than 2400 cc capacity) including drivers, fuel and other consumables for sole use of the Engineer’s representative and his staff. Contractor shall maintain these vehicles in good condition during the Contract period. Vehicle shall have “Full Insurance”, insurance cover including passengers.  Vehicle shall be Air conditioned with Digital FM Radio/Cassette player and complete with standard accessories. Years of vehicle registration should be less than 8 years.  In case of absence of driver or repair of vehicle, Contractor shall provide alternative driver or alternative vehicle to continue the Engineer’s Representative and his staff’s works smoothly. | |

Revised on 04-03-2021

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| 4.1 | | Contractor’s General  Obligations |  |
| 4.1 (d) | |  | **Add to the Sub-Clause:**  Contractor shall provide complete set of “as-built” drawings;   1. in AutoCAD format and submit 01 set of A3 size white paper hard copy and 01 soft copy in a CD. 2. in GIS format as per the Specification given in Volume 2: Section 6 in the Bidding Document.   . |
| 4.2 | | Amount of Performance Security | 5% of the Initial Contract Price, in the currencies and proportions in which the Contract Price is payable. The acceptable form is included in Volume 2: Section 12 – Standard Forms of the Bidding Document. |
|  | |  |  |
|  | |  |  |
| 4.9 | | Site Data | **Add to the Sub-Clause:**  It is compulsory that Contractor shall visit the site prior to bidding and carefully study the site conditions, environmental conditions, climatic conditions, site safety, possible risks that can be foreseen by an experience Contractor and acquaint themselves about all measures that have to be taken during the implementation of the Contract including operation, maintenance and Defects Notification Period until the Performance Certificate is obtained. |
| 6.4 | | Working hours | **Add to the Sub-Clause:**  Normal working hours should be 7.30a.m to 5.00p.m |
| 6.6 | | Health and Safety | **Add to the Sub-Clause:**  Contractor shall maintain health and safety at site in accordance with the health and safety regulations of the respective authorities of the Government of Sri Lanka and any additional precautions time to time to adhere strict compliance with these regulations and he shall indemnify the Employer from any acts by the Government of Sri Lanka and any courts of law. |
| 6.8 | | Contractors Personnel | **Add following to the Sub-Clause:**  The Contractor shall make his own arrangements for the engagement of all labour local or otherwise, and, save in so far as the Contract otherwise provides for the transport, housing, feeding and payment thereof. |
|  | |  | The Contractor shall where possible employ skilled and semi skilled labour possessing National Certificate of Trade Tests issued by the National Apprentices and Industrial Training Authority. The Contractor should ensure that at least 15% of his skilled/semi skilled labour force at any time possess National Trade Test Certificates. In the alternative, the Contractor should arrange for at least 15% of his skilled/semi skilled work force to be Trade Tested at the next National Trade Test being conducted by the National Apprentices and Industrial Training Authority. In respect of heavy earthmoving equipment operators, the percentage of those possessing the National Certificate of Competence or those required to be tested will be 100%.The failure of the Contractor tocomplywith the above will result in a deduction of 0.3% of each interim payment certificate until compliance with above when the amount withheld will be refunded. |
| 6.11 | | Construction Management Services | **Add following Sub-Clauses to theClause 6:**  To ensure the proper management of the construction of the Works, the Contractor shall furnish the names, qualifications and experience of such engineering and technical personnel above the grade of Technical Officer, who he intends employing for the purpose of providing proper construction management services for the Works. The personnel so listed should have the same qualifications and experience and numbers as indicated in the Bidding Documents. Such personnel whether listed in the Bidding Document or not should be approved by the Engineer. The cost of these will be borne by the Contractor. |
| 8.7 | Liquidated damages for the Works | | Rs…….…….….. per Day. *(enter a value)* |
|  | Maximum amount of liquidated damages | | 10% of the Initial Contract Price.  Revised on 08-03-2021 |
| 11.1 | Completion of outstanding work & remedying defects | | **Add to the Sub-Clause:**  Completion of outstanding works and remedying defects by the Contractor shall be done within the Defect Notification Period as may be notified in-writing by the Engineer or within 14 Days after Defects Notification Period as a result of an inspection made by the Engineer or his Representative at the completion of the Defect Notification Period in-writing. |
| 12.2 (b) | Method of Measurement | | The Method of Measurement shall be Civil Engineering Standard Method of Measurement, Third Edition(1991) (CESMM3) and SLS 573. |
| 13.4(b) | Percentage for adjustment of Provisional Sums | | Percentage for adjustment of Provisional sum is as stated in the Bill of Quantities. |
| 13.7 | Price Adjustments | | The Contract Price is subjected to price adjustment, if the Date for Time for Completion from the Commencement Date exceeds 3 months.  Weightings of Inputs are given in Appendix B.  Non adjustable elements are given in Appendix B. |

Revised on 06-11-2020

Revised on 29-10-2015

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| 14.2 | Total Advance Payment  Number and timing of installments | An Advance Payment of maximum of 20 % of the Initial Contract Price excluding provisional sums and contingencies shall be paid on submission of an unconditional Bank guarantee for Advance payment issued by a recognized Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka in the Form for Advance payment Security included in Volume 2: Section 12- Standard Forms and the Performance Guarantee as specified in the Bidding Document.  Number of Installments of Advance Payment is One(01)  Advance payment Guarantee shall be obtained at the Contractor’s cost. |
| 14.3 | Application for Interim Payment Certificate | **Replace the first paragraph of this Sub-Clause with the following paragraph;**  The Contractor shall submit a Statement including approved joint measurement sheets of the Work done for the period in three copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amount to which the Contractor considers himself to be entitled, together with supporting documents which shall include the relevant report on progress during this month in accordance with Sub-Clause 4.14 [Progress Reports] and Subcontractor’s payment progress report. |
| 14.3 (c) | Percentage of retention | **Add to the Sub-Clauses:**  The retention from each payment shall be 10% of the certified work done. |
| 14.3(c) | Limit of Retention Money | The limit of retention shall be 5% of the Initial Contract Price. |
| 14.5 | Minimum amount of Interim Payment Certificates | **Add to the Sub-Clauses:**  Minimum Amount of Interim Payment shall be 25% of the average monthly value of Contract excluding provisional sums and contingencies.  Revised on 04-03-2021 |
| 14.6 | Payment | **Delete the paragraph in Sub-Clause 14.6(b) and add the following paragraph;**  The amount certified in each Interim Payment Certificate within 42 Days after the Employer receives the Interim Certificate from the Engineer; and  **Add the following paragraph at the end of Sub-Clause 14.6;**  However, if the Employer finds sufficient evidence that the Works progress is substantially behind the schedule, the Employer shall instruct to request the Contractor to establish an ESCROW Account with a reputed local bank (ESCROW Agent) acceptable to the Central Bank of Sri Lanka an ESCROW Agreement. Refer Appendix-A of Contract Data for the ESCROW Agreement to ensure funds dispersed are utilized solely for the expenses under the Contract. |
| 14.8 | Payment of Retention | **Deleted the first paragraph and add the following:**  When Retention amount reaches 5% of Contract Price, upon the issuance of the Taking-Over Certificate the full amount of the Retention Money may be released on submission of unconditional, on demand guarantee for 2.5% of Contract Price issued by a commercial bank operating in Sri Lanka approved the Central Bank of Sri Lanka and acceptable to the Employer. This Guarantee shall be valid until 28 Days beyond the Defects Notification Period.  Format for Retention Money guarantee is given in Volume 2:Section 12- Standard Forms of the Bidding Document. |
| 18.1 | Insurance for Works and Contractor’s Equipment | **Add to the Sub-Clauses:**  The minimum insurance covers shall be :  (a) • The minimum cover for insurance of the Works and of Plant and Materials is 115% of the Initial Contract Price.  (b) • The minimum cover for loss or damage to Equipment is the replacement cost of equipment.  Revised on 26-01-2021 |
| 18.2 | Third Party Insurance (Including Employer’s Property) | (a) • The minimum cover for insurance of other property (other than the Site)is to cover the building and property adjacent to the site and reinstatement of ………………….. |
|  |  | (b)• The minimum cover for personnel injury or  Death or third party is Rs.1,000,000 per event. Number of events are unlimited. |
|  |  |  |

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| 18.3 | Insurance for Contractor’s Personnel | (a) The minimum cover for personal injury  or death,   1. For employees of the Employer and other persons engaged by the Employer in the Works is Rs 1,000,000 per event, Number of events are unlimited. |
|  |  | (b) The minimum cover for personal injury or  death,   1. for the Contractor's workmen is Rs. 1,000,000 per person, number of persons are unlimited. 2. Contractor's employees other than workmen is Rs 1,000,000 per person, Number of persons are unlimited. 3. Employer’s Employees and Consultant’s Employees is Rs.1,000,000/= per person. Number of persons are unlimited. |
|  |  | **Add the following Sub Clauses:**  Contractor shall bear all costs in connection with the damages to the works, his labourers, Employer’s staff and adjacent properties and pay any compensation to them. Contractor shall pay any loss of revenue to third party due to closure of roadways, and blockages of road ways or access to all business premises due to the implementation of the works of the Contract.  Contractor shall indemnify the Employer for any losses or damages or any compensation due to cause of the works under the Contract. |
| 19.2 | Dispute Resolution | **Delete the paragraph and replace with the following;**  Any dispute of whatever nature arising out of or in relation to this agreement shall in the first instance be attempted to be resolved by way of amicable settlement by the Employer and the Contractor. |
| 19.3 | Procedure for Adjudication | **Not Applicable.** |
| 19.4 | Replacement of Adjudicator | **Not Applicable.** |
| 19.5 | Arbitration | Venue : Colombo, Sri Lanka  Language:English |

**Add following as Clause 21**

1. **SUPPLY OF GOODS (MATERIALS/PIPES, FITTINGS, SPECIALS, ACCESSORIES, M&E EQUIPMENTS, MANHOLE COVERS AND VALVES)UNDER THE CONTRACT.**

Revised on 07-12-2020

|  |  |
| --- | --- |
| **21.1** | **Use of Contract Documents and Information**  (a) The Contractor shall not, without the Employer's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Employer in connection therewith, to any person other than a person employed by the Contractor in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.  (b) The Contractor shall not, without the Employer’s prior written consent, make use of any document or information enumerated in para21.2 (a) except for purposes of performing the Contract.  (c) Any document, other than the Contract itself, enumerated in para21.2 (a) hereof shall remain the property of the Employer and shall be returned (in all copies) to the Employer on completion of the Contractor's performance under the Contract if so required by the Employer. |
| **21.2** | **Inspections and Tests**  **Testing and Inspection Agencies**  (a) The Employer or his representative shall have the right to inspect and/or to test the Goods for their conformity to the Contract. The Contract Data of Contract and/or the Technical Specifications shall specify what inspections and tests the Employer requires not specified anywhere and where they are to be conducted. The Employer shall notify the Contractor in writing of the identity of any representatives retained for these purposes.  (b) The inspections and tests may be conducted on the premises of the Manufacturer or his Subcontractor(s), at point of delivery and/or at the Good's final destination. Where conducted on the premises of the Manufacturer or its Subcontractor(s), all reasonable facilities and assistance including access to drawings, documents and production data shall be furnished to the inspectors at no charge to the Employer.  (c) Should any inspected or tested Goods fail to conform to the specifications, the Employer may reject them and the Contractor shall either replace the rejected Goods or make all alterations necessary to meet specification requirements free of charge to the Employer.  (d) The Employer's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Employer's stores shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Employer or its representative prior to the delivery of Goods or Goods' shipment from the country of origin, in case of importing.  (e) The Employer requires the goods to be supplied under this contract shall conform to the requirements given in Section 6. The Supplier shall obtain the Certificates of Inspection for the specific requirement of this contract document carried out by an Authorized Accredited Agency which is a member of International Accreditation Forum (IAF) acceptable to the Employer. The Authorized Accredited Agency shall have the authority for the accreditation of mentioned goods in their scope of accreditation.  (f) The selected inspection authority’s name to same has to be given in summary of price schedule. On the acceptance of the bid, the Employer shall inform directly to the selected inspection authority with a copy to the Contractor, the specific requirements for testing including deviations accepted by the Employer, if any, to be tested. However, the payment to the Inspection Authority has to be made directly by the Contractor on production of test reports.  (g) Nothing in Clause 21 shall in any way release the Contractor from any warranty or other obligations under this Contract.  (h) The Contractor shall obtain the approval of the Engineer to ship the goods to be imported for the Works or to deliver such materials and plant to the site. Applications for such consent to ship shall be accompanied by manufacturer’s test certificates and certificates of inspection prescribed in the Contract or agreed with the Engineer. Application shall be made so as to give the Engineer a reasonable time to deal with such applications.  (i) Nominated Inspection Agency shall carryout inspection and testing during Manufacturing process, after Manufacturing and at any time prior to shipping and shall confirm that goods are in conformity with specifications included in the Contract document. He shall submit his inspection report to the Employer including all items given in the Terms of Reference (TOR) for the Nominated Inspection Agency which is included in the Contract document as Appendix – 13. |
| **21.3** | **Pre-shipment Inspection by the Nominated NWSDB Engineers for Foreign Manufacturers** |
|  | The Contractor shall arrange for two (2)number of Nominated NWSDB Engineers for pre-shipment inspection visit to country of manufacture before dispatching the DI/PE Pipes, Fittings, Valves, Specials and Accessories etc. and Treatment Plant equipment.  Each shipment should be inspected by Nominated NWSDB Engineers before dispatching at Manufacturer’s factory.  The Contractor shall in his bid provide detailed proposals for pre-shipment inspection visit he offers to provide under this Clause. The following guidelines shall be used by the Contractor to formulate his proposals. |
|  | 1. The duration of inspection for Pre-shipment Inspection by Nominated NWSDB Engineers shall be worked out based on following guidelines. 2. If DI pipes and fittings are manufactured in same premises, duration of the inspection shall not be less than Eight (8) Days. 3. If DI pipes and fittings are manufactured in different premises, duration of the inspection shall not be less than Ten (10) Days. 4. If PE pipes and fittings, duration of the inspection shall not be less than Ten (10) Days. 5. DI valves Eight (8) Days.   Revised on 08-03-2021   1. For Pumps and other Equipments as follows, but maximum duration shall be Ten (10) Days for one inspection.  |  |  | | --- | --- | | **Scope** | **Duration for Pre-shipment Inspection** | | For number of pumps not exceeding 8  Additional 02 pumps | 8 Days  1 Days | | 01 Generator  Additional 01 Generator | 1 Day + Travelling to factory  1 Day | | 01 Chlorinator  Additional 01 Chlorinator | 1 Day + Travelling to factory  1 Day | | 01 Air blower  Additional 01 Air blower | 1 Day + Travelling to factory  1 Day | | De-oderization system  01 unit  Additional 01 unit | 1 Day + Travelling to factory  1 Day | | Chemical mixers | 1 Day + Travelling to factory | | Electrical Panels | 1 Day + Travelling to factory | | Chemical feeding pumps | 1 Day + Travelling to factory | | For SCADA system | 8Days | | For water meters | 8Days |   (b) Most of the time shall be centered round the manufacturer’s goods which the Contractor proposes to use in the work.  (c) The inspection at the specific manufacturer shall include;   * + A general introduction to the manufacturer’s country, area, town & source of materials, etc.   + introduction to design standards and procedures adopted.   + introduction to relevant production procedures and quality control standards.   + manufacturing process, and Quality Assurance procedure.   + testing procedures, mill certificates, product conformity certificate, Quality Management System Certificate and any other relevant certificates etc. regarding the products.   + packing & dispatching procedure   + Site visits to inspect installed or application of similar products/materials. |

Revised on 26-01-2021

|  |  |
| --- | --- |
|  | (d) The Nominated NWSDB Engineers shall be guided by experienced engineers and quality controllers who arealso competent in English language.  (e) Each Nominated NWSDB Engineer shall be paid a per diem to include combined allowances, the allowance the amount specified in the Appendix 18 prior to departure.  (f) All visas, Insurance (Life, Health and Travel), air fares, permits, taxes, transfer fees, travelling within the manufactures country and all other facilities required to carry out pre-shipment inspections at the manufacturer’s factory/premise shall be arranged by the Contractor and shall be included in the rates and prices of the contract. Contractor is not liable for providing food and accommodation. Contractor shall assist Nominated NWSDB Engineers for booking accommodation if requested.  (g) The Nominated NWSDB Engineers shall be provided Terms of Reference (TOR) as shown in Appendix-13A, 13B, 13C, 13D, 13E & 13F for the inspection jointly agreed by the Contractor and the Engineer and with printed catalogues, manuals, illustrative videos etc., relevant to the manufacturing process and also obtain extra information requested by them, and shall arrange to dispatch these to Nominated NWSDB Engineers, by the Contractor at his own cost.   1. Contractor shall provide a detailed programme(itinerary) showing details of inspection, travelling, and all other arrangement etc. required for the pre-shipment Inspection and submit to the Inspection team prior to departure. Contractor shall discuss the inspection programe in detail with the inspection team and shall be agreed with the Pre-shipment Inspection team prior to departure. Contractor shall assist for obtaining visa for the inspection from the relevant Embassy/ High commission for Nominated NWSDB Engineers. |
|  | (j) Nominated NWSDB Engineers shall inspect and test DI/PE Pipes, Fittings, Valves, Specials and Accessories etc. and Treatment Plant equipment as per the attached check lists for pre shipment as given in Appendix-15A, 15B, 15C & 15D respectively. Manufacturers should perform any other tests which may be required by the Nominated NWSDB Engineers.    (k) Nominated inspection agency shall be present during pre-shipment inspection by the Nominated NWSDB Engineers and shall assist the Nominated NWSDB Engineers for the testing and inspection.  (l) Any inspections carried out by Inspection Agencies or Nominated NWSDB Engineers shall not relieve the Contractor of his obligations under the Contract.  (m) Contractor/Manufacturer shall not ship/deliver by plane materials from the manufacturers Factory or Stores without approval of the Engineer. |
| **21.4** | **Pre-delivery Inspection by the Nominated NWSDB Engineers for Local Manufacturers**  The Contractor shall arrange for two (2)number of Nominated NWSDB Engineers for pre-delivery inspection visit of local manufacturer before dispatching the PE/uPVC Pipes, fittings, Specials and Accessories etc.  Each delivery should be inspected by Nominated NWSDB Engineers before dispatching at Manufacturer’s factory.  The Contractor shall in his bid provide detailed proposals for pre-delivery inspection visit he offers to provide under this Clause. The following guidelines shall be used by the Contractor to formulate his proposals.   1. Most of the time shall be centered round the manufacturer’s goods which the Contractor proposes to use in the work. 2. The inspection at the specific manufacturer shall include;    * introduction to design standards and procedures adopted.    * introduction to relevant production procedures and quality control standards.    * manufacturing process, and Quality Assurance procedure.    * testing procedures, mill certificates, product conformity certificate, Quality Management System Certificate and any other relevant certificates etc. regarding the products.    * packing & dispatching procedure.    * Site visits to inspect installed or application of similar products/materials.   (c) The Nominated NWSDB Engineers shall be guided by experienced engineers and quality controllers who arealso competent in English language.  Revised on 26-01-2021  (d) The Nominated NWSDB Engineers shall be provided Terms of Reference (TOR) as shown in Appendix-13B for the inspection jointly agreed by the Contractor and the Engineer and with printed catalogues, manuals, illustrative videos etc., relevant to the manufacturing process and also obtain extra information requested by them, and shall arrange to dispatch these to Nominated NWSDB Engineers, by the Contractor.  (e) Nominated NWSDB Engineers shall inspect and test PE/uPVC Pipes, fittings, Specials and Accessories etc as per the attached check lists as given in Appendix-15B&15E respectively. Manufacturers should perform any other tests which may be required by the Nominated NWSDB Engineers.    (f) Nominated inspection agency shall be present during pre-delivery inspection by the Nominated NWSDB Engineers and shall assist the Nominated NWSDB Engineers for the testing and inspection.  (g) Any inspections carried out by Inspection Agencies or Nominated NWSDB Engineers shall not relieve the Contractor of his obligations under the Contract. |

**21.5** **Packing**

(a) The Contractor shall provide such packing as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination and the absence of heavy handling facilities at all points in transit.

(b) The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract and, any subsequent instructions ordered by the Employer.

(c) Each package shall be marked on three sides with proper indelible paint as follows:

1. National Water Supply & Drainage Board, Sri Lanka
2. Contract Number
3. Description of Goods
4. Country of Origin of Goods
5. Suppliers' Name
6. Packing List Reference Number

**21.6** **Transportation**

The Contractor shall be required to meet all transport and storage expenses until delivery to the destination as specified in the Contract.

.

The pipe materials and pipe appurtenance shall be stored in Contractor’s stores within reasonable distances from Work sites and only the quantities that can be laid in excavated trenches for the daily work shall be kept along the road. Left-overs shall not be kept at the roadsides and it shall be returned to the Contractor’s stores.

Revised on 26-01-2021

**21.7** **Incidental Services**

(A) The Contractor shall provide any or all of the following services, if required, without any extra cost to the Employer.

(a) Furnishing of tools required for assembly and/or maintenance.

(b) Furnishing of a detailed installation, operations and maintenance manual for each appropriate unit.

(c) Conduct training of the Employer’s personnel, at the Manufacturer’s plant and/or on-site, in assembly, operation, maintenance and/or repair as appropriate.

(d) Demonstration of pipe laying prior to commencement.

(B) Prices charged by the Contractor for the preceding incidental services, shall be included in the Contract Price.

**21.8** **Spare Parts**

The Contractor shall be required to provide the following materials and notifications pertaining to spare parts manufactured or distributed by the Contractor:

(a) Such spare parts as the Employer may elect to purchase from the Contractor, provided that this election shall not relieve the Contractor of any warranty obligations under the Contract;

(b) The Contractor shall carry sufficient inventories to assure ex-stock supply of consumable spares such assure local agents of equipments as Gaskets, Plugs, Bolts, Nuts and Washers etc.

**21.9** **Warranty**

(a) The Employer warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless otherwise provided in the Contract. The Contractor further warrants that Goods supplied under the Contract shall have no defect arising from design, materials or workmanship (except insofar as the design or material is required by the Employer’s Specifications) or from any act or omission of the Contractor, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

1. This warranty shall remain valid for twelve (12) months after Goods, or any portion thereof as the case may be, have been delivered and commissioned to the final destination indicated in the Contract.

(c) The Employer shall promptly notify the Contractor in writing of any claims arising under this warranty.

(d) Upon receipt of such notice, the Contractor shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Employer other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from the port of entry to the final destination.

**APPENDIX-A**

Revised on 26-01-2021

**ESCROW Agreement**

**THIS AGREEMENT** is made and entered into at Colombo on this ….. day of *…………… ………………………[insert month and year]* in the Democratic Socialist Republic of Sri Lanka

**BY AND BETWEEN**

**National Water Supply & Drainage Board**, a corporate body duly established under the provisions of the National Water Supply and Drainage Board Act No.2 of 1974 (hereinafter referred to as **NWSDB**) of having its Head Office at Ratmalana in Sri Lanka (hereinafter referred to as the **‘Employer’** or **‘the Board’** and its successors and assigns)

**AND**

**…………………………………………………..** a firm duly registered in the said Republic of Sri Lanka under Partnership Agreement Bearing No. ………… and having its Registered Office at ……………………………………………………………………………………………. **OR/AND** ……………………………………………………………. (Company name) a company duly incorporated in …………………………………….(Country in incorporation) under the provision of the Companies Act/Country legislation No. …………………… and having its Registered Office at ……………………………………………………………………………. (address of the Registered Office) in ………………………………. (Country) (hereinafter referred to as the **‘Contractor’** and its successors and assigns)

**AND**

……………………………………………………..[*insert the name of the Bank*] a Banking Company incorporated under the laws of Sri Lanka and having its registered office at …………………………………………………………………………. and a branch office at …………………………………………………………… (hereinafter called and referred to as the “**ESCROW Agent**” which term or expression as herein used shall where the context so requires or admits mean and include the said …………………………………[*insert the name of the Bank*] and its successors and assigns)

**(The Employer, the Contractor and the ESCROW Agent are hereinafter and sometimes collectively referred to as ‘the Parties’)**

**WHERE AS THE EMPLOYER AND THE CONTRACTOR ARE PARTIES TO STANDARD OPERATING PROCEDURE FOR OPERATION OF JOINT ESCROW ACCOUNT FOR COMPLETION OF WORKS OF .....................……………… ………………………………. PROJECT FOR:**

1. CONTRACT NO: …………...……………………………………………………………..………………………………………………………………………………………………
2. CONTRACT NO: …………...……………………………………………………………..………………………………………………………………………………………………
3. CONTRACT NO: …………...……………………………………………………………..

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

(hereinafter referred to as the **“Project”**)

**NOW THIS AGREEMENT WITNESSETH THAT THE PARTIES HEREBY AGREE AS FOLOWS:**

1. **Appointment**

The Employer and the Contractor hereby appoint ……………………[*insert the name of the Bank*] ………………….. BRANCH the ESCROW Agent and the joint ESCROW Accounts shall be opened for each project in the name of the Contractor. Withdrawals from this account shall only be made by way of joint written request/ fund transfer order duly signed by a signatory for the Contractor and a signatory for the Employer. The Contractor ……………………….………… [insert the name of the Contractor] shall authorize two signatories for each Project / Account and NWSDB shall authorize two signatories to operate this account.

1. **The Accounts**

The Account shall solely constitute for the money due to the Contractor, ………………………………………………………………[*insert the name of the Contractor*] in the form of loan disbursement, additional advance, Interim Payment Certificates (IPCs), escalation claims or any other money due on account of Contract payments.

1. **Auditing**

The internal audit of the ESCROW Account shall be the co-responsibility of the NWSDB and the ……………………………………………………………[*insert the name of the Contractor*].

1. **Operation in Accounts**

No cheque books are issued for the ESCROW Accounts. The Cash/Funds out of the ESCROW Account shall only be made under the authorized signature of the Employer and the Contractor.

1. **Payments**

Payments from the ESCROW Account shall be processed as follows:

1. Once the ESCROW account is established, payments of all future certified IPCs shall be deposited in the ESCROW Account.
2. Limitation on transactions:

Transactions out of the ESCROW Account shall be limited to payments under the project including Salaries/Wages, Utility Bills, Subcontractors, Suppliers, Service Renders, maintenance work, material supplies, administration requirements, individual dues, etc.

1. The Contractor shall request disbursements from the Committee specified under 5(d) in this Agreement by listing items in appropriate grouping of Salaries/Wages, Utility Bills, Subcontractors, Suppliers, Service Renders, maintenance work, material supplies, administration requirements, individual dues, showing the total amount required for each item listed. Appropriate summary and detailed assessments shall accompany the request. Notwithstanding above, the disbursement against Head Office Overheads shall constitute a mutually agreed amount and the same shall be paid directly to an account as requested by …………………………………………………..…………………… [*insert the name of the Contractor*].

Revised on 01-01-2021

1. The committee comprising of the Project Director (NWSDB), Consultant Team Leader, and Project Manager of the Contractor, Accountant of the Contractor ……………………………………………………..….…. [*insert the name of the Contractor*], shall review the requested list, and determine if the requirements are appropriate to the needs of the Contractor’s activities on the Project. Once approved/agreed, the disbursement payment shall be issued directly to agreed creditors/suppliers. The committee must ensure that;
2. The materials are in accordance with the specifications for the Works.
3. The materials have been delivered to the site and they are properly stored and protected against loss, damage, or deterioration.
4. The Contractor’s records of the requirements, orders, receipts and use of materials are kept in a form approved by the Engineer, and such records are available for inspection by the Engineer.
5. The Contractor has submitted a statement certified by the Employer of his cost of acquiring and delivering the materials to the Site, together with such documents as may be required for the purpose of evidencing such cost.
6. No cash payments will be made through this account
7. All written requests duly signed by the Employer and the Contractor shall be submitted to the bank before 15th of each month.
8. No Facsimile transactions requests shall be accepted
9. Any unreasonable imbalance between the amount paid out from the ESCROW account and the agreed list of payments shall result in further disbursements from the ESCROW account being stopped until the required information/explanation is provided.
10. **Bank Interest**

Any bank interest gained on balance amount in ESCROW account shall be that of ………………………..………………………………………….. [*insert the name of the Contractor*]

1. **Disputes**

The ESCROW Account shall operate within the provisions of terms, conditions and clauses of the Contract. In case of any Conflict between ………………………………………………………………… …….[*insert the name of the Contractor*] and NWSDB, the provisions of this ESCROW agreement shall hold preference. In the case of such dispute the ESCROW Agent shall have sole authority to cease the operation of such ESCROW account immediately.

1. **Maintaining Cash Books**

The cash book shall be maintained by the Project Manager, of ……………………………………………………………………………… [*insert the name of the Contractor*] and it will be countersigned by the Employer’s Representative. The cash book shall be closed on monthly basis.

1. **Period**

By operation on this ESCROW Account, the Contractor is not relieved of any of its obligations under the ContractAgreement with respect to completion of the Works on time as stated in the Contract.

1. **The Role of ESCROW Account**

The role of the ESCROW Account is limited to ensure smooth flow of finance to the project by channeling project payments for speedy execution of the project.

1. **Termination of the ESCROW Agreement:**

The ESCROW Account may be terminated when the full amount of all mobilization advance and additional advance are repaid and the whole of the Works are “Taken Over’ by the Employer, or when the original Contract of the Project between the NWSDB and the ………………………………………………………………………. [*insert the name of the Contractor*] comes to an end. On termination of the account all remaining funds shall be paid to the Contractor subject to any dues to be recovered by the ESCROW Agent.

1. **Amendments**

Employer has the right to add any amendments with the written consent of the Contractor and the ESCROW Agent when it is necessary in the interest of public money.

1. **Governing Law**

This Agreement shall be construed in accordance with the Laws of the Democratic Socialist Republic Sri Lanka and be subjected to the Jurisdiction of the Courts of Sri Lanka.

1. **Miscellaneous**
2. Good Faith

The Parties hereto agree and recognize that not all matters forming the intent of the Parties hereto may be incorporated in this Agreement and not all possibilities which may arise in connection with the subject matter hereof can be foreseen at the time being and fully provided for at the execution of this Agreement. Where any omission or lacuna becomes known. The Parties hereto agree to amend in writing this Agreement to cover such omission or lacuna in conformity with spirit of this Agreement.

1. Severability

If any provision of this Agreement or the application to any party or circumstances are determined to be invalid, illegal or unenforceable to any extent, the remainder of this Agreement or such provision or the application of such provision to such party or circumstances, other than those to which it is so determined to be invalid, illegal or unenforceable, will remain in full force and effect to the fullest extent permitted by law and will not be affected thereby unless such a construction would be unreasonable.

1. Assignment

This Agreement shall ensure to the benefit of and shall be legally.

1. Non – waiver

The failure of either party to enforce a provision of this Agreement shall not be construed as a waiver of any of their rights and obligations in terms of this Agreement. The rights or remedies hereof are cumulative to any other rights or remedies, which may be granted by law.

1. Accrued Rights/Obligations

All of the rights and obligations referred to in this Agreement shall apply during the period of this Agreement provided that where any right(s) and/or obligation(s) has been accrued, such right / obligation shall nevertheless be complied with even after the termination of this Agreement.

1. Entire Agreement

This agreement sets forth the entire understanding between the parties concerning the subject matter of this Agreement and incorporates and supersedes all prior negotiations and understandings of the same.

1. Joint Preparation

This Agreement is to be deemed to have been prepared jointly by the Parties hereto and any uncertainty or ambiguity existing herein shall be interpreted according to the application of the rules of interpretation.

1. **Notices**

Any notice of or other communications to be given or sent by the Employer/ Contractor/ ESCROW Agent shall be in writing and any be as provided hereunder served personally or sent by email or facsimile or registered mail to the addresses and to the persons as set out herein and shall be deemed to have been given as follows.

If personally served when served / or any email or by facsimile, on the second business day after transmission thereof on a facsimile machine to the proper fax number or if emailed to the proper email address /or if mailed (by registered post) on the third business day after deposit in the mail with postage pre – paid and properly addressed.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year aforementioned in accordance with the laws of Sri Lanka.

Signed by the said …………………………………………. Chairman, National Water Supply and Drainage Board and ……………………………………………. Board Member of **the National Water Supply and Drainage Board** at …………………………………… on the …………. day of ………………………….. Two Thousand and ……………….. in the presence of the following Witnesses.

Chairman …………………………………

Board Member ……………………………

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**Witnesses**

1. Signature ……………………. 2. Signature : ………………………

Name : ……………………. Name : ………………………

Address : ……………………. Address : ………………………

……………………. ………………………

……………………. ………………………

For and on behalf ofthe**Contractor** : signed by the said ……………………………………in the capacity of …………………………………………………………………………. and/or duly authorized to sign this Contract agreement for and on behalf of ..………………...……..

…………………………………………………………………………………………………..

……………………………………………………………… (Block Letters).

Authorized Signature of the **Contractor** and the Company seal: ……………………………..

**Witnesses**

1. Signature ……………………. 2. Signature : ………………………

Name : ……………………. Name : ………………………

Address : ……………………. Address : ………………………

……………………. ………………………

……………………. ………………………

For and on behalf of the **ESCROW Agent** : signed by the said ……………………………in the capacity of ………………………………………………………………………... and/or duly authorized to sign this Contract agreement for and on behalf of ……………………………..

……………………………………………………………… (Block Letters).

Authorized Signature of the **ESCROW Agent** and the Company seal: ………………………..

**Witnesses**

1. Signature :……………………2. Signature : ………………………

Name : ……………………. Name : ………………………

Address : ……………………. Address : ………………………

……………………. ………………………

……………………. ………………………

**Appendix-B**

**For Contract Data**

* 1. **Input Percentages for Major Items**

With reference to Sub – Clause 13.7 (b) of the Conditions of Contract, the “input percentages’ for major items are

|  |  |
| --- | --- |
| **Input Name** | **Input Percentage** |
|  |  |
| **Total** | **90.0%** |

**Non Adjustable Elements**

With reference to Sub-Clause 13.7 (c) of the “Conditions of Contract” the BOQ item Nos that shall be considered as ‘Non- Adjustable elements’ are

Items in General Bill, Provisional Sums, PE/DI/CI/GI/PVC Pipes, Fittings, Specials, accessories and Valves (All pipes, fittings, specials, accessories and valves) and any other items which does not belong to the categories of Inputs listed above).

………………………………………………………………………………………………

………………………………………………………………………………………………

(State if there are any others) ………………………………………………………………………………………………

………………………………………………………………………………………………

**6. SPECIFICATIONS**

**List of Specifications**

|  |  |  |
| --- | --- | --- |
|  | **Works** |  |
|  | **CIDA General Specifications:** |  |
| 1 | Civil Engineering Construction | **6a** |

* *Add the relevant list of NWSDB Standard Specifications to the document****from below list according to the requirement of the work.***
* *Add the all Specifications selected from this list to the document* ***from NWSDB web (under the “Restrict inks”) when preparing the Bidding Document.***

|  |  |  |  |
| --- | --- | --- | --- |
| **NWSDB Standard Specifications List** | | | |
|  | **The sections of each specification come under CIDA General Specifications given above shall be superseded from the followingNWSDB Standard Specifications.** |  | |
| **No.** | **Name of Specification** | **Page No.** | |
|  | **Works** |  | |
| 2 | Trench Excavation, Backfilling and Road Reinstatement for Pipe Laying | **6b** | |
| 3 | Service Connection | **6c** | |
| 4 | Trenchless Pipe Installation | **6d** | |
| 5 | Instruction For Prevention Of Mosquito Breeding | **6e** | |
| 6 | Surveying Works | **6f** | |
| 7 | Timber Works | **6g** | |
| 8 | Pipeline Warning Tape | **6bc** | |
| 9 | Mastic Materials & Installation | **6bj** | |
| 10 | Pressure Testing for DI, PE &PVC Pipes | **6bk** | |
| 11 | As-built information in GIS format | **6bf** | |
|  | **Pipes, Valves & Accessories** |  | |
| 1 | DI Pipes and Fittings | **6h** | |
| 2 | DI pipes, fittings, specials and accessories for Sewerage Applications | **6bb** | |
| 3 | PVC Pipes and Fittings | **6i** | |
| 4 | PE Pipes and Fittings for Water Supply | **6j** | |
| 5 | PE pipes, fittings, specials and accessories for Sewerage Applications | **6bd** | |
| 6 | Steel Pipes and Fittings | **6k** | |
| 7 | Galvanized Pipes & Fittings | **6l** | |
| 8 | Valve, Hydrants, Surface Boxes & Manhole Covers | **6m** | |
| 9 | Mechanical Couplings, Repair Clamps and Flange Adaptors | **6n** | |
| 10 | Clamp Saddles | **6o** | |
| 11 | Ball Valves | **6p** | |
| 12 | Stop Valves | **6q** | |
| 13 | Repair Clamps | **6r** | |
| 14 | Penstocks & Headstocks | **6w** | |
| 15 | Supply and Installation of power surge protection devices | **6ai** | |
| 16 | PVC/ ABS/ Stainless Steel/ Bronze/ DI/ CI Valves, Shear gates, Slide gates and Manhole Covers & Frames of Sewerage Application | **6x** | |
| 17 | PVC Pipes for Sewerage | **6bi** | |
| 18 | PP Clamp Saddles | **6bf** | |
| **No.** | **Name of Specification** | **Page No.** |
| 19 | Surge vessels & Air compressor | **6aj** | |
|  | **Water Pumps** |  | |
| 1 | Motor Driven Self lubricated vertical Turbine pumping sets and Accessories | **6y** | |
| 2 | Horizontal shaft driven double suction pumping sets and accessories | **6aa** | |
| 3 | End Section vertical delivery Back pull-out centrifugal Pumping sets and Accessories | **6ab** | |
| 4 | Vertical Shaft driven double suction centrifugal pumping sets and Accessories | **6ac** | |
| 5 | Vertically/ Horizontally mounted in line booster pumping sets & Accessories | **6ad** | |
| 6 | Bore hole type submersible pumping sets and Accessories | **6z** | |
|  | **Sewer Pumps** |  | |
| 1 | Supply & Installation of Auto Coupling type wet well electrically driven submersible pumps and accessories (Wet well below 30 kw) | **6ae** | |
| 2 | Wet well Above 30 kw | **6af** | |
| 3 | Dry well below 30 kw | **6ag** | |
| 4 | Dry well Above 30 kw | **6ah** | |
|  | **Air Condition & Lighting Protection** |  | |
| 1 | Air Conditioner - Window type | **6ap** | |
| 2 | Air Conditioner - Split & Cassette Type | **6aq** | |
| 3 | Lighting protection system | **6ar** | |
|  | **Office Equipments** |  | |
| 1 | Computer | **6ax** | |
| 2 | Photo Copier | **6ay** | |
|  | **Miscellaneous** |  | |
| 1 | Hiring of Vehicle (English) | **6az** | |
| 2 | Hiring of Vehicle (Sinhala) | **6bm** | |
| 3 | Janitorial works | **6ba** | |
| 4 | Water Bowsers | **6be** | |
| 5 | Pontoon Intake | **6bg** | |
|  | **Water/Wastewater/Flow Meters and Gun Metal Ferule** |  | |
| 1 | Waltman Type Bulk Water Meters | **6t** | |
| 2 | Flow Meters and Waste Meters | **6u** | |
| 3 | Weir type Wastewater Flow Meters | **6bn** | |
| 4 | Portable type Wastewater Flow Meters | **6bo** | |
| 5 | Electromagnetic Type Wastewater Flow Meters | **6bbm** | |
| 6 | Water Meters & Spare Parts | **6s** | |
| 7 | Gun Metal Ferrules | **6v** | |
|  | **Chlorinators and related equipments** |  | |
| 1 | Gas Chlorinators and Accessories | **6ak** | |
| 2 | Lime and Alum/ Poly Aluminium chloride dosing packages | **6al** | |
| 3 | Hosting equipment and accessories | **6am** | |
| 4 | Water sampling collection system | **6an** | |
| 5 | Laboratory equipment | **6ao** | |
| 6 | Granular Activated Carbon | **6bh** | |

Note:

1. Bidder shall submit a detailed technical comparison (Specified Vs Supplied) if their products deviate from performance criteria manifested in the Specifications.

**7. SCHEDULE OF PARTICULARS**

**SCHEDULE OF PARTICULARS**

(Information to be provided by the Bidder for the supply items only after reference to the Specifications, Bills of Quantities and Appendices).

Note : Where pamphlets, catalogues and drawings are accompany with the bid, their reference should be quoted in the Schedule of Particulars.

Copies of the Technical Literature with regard to pipes, specials and fittings shall be submitted to establish conformity with BS, BS EN or ISO standards along with ISO 9001:2015Quality Management System Certification, together with the offer.

1. PVC pipes and Fittings.
2. Ductile Iron (DI);

2.1 Pipes & Fittings.

2.2 Mechanical Couplings & Flange Adaptors.

2.3 Manhole Covers & Surface boxes.

1. DI Valves and Accessories:

3.1 Gate/Sluice Valves.

3.2 Butterfly Valves.

3.3 Air Valve.

3.4 Check Valves.

3.5 Pressure Reducing Valves.

3.6 Pressure Sustaining/Relief Valves.

3.7 Flow Control Valves.

3.8 Altitude Valves.

3.9 Ball Float Valves.

3.10 Flap Valves.

3.11 Fire Hydrants.

3.12 Fire Hydrants - Dry Barrel Type.

1. Polyethylene (PE) pipes and fittings.
2. Galvanized Iron pipes and fittings.
3. Pumps.

6.1 Motor Driven Self Lubricated Vertical Turbine Pumping Sets and Accessories.

6.2 Borehole Type Submersible Pumping Sets and Accessories.

6.3 Horizontal Shaft Driven Double Suction Pumping Sets and Accessories.

6.4 End Suction Vertical Delivery Back Pull – Out Centrifugal Pumping Sets and Accessories.

6.5 Vertical Shaft Driven Double Suction Centrifugal Pumping Sets and Accessories.

6.6 Vertically/Horizontally Mounted In Line Booster Pumping Sets and Accessories.

1. Joint Protection Material.
2. Gas Chlorinators and Accessories.

**SCHEDULE OF PARTICULARS**

Revised on 20-11-2020

**1. PVC PIPES AND FITTINGS**

1.0 Name of the Manufacturer : ……………………………………..

1.1 Address of Manufacturer's Factory : Pipes –

Fittings -

1.2 Standards to which pipes and fittings conform: Pipes –

Fittings -

Is Certificate of relevant Standards Institute Provided?

* 1. Whether fittings (except bends) provided are:

a) Moulded ……………..

b) Fabricated ………………

* 1. Whether bends provided are:

a) Single cast ……………..

b) Fabricated ………………

1.5 Year of manufacture of pipes &fittings :

1.6 Quantity of solvent cement required per joint :

|  |  |
| --- | --- |
| **Pipe Dia** | Quantity of solvent cement  required per joint |
| 15 mm  …………  …………  63 mm  ………… | ………………….  ………………….  ………………….  ………………….  …………………. |

1.7 For PVC pipes and fittings of dia. 90 mm or greater :

* + 1. Joint Rings for mechanical joints :

Material :

Class :

Standard to which it conforms :

* + 1. Make of Lubricant for mechanical joints for safety in water supply :

To confirm whether it complies :

Quantity of lubricant required per joint

|  |  |
| --- | --- |
| **Pipe Dia** | Quantity of lubricant required |
| 225 mm.  160 mm  110 mm  90 mm | ………………….  ………………….  ………………….  ……….…………. |

1.7.3 Vacuum to which the mechanical joint will hold (As per the test in

APP. G of BS 4346 part 2):

1.7.4 Indicate whether the manufacturing process of the items offered comply with ISO 9001:2015 Quality Management System Standard.

1.8 **FLANGES**

1.8.0 Name of the Manufacturer : ……………………………………..

1.8.1 Address of Manufacturer :……………………………………..

1.8.2 Standard to which flanges conform :……………………………………..

1.8.3 (a) Standard to which Gaskets conform :

(b) Specify whether gaskets are inside bolt circle type or

full face type :

1.8.4 Details of flanges :

|  |  |
| --- | --- |
| **Pipe Dia** | Bolts & Nuts for one set  Dia. Length No. off |
| 225 mm.  160 mm  110 mm  90 mm  63 mm | ………………….  ………………….  ………………….  ……….………….  ………………….. |

1.8.5 Material : Gaskets :

Nuts &Bolts :

1.9 **SADDLE STRAPS**

1.9.0 Name of the Manufacturer : ………………………………..

1.9.1 Country of Manufacture : ………………………………….

1.9.2 Manufacturer’s Address : …………………………………..

1.9.3 Make :

Standard to which saddle straps conform : ……………………………..

Is certificate of relevant Standard Institutions Provided : ……………….

1.9.4 Material - Straps :

Joint Rings :

Bolts &Nuts :

1.9.5 Indicate whether the manufacturing process of the items offered comply with

ISO 9001:2015 Quality Management System Standard ………….

Is certificate of relevant Standard Institutions Provided: ……………….

**2.** **DUCTILE IRON (DI)**

* 1. **PIPES AND FITTINGS**

2.1.0 Name of the Manufacturer : (1) Pipes …………………………………………………

(2) Fittings…………………………………………………

2.1.1 Country of manufacture: (1) Pipes ……………………………………………………

(2) Fittings…………………………………………………

* + 1. Manufacturers’ Address: (1) Pipes ………………………………………..

…………………………………………………….

(2) Fittings ………………………………………

……………………………………………………

2.1.3 2.2.3.1 Standards to which pipes and fittings conform:

(1) Pipes ………………………………

(2) Fittings ……………………………

* + - 1. No of Shipments proposed by the Contractor:……………………..

2.1.4 Is Certificate for conformity to standards from relevant standards Institution provided

to the factory/factories : (1) Pipes ………………….

(2) Fittings ………………..

* + 1. Is ISO 9001:2015 Quality Management System Certificate provided to the factory/factories : (1) Pipes ……………………

(2) Fittings …………………

* + 1. Class of Pipes and fittings :

Class

S/S Pipes ………………..

Pipes with integral casted flanges ………………..

Pipes with factory welded flanges ………………..

Pipes with screwed flanges ……………….

Tees …………………

Bends & Other Fittings ……………….

2.1.7 Whether factory welded flange pipes tested for each flanged joint? ...............

2.1.8 Whether Pipes & Fittings are from same Manufacturer ?…………..

2.1.9 Gaskets, Joint rings and Lubricant :

2.1.10 Standard to which Gaskets, Joint rings conforms: ……………………………

2.1.11 Is Certificate for conformity to standards from relevant standards Institution provided

to the factory/factories : ………………

2.1.12 Make of Gaskets, Joint rings and Lubricant :

Make

Gaskets ………………

Joint rings ………………

Lubricant ………………

2.1.13 Material of Gaskets, Joint rings and Lubricant :

Gaskets ………………

Joint rings ………………

Lubricant ………………

2.1.14 Hardness range of Gaskets and Joint Rings

Hardness Range (1RHD)

Gaskets ……………………

Joint Rings ……………………

2.1.15 Standard to which Flanges conform : ………………………………

2.1.16 Whether Flanges are integrally casted or Factory welded ? …………………………

2.1.17 Type of external coating and grade : …………………………………………………

2.1.18 Standard to which external coating conform: …………………………………………

2.1.19 Type of internal coating/lining and standard: ………………………………………..

2.1.20 Standard to which nuts and bolts, washers conform and the type of material:

Standard …………………………………..

Material ……………………………………

2.1.21 Standard to which polyethylene sleeving conform and the colour

Standard ………………………….

Colour …………………………...

2.1.22 Quantity of joint protection materials required per flanged joint as per manufacturer’s

recommendation

Diameter Mastic Paste Tape uPVC/Polyethylene outer

(mm) /Primer (litres) (kg) (m) wrapping (m)

150 …………….. ………….. ………….. …………………….

200 ……………. …………. …………. …………………….

………. ……………. …………. …………. …………………….

……… ……………. ………… …………. …………………….

2.1.23 Port of shipment : …………………………………………………………………….

2.1.24 Packing and protection in transit : ………………………………….

2.1.25 Time of delivery: …………………………………………………….

2.1.26 Reference of the catalogues, technical literature, drawing provided with the Bid: …....

2.1.27 Name and address of the Supplier’s accredited agent in Sri Lanka: …………………..

2.1.28 Deviations from specifications (if any): ……………………………………………….

**2.2 MECHANICAL COUPLINGS AND FLANGE ADAPTERS**

2.2.0 Name of the Manufacturer : ………………………

2.2.1 Country of manufacture :………………………….

2.2.2 Manufacturers’ Address:……………………………………………………

2.2.3 2.2.3.1 Make, Material, Hardness Range and Standard :

Make Material Hardness Standard Date of

Range Manufacture

Sleeve: …………. ……….. N/A .………… ………………

Flange : …………. ……….. N/A ………… ………………

Gaskets: …………. ………. …………. ………… ………………

Joint Rings: …………. ……….. ………… ………… ………………

* + - 1. No of Shipments proposed by the Contractor: ……………………………

2.2.4 Type of external coating and thickness: ………………………………………………

2.2.5 Type of internal coating and lining: ……………………………………………………

2.2.6 Time of Delivery : ……………………………………………………………………

2.2.7 Port of Shipment: …………………………………………………………………….

2.2.8 Reference of the catalogues, technical literature, drawings provided with the Bid :

2.2.9 Name and Address of supplier’s agent (if any) in Sri Lanka ………………………..

2.2.10 Deviations from Specifications (if any) : ………………………………………………

2.2.11 Is ISO 9001 :2015 Quality Management System Certificate provided to the Factory ………………..

**2.3 SURFACE BOXES AND MANHOLE COVERS**

2.3.0 Name of the Manufacturer : ……………………………

* + 1. Country of Manufacture :…………………………….

2.3.2 Manufacturer’s Address :………………………………………………….

2.3.3 Material :………………………………………

2.3.4 Class, Make, Standard and Date of Manufacture

Class Make Standard Date of Manufacture

Manhole Covers : ……… ……….. ………… ………………

Surface Boxes : ………. ………. …………. …………………

2.3.5 Coating :…………………..

2.3.6 Lifting arrangements:

Manhole Covers :………………

Surface Boxes :……………………

2.3.7 Name and Address of Supplier’s agent (if any) in Sri Lanka :……………………….

2.3.8 Port of Shipment:……………………………

2.3.9 Time of Delivery of Material at port of shipment:………………………….

2.3.10 Deviations from Specification (if any):…………………………..

**3.** **DI/CI VALVES AND ACCESSORIES**

**3.1** **GATE/SLUICE VALVES**

3.1.0 Name of the Manufacturer : ………………………

3.1.1 Country of Manufacture : …………………………………………..

3.1.2 Manufacturer’s Address: …………………………………

3.1.3 Date of Manufacture: ………………………………………………..

3.1.4 3.1.4.1 Standards to which valves conform …………………………………

3.1.4.2 No of Shipments proposed by the Contractor : ………………………

3.1.5 Is certificate for conformity to standards from relevant Standards Institution provided to the factory/ factories …………………………….

3.1.6 Is ISO 9001 : 2015 Quality Management System Certificate provided to the factory/ Factories ……………………….

3.1.7 Material

Body : ………………………………………………………

Spindle : …………………………………………………….

Metal faces and seal: ………………………………………….

3.1.8 Length between flanges (mm):…………..

3.1.9 End flanges - Pressure Rating: …………………………

Dimensions (mm): ………………………

Bolt Circle dia (mm): …………………………

3.1.10 Whether gearing arrangement Provided : ……………………….

Gear Ratio

Unbalanced head: ………………..bars

Seat test pressure: ………………. bars

Body test pressure: ……………… bars

3.1.11 Internal protection : ………………………………………………………..

3.1.12 External protective finish: ………………………………………………………..

3.1.13 Weight of the valve …………….. kgs ………………………………

3.1.14 Packing and protection of valves in transit: ……………………………

3.1.15 Reference of the catalogues, technical literature and drawing provided with the Bid:

3.1.16 Port of shipment: ………………………………………..

3.1.17 Time of delivery of valves at the port of shipment: ……………………………………

3.1.18 Name and Address of Supplier’s accredited agent in Sri Lanka: ………………

3.1.19 Deviations from Specifications (if any):

**3.2** **BUTTERFLY VALVES**

3.2.0 Name of the Manufacturer : ………………………

3.2.1 Country of Manufacture ……………………..

3.2.2 Manufacturer’s Address: …………………………………………………

.…………………………………………………...

3.2.3 Date of Manufacture:…………………….

3.2.4 3.2.4.1 Standard to which valves conform: …………………………………….

3.2.4.2 No of Shipments proposed by the Contractor : ……………………….

3.2.5 Is certificate for conformity to Standards from relevant Standard Institution provided to the factory/ factories. ………………….

3.2.6 Is ISO 9001 : 2015 Quality Management System Certificate provided to the factory/ factories. ………………………………….

3.2.7 Material

Valve body:

Valve disc:

Valve seat:

Shaft:

Shaft seals:

3.2.8 Valve body : Whether Rubber lined ? if so material : …………………….

3.2.8.1 Standards to which gaskets conforms :………………………………

3.2.8.2 Is certificate for conformity to Standards from relevant Standard Institution provided to gaskets :. ………………….

3.2.8.3 Face to face dimensions of the valves (mm) :…………….

3.2.8.4 End Flanges

Pressure rating:…………

Dimensions (mm):…………..

Bolt circle dia (mm):………………….

3.2.8.5 Standard to which nuts and bolts conform and the material:……………………..

3.2.8.6 The type of operating gear for the valve:……………………………..

3.2.8.7 Operating method of the valve (hand wheel/Tee key):…………………………….

3.2.8.8 Whether Gearing arrangement is provided : ……………….

Gear ratio of gearing:……………

Unbalanced head: ……………. Bars

Seat test pressure : …………………… Bars

Body test pressure ……………. Bars

3.2.8.9 Internal protective finish:

Material : ……………….

Thickness : ……………..

3.2.8.10 External protective finish:

Material : ………………….

Thickness : …………………

3.2.8.11 Weight of the valve: …………………. Kg

3.2.8.12 Packing and Protection of valves in transit: …………..

3.2.8.13 Reference of the catalogues, technical literature and drawings provided with the Bid:

……………………………………………………………………………………

3.2.8.14 Port of shipment: .………………………

3.3.8.15 Time of delivery of valves at port of shipment: ……………..

3.2.8.16 Name and Address of supplier’s agent (if any) in Sri Lanka: ………………………

…………………………………………………………………………………………

3.2.8.17 Deviations from specifications (if any) :…………………………….

**3.3** **AIR VALVES**

3.3.0 Name of the Manufacturer : ………………………

3.3.1 Country of Manufacture : …………………………

3.3.2 Manufacturer’s Address: ……………………………………………………

………………………………………………………………………………………….

3.3.3 Date of Manufacture: ………………….

3.3.4 Is ISO 9001 :2015 Quality Management System Certificate provided to the factory / Factories : …………………………………….

3.3.5 Type of Valve (single orifice/double orifice): ………………………………….

3.3.6 For large orifice air valves;

|  |  |
| --- | --- |
| Orifice dia  …………… mm | Minimum air outflow at 0.5 bar differential pressure ………………… m3 /min |
| Minimum air inflow at 0.2 bar differential pressure ………………… m3 /min |

3.3.7 For large orifice and Double orifice air valves; whether isolating valve has mitre

gearing for making it Tee key operated: ………………….

3.3.8 Make of material of Ball (Stainless Steel or Plastic):………………………….

3.3.9 Flanges (if applicable)

Pressure rating : …………..

Standard :………………….

Dimensions (mm) :………..

Bolt circle dia (mm):………

3.3.10 Seat test pressure : …………………. bars

3.3.11 Body test pressure : ………………… bars

3.3.12 Internal protective finish: ………….

3.3.13 External protective finish:………….

3.3.14 Weight of the valve :…………………… kg

3.3.15 Packing and protection of valves in transit: ………………..

3.3.16 Reference of the catalogues, technical literature and drawings provided with the Bid:

………………………………………………………………………………………..

3.3.17 Port of shipment: …………………………………….

3.3.18 Time of delivery of valves at port of shipment:…………………………

3.3.19 Name and Address of supplier’s agent (if any) in Sri Lanka: ………………………...

…………………………………………………………………………………………

3.3.20 Deviations from specifications (if any):………………………….

**3.4 CHECK VALVES**

3.4.0 Name of the Manufacturer : ………………………

3.4.1 Country of Manufacture : ………………………….

3.4.2 Manufacturer’s Address: …………………………………………………

…………………………………………………………………………………….

3.4.3 Date of Manufacture:………………………..

3.4.4 Standard to which valves conform: …………………………………………..

3.4.5 Is ISO 9001 :2015 Quality Management System provided to the factory/

factories:………

3.4.6 3.4.6.1 Is product conformity certificate from relevant Standard Institution provided

to the Factory / factories :……………………

3.4.6.2 No of Shipments proposed by the Contractor: ………………………………

3.4.7 Is this Vertical Installation or Horizontal Installation :……………………..

3.4.8 Is this non Slam :………….

3.4.9 Is this Spring loaded : …………..

3.4.10 Material

Valve body: ……………….

Hinge pin and bushes:…………..

Disc:……………

Disc encapsulating material:…………..

3.4.11 End Flanges

Pressure rating:………….

Dimensions (mm):………

Bolt circle dia (mm):……..

Standard :…………………..

3.4.12 Face to face dimensions of the valve (mm) :…………

3.4.13 Seat test pressure : …………………… bars

3.4.14 Body test pressure ……………. bars

3.4.15 Internal protective finish:………………

3.4.16 External protective finish:………………..

3.4.17 Weight of the valve: …………………. Kg

3.4.18 Packing and Protection of valves in transit:………………….

3.4.19 Reference of the catalogues, technical literature and drawings provided with the Bid:

……………………………………………………..

3.4.20 Port of shipment:…………………..

3.4.21 Time of delivery of valves at port of shipment:……………………….

3.4.22 Name and Address of supplier’s agent (if any) in Sri Lanka:………..

3.4.23 Deviations from specifications (if any):…………….

**3.5 PRESSURE REDUCING VALVES**

3.5.0 Name of the Manufacturer : ………………………

3.5.1 Country of Manufacture : ……………………………….

3.5.2 Manufacturer’s Address: ……………………………………………...

…………………………………………………………………………………….

3.5.3 Date of Manufacture:…………….

3.5.4 Is ISO 9001:2015 Quality Management System provided to the factory/

factories: ………...………………………………………….

3.5.5 3.5.5.1 Is product conformity certificate from relevant Standard Institution provided to the factory/ factories:……………………

3.5.5.2 No of Shipments proposed by the Contractor: ………………………………

3.5.6 Material

Main valve:……………..

Body:……………………

Internal valve:…………….

Indicator rod:……………..

Relay Valve

Body:…………………..

Spindle:…………………..

Diaphragm:………………….

Spring:……………………..

3.5.7 Length between flanges (mm):…………

3.5.8 End Flanges

Pressure rating:……………

Dimensions (mm):………..

Bolt circle dia (mm):…………

Standard :………………………

* + 1. Minimum running pressure difference: …………………… bars
    2. Minimum control pressure ……………. Bars
    3. Internal protective finish:………………..
    4. External protective finish:………………….
    5. Weight of the valve: …………………. kg
    6. Packing and Protection of valves in transit:…………

3.5.15 Reference of the catalogues, technical literature and drawings provided with the Bid: …...……………………………………………………………………..

* + 1. Port of shipment:………………………..
    2. Time of delivery of valves at port of shipment:…………………..
    3. Name and Address of supplier’s agent (if any) in Sri Lanka:…………………………
    4. Deviations from specifications (if any):………………………………….
  1. **PRESSURE SUSTAINING/RELIEF VALVES**

3.6.0 Name of the Manufacturer : ………………………

* + 1. Country of Manufacture :………………………………………………..
    2. Manufacturer’s Address:………………………………………………
    3. Date of Manufacture:………………………..
    4. Is ISO 9001 :2015 Quality Management System provided to the factory/ factories …………………………
    5. 3.6.5.1 Is product conformity certificate from relevant Standard Institution provided to the factory/ factories:……………………

3.6.5.2 No of Shipments proposed by the Contractor : …………………………….

* + 1. Material

Main valve:…………..

Body:……………………

Internal valve:…………

Indicator rod:……………..

Relay Valve

Body:…………………..

Spindle:…………………..

Diaphragm:………………

Spring:…………………….

* + 1. Length between flanges (mm):…………
    2. End Flanges

Pressure rating:………………

Dimensions (mm):………………..

Bolt circle dia (mm):…………….

Standard :……………………….

* + 1. Internal protective finish:………………
    2. External protective finish:………………..
    3. Weight of the valve: …………………. kg
    4. Packing and Protection of valves in transit:………………….
    5. Reference of the catalogues, technical literature and drawings provided with the Bid:

………………………………………………………………

* + 1. Port of shipment:…………………………
    2. Time of delivery of valves at port of shipment:………………………….
    3. Name and Address of supplier’s agent (if any) in Sri Lanka:…………………………
    4. Deviations from specifications (if any):………………..
  1. **FLOW CONTROL VALVES**

3.7.0 Name of the Manufacturer : ………………………

* + 1. Country of Manufacture :……………………………
    2. Manufacturer’s Address:…………………….
    3. Date of Manufacture:…………………………
    4. Is ISO 9001 :2015 Quality Management System provided to the factory/ factories: …………………………

* + 1. 3.7.5.1 Is Product Conformity Certificate from relevant Standard Institution provided to the factory/ factories:……………………

3.7.5.2 No or Shipments proposed by the Contractor : …………………………….

* + 1. Material

Main valve:………………….

Body:………………………..

Internal valve:………………..

Indicator rod:………………….

Relay Valve

Body:…………………..

Spindle:………………..

Diaphragm:……………

Spring:…………………

* + 1. Length between flanges (mm):……………………..
    2. End Flanges

Pressure rating:………………

Dimensions (mm):……………

Bolt circle dia (mm):……………

Standard :………………………

* + 1. Minimum flow :…………………….
    2. Constant flow:………………….
    3. Internal protective finish:…………….
    4. External protective finish:………………….
    5. Weight of the valve: …………………. kg
    6. Packing and Protection of valves in transit:………………………
    7. Reference of the catalogues, technical literature and drawings provided with the Bid:
    8. Port of shipment:…………………….
    9. Time of delivery of valves at port of shipment:…………………..
    10. Name and Address of supplier’s agent (if any) in Sri Lanka:………………….
    11. Deviations from specifications (if any):……………………………………………..

**3.8 ALTITUDE VALVES**

3.8.0 Name of the Manufacturer : ………………………

3.8.1 Country of Manufacture :…………………

3.8.2 Manufacturer’s Address:…………………………………………………

…………………………………………………………………………………………

3.8.3 Date of Manufacture:………………………..

3.8.4 Is ISO 9001 :2015 Quality Management System provided to the factory/

factories ……………………

3.8.5 3.8.5.1 Is Product Conformity Certificate from relevant Standard Institution provided

to the factory/ factories……………………

3.8.5.2 No of Shipments proposed by the Contractor : ………………………………

* + 1. Material

Main valve:…………..

Body:……………………

Internal valve:…………….

Indicator rod:………………

Relay Valve

Body:……………..

Spindle:……………

Diaphragm:………….

Spring:………………..

* + 1. Length between flanges (mm):……………
    2. End Flanges

Pressure rating:……………….

Dimensions (mm):…………….

Bolt circle dia (mm):…………

Standard :…………………………

* + 1. Minimum head required at valve inlet:…………………
    2. Internal protective finish:…………………
    3. External protective finish:………………….
    4. Weight of the valve: …………………. kg
    5. Packing and Protection of valves in transit:…………………….
    6. Reference of the catalogues, technical literature and drawings provided with the Bid:

…………………………………………………………..

* + 1. Port of shipment:…………………………
    2. Time of delivery of valves at port of shipment:…………………….
    3. Name and Address of supplier’s agent (if any) in Sri Lanka:………………………
    4. Deviations from specifications (if any):…………………………………

**3.9 BALL FLOAT VALVES**

3.9.0Name of the Manufacturer : ………………………

3.9.1 Country of Manufacture :…………………………….

3.9.2 Manufacturer’s address : ………………………………………………

3.9.3 Date of Manufacture:……………………..

3.9.4 Is ISO 9001 :2015 Quality Management System provided to the factory/

factories ……………………….

3.9.5 3.9.5.1 Is product conformity certificate from relevant Standard Institution provided

to the factory/ factories……………………

3.9.5.2 No of Shipments proposed by the Contractor : ………………………………

* + 1. Body test pressure:……………….
    2. End Flanges

Pressure rating:…………………..

Dimensions (mm):………………..

Bolt circle dia (mm):……………..

Standard:…………………………………

* + 1. Material

Valve Body:……………………

Float:………………………….

Lever and links:…………………..

* + 1. Body test pressure: ……………… bars
    2. Close assembly test pressure ………………… bars
    3. Weight of the valve: …………………. kg
    4. Packing and Protection of valves in transit:……………………………….
    5. Reference of the catalogues, technical literature and drawings provided with the Bid:

……………………………………………..

* + 1. Port of shipment:………………………………
    2. Time of delivery of valves at port of shipment:………………………….
    3. Name and Address of supplier’s agent (if any) in Sri Lanka:………………………..
    4. Deviations from specifications (if any):………………………………..
  1. **FLAP VALVES**

3.10.0 Name of the Manufacturer : ………………………

* + 1. Country of Manufacture :……………………….
    2. Manufacturer’s Address:……………………………………………………
    3. Date of Manufacture:…………………………

3.10.4 Is ISO 9001 :2015 Quality Management System provided to the factory/ factories ……………………

3.10.5 3.10.5.1 Is product conformity certificate from relevant Standard Institution provided to the factory/ factories……………………

3.10.5.2 No of Shipments proposed by the Contractor : …………………………

* + 1. Material

Frame and door:…………………

Sealing:………………..

Hinge pin:…………….

Links:………………….

* + 1. Flanges

Pressure rating:………

Dimensions (mm):………….

Bolt circle dia (mm):…………..

Standard :……………………

* + 1. Weight of the valve: …………………. kg
    2. Packing and Protection of valves in transit:………………
    3. Reference of the catalogues, technical literature and drawings provided with the

Bid:…………………………..

* + 1. Port of shipment:…………………………
    2. Time of delivery of valves at port of shipment:…………………….
    3. Name and Address of supplier’s agent (if any) in Sri Lanka:………………….
    4. Deviations from specifications (if any)…………………………..
  1. **FIRE HYDRANTS**
     1. Name of the Manufacturer : ………………………
     2. Country of Origin:…………………………
     3. Manufacturer’s Address:………………………………
     4. Is this Pillar type or Underground type: ……………
     5. Screw down type

3.11.5 Is ISO 9001 :2015 Quality Management System provided to the factory/ factories: …………………………………….

* + 1. 3.11.6.1 Is product conformity certificate from relevant Standard Institution provided to the factory/ factories…………………………….

3.11.6.2 No of Shipments proposed by the Contractor : …………………………

* + 1. Date of Manufacture:…………………
    2. Standard to which it conform:……………….
    3. Inlet Flanges

Pressure rating:……………

Dimensions (mm):……………

Bolt circle dia(mm):……………….

Standard:……………………….

Standard of facing and drilling:…………………………..

* + 1. The direction of closing of the hydrant valve:……………..
    2. Body test pressure:……………. Bars
    3. Valve and seat test pressure : ……………… bars
    4. Internal protective finish:………………
    5. External protective finish:……………………
    6. Weight of the hydrant: ……………………… kg
    7. Packing and protection of hydrants in transit:………………
    8. Reference of the catalogues, technical literature and drawings provided with the Bid:.....................................................................................................................................
    9. Time of delivery of hydrants at port of shipment:……………………
    10. Name and address of supplier’s agent (if any) in Sri Lanka:…………………………
    11. Deviations from specifications (if any):………………………
  1. **Fire Hydrants - Dry Barrel Type**

3.12.0 Name of the Manufacturer : ………………………

* + 1. Country of Manufacture :……………………
    2. Manufacturer’s Address:………………………………………………
    3. Date of Manufacture:……………………………….
    4. Is ISO 9001 :2015 Quality Management System provided to the factory/ factories ………………………………………………………………………………
    5. 3.12.5.1 Is product conformity certificate from relevant Standard Institution provided to the factory/ factories……………………

3.12.5.2 No of Shipments proposed by the Contractor : …………………………

* + 1. Standard to which it conform:……………………….
    2. Burried length of hydrant: ……………….. m
    3. Number of outlet nozzles nominal diameter and standard:

No. of outlet nozzles:………………….

Nominal diameter (mm):……………………

Standard:……………………..

* + 1. Inlet Flange

Pressure rating:………………..

Dimensions (mm):……………

Bolt circle dia(mm):………….

Standard:………………………

* + 1. Material, Hardness range and standard

Material Hardness range Standard

Gaskets: ……………….… ………………. …………….

Nuts and Bolts: …………….. ………………… …………..

* + 1. The direction of closing of the hydrant valve:………………………………….
    2. Colour of the finish paint above ground line:
    3. Weight of the hydrant: ……………………… kg
    4. Packing and protection of hydrants in transit:
    5. Reference of the catalogues, technical literature and drawings provided with the tender:
    6. Port of shipment:
    7. Time of delivery of hydrants at port of shipment:
    8. Name and address of supplier’s agent (if any) in Sri Lanka:
    9. Deviations from specifications (if any):

**4. PE PIPES AND FITTINGS**

4.0 Name of the Manufacturer : (1) Pipes ……………………………………………………

(2) Fittings…………………………………………………

* 1. No of shipments proposed by the Contractor : …………………………………
  2. Country of Manufacture:

Pipes: ……………………….

Fittings: ………………………

* 1. Manufacturer’s Address and the intended Date of Manufacture:

**Address** **Intended Date of Manufacture**

Pipes: ………………….. ………………………………

Fittings: …………………. ………………………………

* 1. Colour of the product :

Pipes: ……………………….

Fittings: ………………………

* 1. Port of Shipment :
  2. 4.6.1 Standards to which pipes and fittings conform:

Pipes: ……………………….

Fittings: ………………………

4.6.2 No of Shipments proposed by the Contrcator : ……………………………

* 1. Is Certificate of product conformity from a relevant standards Institution provided :

Pipes ………………….. (attach a copy)

Fittings ………………. (attach a copy)

* 1. Nominal sizes and pressure ratings of Pipes & Fittings:

**Nominal Dia** **Pressure Rating SDR**

Pipes: ……………. ………………. ………

Fittings: …………… ……………….. ………

* 1. Make of compression fittings, Gaskets/ rubber rings, inserts, clamps

**Make/material** **IntendedDate of Manufacture**

**Body of Compression fittings …………………. ……………………..**

**Inserts ………………….. ……………………..**

**Rubber ring/Gasket ………………….. ……………………..**

* 1. Characteristics of PE compound as granules

1. Compound Density : …………………
2. Carbon black content

(black compound % by mass) …………

1. Carbon black dispersion

(black compound specify the grade range) ……………

* 1. Mechanical characteristics

1. Hydrostatic strength at 200C
2. For pipes …………………
3. For fittings ……………….
4. Hydrostatic strength at 800C
5. For pipes …………………
6. For fittings ……………….
   1. Packing and protection in transit :

Pipes ……………. (specify in detail)

Fittings ……………… (specify in detail)

* 1. Time of delivery:

|  |  |  |
| --- | --- | --- |
|  | **FOB** | **At Site** |
| Pipes |  |  |
| Fittings |  |  |

* 1. Reference of the catalogues, technical literature, drawing provided with the tender:

Pipes : ……………………….

Fittings : ……………………

* 1. Name and address of the Supplier’s agent in Sri Lanka: …………………… ………………………………………………………………………………………………………………………….………………………………………………………………………………………………………….
  2. Whether ISO 9001 : 2015 quality assurance certificate is available for

manufacturing factory:

(i) (a) For Pipes ……………………………(i) (b) If yes, attach a copy …………

(ii) (a) For Fittings …………………………………(ii) (b) If yes, attach a copy

**5.** **GALVANIZED IRON PIPES & FITTINGS**

5.0 Name of the Manufacturer : ………………………

5.1 Country of Manufacturer : ………………………………

5.2 Address of the manufacturer : ……………………………………..

5.3 Manufacturing Process : ……………………………………..

5.4 Thickness of external galvanized coating : ……………………………………..

5.5 Protection of pipes and pipe ends in transit :

Pipes and plain ends :

Flanges :

5.6 Details of Flanges :

|  |  |  |
| --- | --- | --- |
| **Pipe Diameter** | **Bolts & Nuts**  **Dia. Length No. off** | **Material** |
| …………………  …………………  ………………… | …………………………  …………………………  ………………………… | …………………  …………………  ………………… |

Specify the standards to which the GI pipes and fittings to be supplied under this

Contract comply with :

Is certificate from relevant Institution Provided :

5.7 Specify the duty (Heavy/Medium/Light) :

5.8 Pressure rating of pipes :

5.9 Indicate whether the manufacturing process of the items offered comply with

ISO 9001:2015 Quality Management System Standard.

Is certificate from relevant Institution provided :

**6.0 PUMPS**

**6.1 MOTOR DRIVEN SELF LUBRICATED VERTICAL TURBINE PUMPING SETS AND ACCESSORIES**

**6.1.1Pump**

6.1.1.0 Name of the Manufacturer :

6.1.1.1 Make and country of origin:

6.1.1.2 Type :

6.1.1.3 Model :

6.1.1.4 Number of stages :

6.1.1.5 Speed (RPM) :

6.1.1.6 Capacity at specified head (m3/hr) :

6.1.1.7 Efficiency at duty point :

6.1.1.8 Minimum submergence required :

6.1.1.9 Pump casing materials :

6.1.1.10 Impeller material :

6.1.1.11 Pump shaft material :

6.1.1.12 Wear ring material :

6.1.1.13 Column pipe material :

6.1.1.14 Column shaft (Drive shaft) material :

6.1.1.15 Spider bush material :

6.1.1.16 Type of column pipe joint :

6.1.1.17 Type of coupling:

6.1.1.18 Type of thrust bearing:

6.1.1.19 Silt handling capacity:

6.1.1.20 Shut off head :

6.1.1.21 Max.power absorbed by the pump :

**6.1.2Motor**

6.1.2.0 Name of the Manufacturer :

6.1.2.1 Make and Country of Origin:

6.1.2.2 Model:

6.1.2.3 Type:

6.1.2.4 Nominal Supply voltage, frequency and number of phases:

6.1.2.5 Allowable voltage fluctuations:

6.1.2.6 Synchronous speed;

6.1.2.7 Full load output power:

6.1.2.8 Full load current ;

6.1.2.9 Power factor at 100% :

at 75% :

at 50% :

Of full load

6.1.2.10 Class of insulation :

6.1.2.11 Enclosure protection class (IP No.) :

6.1.2.12 Motor operation rating :

6.1.2.13 Motor Bearing No. :

1. Drive end :
2. Non drive end :

6.1.2.14 Design life of bearings :

6.1.2.15 Motor efficiency at 100% ;

at 75% :

at 50% :

6.1.2.16 Overall efficiency of pumping set at duty point :

6.1.2.17 Temperature rise after 6 hrs.at 400 V. :

**6.1.3 L.T. Panel and Starters :**

6.1.3.0 Name of the Manufacturer :

6.1.3.1 Make and country of origin :

6.3.3.2 Make of Main MCCB :

Whether earth fault trip available :

Whether adjustable thermal trip available :

6.1.3.3 Rating of Main MCCB :

6.1.3.4 Make of MCBB :

6.1.3.5 Rating of MCBB :

6.1.3.6 Make of supply voltage monitor :

Whether U/V or O/V adjustable ;

Whether supply imbalance protection available :

Whether phase reversal protection available :

6.1.3.7 Make of surge diverters :

6.1.3.8 Rated voltage of surge diverters :

6.1.3.9 Type of starter :

6.1.3.10 Make of starter :

6.1.3.11 AC3 rating of contactors :

1.

2.

3.

6.1.3.12 Make of water level switch :

6.1.3.13 Type/Operation of water level switch :

6.1.3.14 Rating of Auto Transformers (if applicable) :

**6.1.4 Cables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cables** | **Make** | **Size** | **Type** | **Material** | **Length** |
| 6.1.4.1 | CEB to change over |  |  |  |  |  |
| 6.1.4.2 | Generator to change over  (if applicable) |  |  |  |  |  |
| 6.1.4.3 | Change over to incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.1.4.4 | CEB to Incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.1.4.5 | Incoming to LT panel |  |  |  |  |  |
| 6.1.4.6 | LT panel to motor starter |  |  |  |  |  |
| 6.1.4.7 | Motor starter to motors |  |  |  |  |  |
| 6.1.4.8 | Control cables in LT panel |  |  |  |  |  |

**6.2 BOREHOLE TYPE SUBMERSIBLE PUMPING SETS AND ACCESSORIES**

**6.2.1 Pump**

6.2.1.0 Name of the Manufacturer :

6.2.1.1 Make and country of origin :

6.2.1.2 Type :

6.2.1.3 Model :

6.2.1.5 Speed (RPM) :

6.2.1.6 Capacity at specified head (m3/hr) :

6.2.1.7 Efficiency at duty point :

6.2.1.8 Number of stages :

6.2.1.9 Overall efficiency :

6.2.1.10 Pump casing materials :

6.2.1.11 Impeller material :

6.2.1.12 Pump shaft material :

6.2.1.13 Casing wearing material :

6.2.1.14 Max.external diameter of pump assembly :

6.2.1.15 Impeller wearing material :

6.2.1.16 Impeller diameter (mm) :

6.2.1.17 Max.impeller diameter (mm) :

6.2.1.18 Shut – off head (m) :

6.2.1.19 Pump bearing nos.

a) Drive end :

6.2.1.20 Designed life of pump bearings :

6.2.1.21 Power absorbed by the pump at duty point :

6.2.1.22 Max.power absorbed by the pump :

6.2.1.23 Shaft Intermediate Bearing Nos. :

6.2.1.24 Type of the Drive Shaft Bearings :

6.2.1.25 Designed life of Drive Shaft Bearings :

6.2.1.26 Critical Speed of Drive Shaft :

**6.2 .2 Motor**

6.2.2.0 Name of the Manufacturer :

6.2.2.1 Make and Country of Origin :

6.2.2.2 Model :

6.2.2.3 Type :

6.2.2.4 Nominal Supply voltage, frequency and number of phases :

6.2.2.5 Allowable voltage fluctuations :

6.2.2.6 Synchronous speed ;

6.2.2.7 Full load output power :

6.2.2.8 Full load current ;

6.2.2.9 Power factor at 100% :

at 75% :

at 50% :

Of full load

6.2.2.10 Class of insulation :

6.2.2.11 Enclosure protection class (IP No.) :

6.2.2.12 Motor operation rating :

6.2.2.13 Motor Bearing No. :

Drive end :

Non drive end :

6.2.2.14 Design life of bearings :

6.2.2.15 Motor efficiency at 100% ;

at 75% :

at 50% :

6.2.2.16 Overall efficiency of pumping set at duty point :

6.2.2.17 Temperature rise after 6 hrs.at 400 V. :

**6.2.3L.T. Panel and Starters :**

6.2.3.0 Name of the Manufacturer :

6.2.3.1 Make and country of origin :

6.2.3.2 Make of Main MCCB :

Whether earth fault trip available :

Whether adjustable thermal trip available :

6.2.3.3 Rating of Main MCCB :

6.2.3.4 Make of MCB’s :

6.2.3.5 Rating of MCB’s :

6.2.3.6 Make of supply voltage monitor :

Whether U/V or O/V adjustable ;

Whether supply imbalance protection available :

Whether phase reversal protection available :

6.2.3.7 Make of surge diverters :

6.2.3.8 Rated voltage of surge diverters :

6.2.3.9 Type of starter :

6.2.3.10 Make of starter :

6.2.3.11 AC3 rating of contactors :

1.

2.

3.

6.2.3.12 Make of water level switch :

6.2.3.13 Type/Operation of water level switch :

6.2.3.14 Rating of Auto Transformers (if applicable) :

**6.2.4. Water level guard**

6.2.4.0 Name of the Manufacturer :

6.2.4.1 Make and country of origin :

6.2.4.2 type :

**6.2.5 Cables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cables** | **Make** | **Size** | **Type** | **Material** | **Length** |
| 6.2.5.1 | CEB to change over |  |  |  |  |  |
| 6.2.5.2 | Generator to change over  (if applicable) |  |  |  |  |  |
| 6.2.5.3 | Change over to incoming MCCB(if applicable) |  |  |  |  |  |
| 6.2.5.4 | CEB to Incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.2.5.5 | Incoming to LT panel |  |  |  |  |  |
| 6.2.5.6 | LT panel to motor starter |  |  |  |  |  |
| 6.2.5.7 | Motor starter to motors |  |  |  |  |  |
| 6.2.5.8 | Control cables in LT panel |  |  |  |  |  |

**6.3 HORIZONTAL SHAFT DRIVEN DOUBLE SUCTION PUMPING SETS AND ACCESSORIES**

**6.3.1 Pump**

6.3.1.0 Name of the Manufacturer :

6.3.1.1 Make and country of origin :

6.3.1.2 Type :

6.3.1.3 Model :

6.3.1.4 Number of stages :

6.3.1.5 Speed (RPM) :

6.3.1.6 Capacity at specified head (m3/hr) :

6.3.1.7 Efficiency at duty point :

6.3.1.8 NPSH required at duty point(m) :

6.3.1.9 Safety margin required for over and above NPSHR (m) :

6.3.1.10 Pump casing materials :

6.3.1.11 Impeller material :

6.3.1.12 Pump shaft material :

6.3.1.13 Shaft sleeve material :

6.3.1.14 Casing wearing material :

6.3.1.15 Impeller wearing material :

6.3.1.16 Impeller diameter (mm) :

6.3.1.17 Max.impeller diameter (mm) :

6.3.1.18 Shut – off head (m) :

6.3.1.19 Pump bearing nos.

a) Drive end :

6.3.1.20 Designed life of pump bearings :

6.3.1.21 Power absorbed by the pump at duty point :

6.3.1.22 Max.power absorbed by the pump :

6.3.1.23 Shaft Intermediate Bearing Nos. :

6.3.1.24 Type of the Drive Shaft Bearings :

6.3.1.25 Designed life of Drive Shaft Bearings :

6.3.1.26 Critical Speed of Drive Shaft :

**6.3.2 Motor**

6.3.2.0 Name of the Manufacturer :

6.3.2.1 Make and Country of Origin :

6.3.2.2 Model :

6.3.2.3 Type :

6.3.2.4 Nominal Supply voltage, frequency and number of phases :

6.3.2.5 Allowable voltage fluctuations :

6.3.2.6 Synchronous speed ;

6.3.2.7 Full load output power :

6.3.2.8 Full load current ;

6.3.2.9 Power factor at 100% :

at 75% :

at 50% :

Of full load

6.3.2.10 Class of insulation :

6.3.2.11 Enclosure protection class (IP No.) :

6.3.2.12 Motor operation rating :

6.3.2.13 Motor Bearing No. :

Drive end :

Non drive end :

6.3.2.14 Design life of bearings :

6.3.2.15 Motor efficiency at 100% ;

at 75% :

at 50% :

6.3.2.16 Overall efficiency of pumping set at duty point :

6.3.2.17 Temperature rise after 6 hrs.at 400 V. :

**6.3.3 L.T. Panel and Starters :**

6.3.3.0 Name of the Manufacturer :

6.3.3.1 Make and country of origin :

6.3.3.2 Make of Main MCCB :

Whether earth fault trip available :

Whether adjustable thermal trip available :

6.3.3.3 Rating of Main MCCB :

6.3.3.4 Make of MCB’s :

6.3.3.5 Rating of MCB’s :

6.3.3.6 Make of supply voltage monitor :

Whether U/V or O/V adjustable ;

Whether supply imbalance protection available :

Whether phase reversal protection available :

6.3.3.7 Make of surge diverters :

6.3.3.8 Rated voltage of surge diverters :

6.3.3.9 Type of starter :

6.3.3.10 Make of starter :

6.3.3.11 AC3 rating of contactors :

1.

2.

3.

6.3.3.12 Make of water level switch :

6.3.3.13 Type/Operation of water level switch :

6.3.3.14 Rating of Auto Transformers (if applicable) :

**6.3.4. Cables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cables** | **Make** | **Size** | **Type** | **Material** | **Length** |
| 6.3.4.1 | CEB to change over |  |  |  |  |  |
| 6.3.4.2 | Generator to change over  (if applicable) |  |  |  |  |  |
| 6.3.4.3 | Change over to incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.3.4.4 | CEB to Incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.3.4.5 | Incoming to LT panel |  |  |  |  |  |
| 6.3.4.6 | LT panel to motor starter |  |  |  |  |  |
| 6.3.4.7 | Motor starter to motors |  |  |  |  |  |
| 6.3.4.8 | Control cables in LT panel |  |  |  |  |  |

**6.4 END SUCTION VERTICAL DELIVERY BACK PULL – OUT CENTRIFUGAL PUMPING SETS AND ACCESSORIES**

**6.4.1 Pump**

6.4.1.0 Name of the Manufacturer :

6.4.1.1 Make and country of origin :

6.4.1.2 Type :

6.4.1.3 Model :

6.4.1.4 Number of stages :

6.4.1.5 Speed (RPM) :

6.4.1.6 Capacity at specified head (m3/hr) :

6.4.1.7 Efficiency at duty point :

6.4.1.8 NPSH required at duty point(m) :

6.4.1.9 Safety margin required for over and above NPSHR (m) :

6.4.1.10 Pump casing materials :

6.4.1.11 Impeller material :

6.4.1.12 Pump shaft material :

6.4.1.13 Shaft sleeve material :

6.4.1.14 Casing wearing material :

6.4.1.15 Impeller wearing material :

6.4.1.16 Impeller diameter (mm) :

6.4.1.17 Max.impeller diameter (mm) :

6.4.1.18 Shut – off head (m) :

6.4.1.19 Pump bearing nos.

a) Drive end :

6.4.1.20 Designed life of pump bearings :

6.4.1.21 Power absorbed by the pump at duty point :

6.4.1.22 Max.power absorbed by the pump :

6.4.1.23 Shaft Intermediate Bearing Nos. :

6.4.1.24 Type of the Drive Shaft Bearings :

6.4.1.25 Designed life of Drive Shaft Bearings :

6.4.1.26 Critical Speed of Drive Shaft :

**6.4.2 Motor**

6.4.2.0 Name of the Manufacturer :

6.4.2.1 Make and Country of Origin :

6.4.2.2 Model :

6.4.2.3 Type :

6.4.2.4 Nominal Supply voltage, frequency and number of phases :

6.4.2.5 Allowable voltage fluctuations :

6.4.2.6 Synchronous speed ;

6.4.2.7 Full load output power :

6.4.2.8 Full load current ;

6.4.2.9 Power factor at 100% :

at 75% :

at 50% :

Of full load

6.4.2.10 Class of insulation :

6.4.2.11 Enclosure protection class (IP No.) :

6.4.2.12 Motor operation rating :

6.4.2.13 Motor Bearing No. :

Drive end :

Non drive end :

6.4.2.14 Design life of bearings :

6.4.2.15 Motor efficiency at 100% ;

at 75% :

at 50% :

6.4.2.16 Overall efficiency of pumping set at duty point :

6.4.2.17 Temperature rise after 6 hrs.at 400 V. :

**6.4.3 L.T. Panel and Starters :**

6.4.3.0 Name of the Manufacturer :

6.4.3.1 Make and country of origin :

6.4.3.2 Make of Main MCCB :

Whether earth fault trip available :

Whether adjustable thermal trip available :

6.4.3.3 Rating of Main MCCB :

6.4.3.4 Make of MCB’s :

6.4.3.5 Rating of MCB’s :

6.4.3.6 Make of supply voltage monitor :

Whether U/V or O/V adjustable ;

Whether supply imbalance protection available :

Whether phase reversal protection available :

6.4.3.7 Make of surge diverters :

6.4.3.8 Rated voltage of surge diverters :

6.4.3.9 Type of starter :

6.4.3.10 Make of starter :

6.4.3.11 AC3 rating of contactors :

1.

2.

3.

6.4.3.12 Make of water level switch :

6.4.3.13 Type/Operation of water level switch :

6.4.3.14 Rating of Auto Transformers (if applicable) :

**6.4.4 Cables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cables** | **Make** | **Size** | **Type** | **Material** | **Length** |
| 6.4.4.1 | CEB to change over |  |  |  |  |  |
| 6.4.4.2 | Generator to change over  (if applicable) |  |  |  |  |  |
| 6.4.4.3 | Change over to incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.4.4.4 | CEB to Incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.4.5.5 | Incoming to LT panel |  |  |  |  |  |
| 6.4.5.6 | LT panel to motor starter |  |  |  |  |  |
| 6.4.5.7 | Motor starter to motors |  |  |  |  |  |
| 6.4.5.8 | Control cables in LT panel |  |  |  |  |  |

**6.5 VERTICAL SHAFT DRIVEN DOUBLE SUCTION CENTRIFUGAL PUMPING SETS AND ACCESSORIES**

**6.5.1 Pump and Drive Shafts**

6.5.1.0 Name of the Manufacturer :

6.5.1.1 Make and Country of Origin:‑

6.5.1.2 Type:‑

6.5.1.3 Model:‑

6.5.1.4 Number of stages:‑

6.5.1.5 Speed (RPM):‑

6.5.1.6 Capacity at specified head (m3/hr):‑

6.5.1.7 Efficiency at duty point (%):‑

6.5.1.8 NPSH required at duty point (m) :‑

6.5.1.9 Safety margin required for over and above NPSHR (m) :-

6.5.1.10 Pump casing material:‑

6.5.1.11 Impeller material:‑

6.5.1.12 Pump shaft material:‑

6.5.1.13 Shaft sleeve material:‑

6.5.1.14 Casing wearing material :-

6.5.1.15 Impeller wearing material:-

6.5.1.16 Impeller diameter (mm):‑

6.5.1.17 Max. Impeller diameter (mm):-

6.5.1.18 Shut-off head (m):‑

6.5.1.19 Pump Bearing Nos.

a) Drive end:‑

b) Non drive end:‑

6.5.1.20 Designed life of pump bearings:-

6.5.1.21 Power absorbed by the pump at duty point :-

6.5.1.22 Max. Power absorbed by the pump :-

6.5.1.23 Make and country of origin of drive shaft:-

6.5.1.24 Length of each drive shaft:-

6.5.1.25 Drive shaft intermediate bearing Nos. :-

6.5.1.26 Type of the drive shaft bearings :-

6.5.1.27 Designed life of drive shaft bearings :-

6.5.1.28 Critical speed of drive shaft :-

6.5.1.29 Length of drive shafts :-

6.5.1.30 Total Number of drive shafts :-

**6.5.2 Motor**:‑

6.5.2.0 Name of the Manufacturer :

6.5.2.1 Make and country of origin:‑

6.5.2.2 Model:‑

6.5.2.3 Type:‑

6.5.2.4 Nominal supply voltage frequency and number of phase:‑

6.5.2.5 Allowable voltage fluctuation:‑

6.5.2.6 Synchronous speed:‑

6.5.2.7 Full load out put power:‑

6.5.2.8 Full load current:‑

6.5.2.9 Power factor at 100% :-

at 75% :-

at 50% :-

Full Load.

6.5.2.10 Class of insulation:‑

6.5.2.11 Enclosure protection class (IP No):‑

6.5.2.12 Motor operation rating :-

6.5.2.13 Motor bearing No: :‑

a) Drive end:‑

b) Non drive end:‑

6.5.2.14 Designed life of bearings :-

6.5.2.15 Motor efficiency at 100% :-

at 75% :-

at 50% :-

Full Load.

6.5.2.16 Overall efficiency of pumping set at duty point:‑

6.5.2.17 Temperature rise after 6 Hrs. at 400V :-

**6.5.3** **L.T Panel and Starters**:‑

6.5.3.0 Name of the Manufacturer :

6.5.3.1 Make and Country of Origin:‑

6.5.3.2 Make of main MCCB:‑

6.5.3.3 Indicate

Whether earth fault trip is available:-

(b) Whether adjustable thermal trip is available:-

6.5.3.4 Rating of Main MCCB:-

6.5.3.5 Rating of starter MCCB :-

6.5.3.6 Make of MCB’s :-

6.5.3.7 Rating’s of MCBs :-

6.5.3.8 Make of supply voltage monitor :-

6.5.3.9 Indicate whether U/V or O/V and adjustable :-

6.5.3.10 Indicate whether supply Imbalance protection is available :-

6.5.3.11 Indicate whether phase reversal protection is available :-

6.5.3.12 Make of surge diverters :-

6.5.3.13 Rated Voltage of surge diverters :-

6.5.3.14 Type of starter :-

6.5.3.15 Make of starter :-

6.5.3.16 AC-3 Rating of Contactors :-

1.

2.

3.

6.5.3.17 Make of water level switch :-

6.5.3.18 Type/Operation of water level switch :-

6.5.3.19 Rating of Auto transformers (if applicable) :-

6.5.3.20 Indicate whether thermal sensors provided in the auto transformer :-

6.5.3.21 Indicate whether all control wires in the starter and LT panel

are lugged and connected :-

6.5.3.22 Indicate whether all control wires are lugged and connected :-

6.5.3.23 Indicate whether power factor correction capacitors are mounted :-

**6.5.4 Cables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cables** | **Make** | **Size** | **Type** | **Material** | **Length** |
| 6.5.4.1 | CEB to change over |  |  |  |  |  |
| 6.5.4.2 | Generator to change over  (if applicable) |  |  |  |  |  |
| 6.5.4.3 | Change over to incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.5.4.4 | CEB to Incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.5.4.5 | Incoming to LT panel |  |  |  |  |  |
| 6.5.4.6 | LT panel to motor starter |  |  |  |  |  |
| 6.5.4.7 | Motor starter to motors |  |  |  |  |  |
| 6.5.4.8 | Control cables in LT panel |  |  |  |  |  |

**6.6 VERTICALLY/HORIZONTALLY MOUNTED IN LINE BOOSTER PUMPING SETS AND ACCESSORIES**

**6.6.1 Pump**

6.6.1.0 Name of the Manufacturer :

6.6.1.1 Make and country of origin :

6.6.1.2 Type :

6.6.1.3 Model :

6.6.1.4 Number of stages :

6.6.1.5 Speed (RPM) :

6.6.1.6 Capacity at specified head (m3/hr) :

6.6.1.7 Efficiency at duty point :

6.6.1.8 NPSH required at duty point(m) :

6.6.1.9 Safety margin required for over and above NPSHR (m) :

6.6.1.10 Pump casing materials :

6.6.1.11 Impeller material :

6.6.1.12 Pump shaft material :

6.6.1.13 Shaft sleeve material :

6.6.1.14 Casing wearing material :

6.6.1.15 Impeller wearing material :

6.6.1.16 Impeller diameter (mm) :

6.6.1.17 Max.impeller diameter (mm) :

6.6.1.18 Shut – off head (m) :

6.6.1.19 Pump bearing nos.

a) Drive end :

6.6.1.20 Designed life of pump bearings :

6.6.1.21 Power absorbed by the pump at duty point :

6.6.1.22 Max.power absorbed by the pump :

6.6.1.23 Shaft Intermediate Bearing Nos. :

6.6.1.24 Type of the Drive Shaft Bearings :

6.6.1.25 Designed life of Drive Shaft Bearings :

6.6.1.26 Critical Speed of Drive Shaft :

**6.6.2 Motor**

6.6.2.0 Name of the Manufacturer :

6.6.2.1 Make and Country of Origin :

6.6.2.2 Model :

6.6.2.3 Type :

6.6.2.4 Nominal Supply voltage, frequency and number of phases :

6.6.2.5 Allowable voltage fluctuations :

6.6.2.6 Synchronous speed ;

6.6.2.7 Full load output power :

6.6.2.8 Full load current ;

6.6.2.9 Power factor at 100% :

at 75% :

at 50% :

Of full load

6.6.2.10 Class of insulation :

6.6.2.11 Enclosure protection class (IP No.) :

6.6.2.12 Motor operation rating :

6.6.2.13 Motor Bearing No. :

Drive end :

Non drive end :

6.6.2.14 Design life of bearings :

6.6.2.15 Motor efficiency at 100% ;

at 75% :

at 50% :

6.6.2.16 Overall efficiency of pumping set at duty point :

6.6.2.17 Temperature rise after 6 hrs.at 400 V. :

**6.6.3 L.T. Panel and Starters :**

6.6.3.0 Name of the Manufacturer :

6.6.3.1 Make and country of origin :

6.6.3.2 Make of Main MCCB :

Whether earth fault trip available :

Whether adjustable thermal trip available :

6.6.3.3 Rating of Main MCCB :

6.6.3.4 Make of MCB’s :

6.6.3.5 Rating of MCB’s :

6.6.3.6 Make of supply voltage monitor :

Whether U/V or O/V adjustable ;

Whether supply imbalance protection available :

Whether phase reversal protection available :

6.6.3.7 Make of surge diverters :

6.6.3.8 Rated voltage of surge diverters :

6.6.3.9 Type of starter :

6.6.3.10 Make of starter :

6.6.3.11 AC3 rating of contactors :

1.

2.

3.

6.6.3.12 Make of water level switch :

6.6.3.13 Type/Operation of water level switch :

6.6.3.14 Rating of Auto Transformers (if applicable) :

**6.6.4 Cables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cables** | **Make** | **Size** | **Type** | **Material** | **Length** |
| 6.6.4.1 | CEB to change over |  |  |  |  |  |
| 6.6.4.2 | Generator to change over  (if applicable) |  |  |  |  |  |
| 6.6.4.3 | Change over to incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.6.4.4 | CEB to Incoming MCCB  (if applicable) |  |  |  |  |  |
| 6.6.4.5 | Incoming to LT panel |  |  |  |  |  |
| 6.6.4.6 | LT panel to motor starter |  |  |  |  |  |
| 6.6.4.7 | Motor starter to motors |  |  |  |  |  |
| 6.6.4.8 | Control cables in LT panel |  |  |  |  |  |

**7.0 JOINT PROTECTION MATERIAL**

1. Country of manufacture:

(1) Mastic Primer………………………………………………

(2) Mastic Paste……………………………………………………….

(3) Mastic Tape……………………………………………………….

1. Manufacturers’ name and Address:
2. Mastic Primer…………………………………………………………

……………………………………….

1. Mastic Paste……………………………………………………….

………………………………..

1. Mastic Tape…………………………………………………
   1. Volatile Organic Compound Content……………………………….
   2. Self-Supporting…………………………….
   3. Cracking…………………………..
   4. Moisture and state limit……………………………………..
   5. Resistivity to;
2. Mineral Acid………………………………
3. Alkalis……………………………..
4. Salts……………………………….
   1. Suitability Climate…………………………………………….
5. Internal protection : ………………………………………………………..
6. External protection ………………………………………………………..
7. Weight of the packs …………….. kgs ………………………………
8. Reference of the catalogues, technical literature and drawings provided with the Bid:
9. Port of shipment: ………………………………………..
10. Time of delivery of the materials at port of shipment: ……………………………………
11. Name and Address of Supplier’s accredited agent in Sri Lanka: ………………
12. Deviations from Specifications (if any):

**8.0 GAS CHLORINATORS AND ACCESSORIES**

**8.1 CHLORINATORS**

1. Make and Country of Manufacture: ..........................................................................

2. Model :....................................................................................................

3. Type :....................................................................................................

4. Availability of ISO 9001:2015……………………………………………………

5. 5.1 Port of shipment ………………………………………………………..

5.2 No of shipment proposed by the Contractor ………………………………

6. What is the feed range and control possible: ....................................................

7. Is the Feed Range manually adjustable: ...........................................................

8. Type of Chlorine flow indicator: .........................................................................

9. Accuracy of chlorine flow indicator: ....................................................................

10. What is the maximum Operating Water Pressure: ............................................

11. What is the solution Discharge Pressure: .........................................................

12. The operating temperature range: .....................................................................

13. Is a Chlorine Pressure Gauge provided: ............................................................

14. If so, type and size of dial: ................................................................................

15. Is an operating water pressure Gauge provided: ................................................

16. If so, type and size of dial: ..............................................................................…

17. Chlorinator diaphragm material: .........................................................................

18. Seat material: ....................................................................................................

19. Is corrosion resistance material used for the chlorinator: ....................................

20. Are two check valves provided to prevent ingress of water to chlorinator:............

..................................................................................................……………………

21. The type of valves provided: .............................................................................

22. Is chlorine supply status indicated on the chlorinator: ........................................

23. The type of piping and connections used for chlorine supply line from cylinder:

.........................................................................................................................…….

24. The type of piping used for vacuum and vent pipes and connections:......................................

25. Type of "Y" strainers provided: .................................................................................................

26. Does a loss in operating water pressure automatically shut-off the chlorine gas flow?...................................................................................................................

27. The type and make of cabinet: ...................................................………………...

28. Type of Diffuser: ...............................................................................................

29. Specific spares provided for the chlorinator unit ……………………………….

**8.2 BOOSTER PUMPING SETS AND ACCESSORIES**

**8.2.1 PUMP**

1. Make and Country of Manufacture:‑

2 Port of shipment

3 Type:‑

4 Model:‑

5 Stagers:-

6 R.P.M.:-

7 Capacity at duty point m3/hr: -

**8.2.2 MOTORS**

1. Make and Country of Manufacture:‑
2. Port of shipment

3 Model:‑

4 Nr. of Poles :-

5 Voltage :-

6 Class of Insulation :-

7 Rated output in kW :-

8 Current approximate in Amps at rated output :-

9 Speed in R.P.M. at rated output:-

**8.2.3 STARTERS**

1 Make and Country of Manufacture:‑

2 Whether push button operated:‑

**8.2.4 EXTRACTOR (Exhauster)**

1 Make and Country of Manufacture:‑

2 Model: ‑

3 Capacity:-m3/Hr:-

4 Noise level at 1m (dB): -

5 Size (Diameter mm): -

**8.2.5 WEIGHING SCALES**

1 Make and Country of Manufacture: ‑

2 Model: ‑

3 Type of Operation: -

**8.2.6 CHLORINE LEAK DETECTOR**

1 Make and Country of Manufacture: ‑

2 Model: ‑

3 Type of Operation: -

**8.2.7 OTHERS**

1. Is chlorine measuring scale provided to measure the weight of chlorine in cylinders?

2. What is the type of safety equipment provided? :-

3. The type and make or Residual Chlorine test kit provided:-

4. Whether available ex-stock : -

5. Otherwise, approximate date of delivery:-

**8.3 CHEMICAL CARRYING TROLLEY**

1. Make and Country of Manufacture: ‑
2. Type: ‑
3. Model: ‑
4. Capacity: -
5. Material: -
6. No of cylinders, this can carry.
7. Whether it suitable for chlorine rich environment.

**8.4 CHLORINE CYLINDER CARRYING TROLLEY**

1. Make and Country of Manufacture: ‑
2. Type: ‑
3. Model: ‑
4. Capacity: -
5. Material: -
6. No of cylinders, this can carry.
7. Whether it suitable for chlorine rich environment.

**8.5 HOISTING EQUIPMENT FOR Chemicals**

1. Make and Country of Manufacture: ‑
2. Type: ‑
3. Model: ‑
4. Capacity: -
5. Motor power: -
6. Full load current: -
7. Nominal supply voltage, frequency and number of phase: -
8. Allowable voltage fluctuation: -
9. Details of similar works carried out in the past 3 years :-
10. Details of similar facilities available

(a). Machinery

(b). Location of workshop

1. Details of technical staff to be deputed to carry out the installation work: -

**8.6 HOISTING EQUIPMENT FOR TONNERS**

1. Make and Country of Manufacture: ‑
2. Type: ‑
3. Model: ‑
4. Capacity: -
5. Motor power: -
6. Full load current: -
7. Nominal supply voltage, frequency and number of phase: -
8. Allowable voltage fluctuation: -
9. Details of similar works carried out in the past 3 years :-
10. Details of similar facilities available

(a). Machinery

(b). Location of workshop

1. Details of technical staff to be deputed to carry out the installation work: -

**8.7 DIAPHRAGM TYPE ALUM/ POLY ALUMINIUM CHLORIDE DOSING PUMP & ACCESSORIES**

**8.7.1 PUMPS**

|  |  |  |
| --- | --- | --- |
|  | **Pump: -** | **Alum/Poly aluminium chloride** |
|  | Make and Country of Origin :- |  |
|  | Type :- |  |
|  | Model No. :- |  |
|  | Maximum Capacity L/hr :- |  |
|  | Capacity at specified head, Is characteristic curve provided :- |  |
|  | Inlet diameter/outlet diameter mm :- |  |
|  | Pump Casing Material :- |  |
|  | Diaphragm Material :- |  |
|  | Type of Bearings :- |  |
|  | No. of Strokes/Min :- |  |
|  | Make, model and type of the pressure relief valve :- |  |
|  | Make, model and type of the pressure retention valve :- |  |

**8.7.2 MOTOR**

|  |  |  |
| --- | --- | --- |
|  | **Motor: -** | **Alum/Poly aluminium chloride** |
|  | Make and Country of Origin :- |  |
|  | Model/Type No. :- |  |
|  | Model No :- |  |
|  | Nominal Supply voltage (V) :- |  |
|  | Allowable voltage fluctuation % :- |  |
|  | Synchronous speed (RPM) :- |  |
|  | Full load power factor :- |  |
|  | Insulation Class :- |  |
|  | Enclosure protection class (IP No):- |  |

**8.7.3 TANK**

|  |  |  |
| --- | --- | --- |
|  |  | **Alum/Poly aluminium chloride** |
|  | Country of origin: |  |
|  | Name and Address of the Manufacture:- |  |
|  | Tank capacity:- |  |
|  | Material of construction:- |  |
|  | Material Thickness:- |  |
|  | Coating Material and Thickness:- |  |
|  | Whether coating material is food quality:- |  |
|  | Warranty certificate for the coating:- |  |
|  | Whether it provide suitable provision to put chemical easily:- |  |
|  | Other :- |  |

**8.7.4 STIRRER**

|  |  |  |
| --- | --- | --- |
|  |  | **Alum/Poly aluminium chloride** |
|  | Name and Address of the Manufacture:- |  |
|  | Make: ‑ |  |
|  | Model: ‑ |  |
|  | Type: ‑ |  |
|  | Material of construction of the Impeller and Shaft |  |
|  | Number of blades in the Impeller and diameter of the shaft: - |  |
|  | Rotating Speed: - |  |
|  | Whether speed reduction Gear box provided: - |  |
|  | If yes, Mentioned the Gear ratio: - |  |
|  | Nominal supply voltage frequency and number of phase: ‑ |  |
|  | Allowable voltage fluctuation: ‑ |  |
|  | Full load out put power: ‑ |  |
|  | Full load current: ‑ |  |
|  | Power factor at full load: - |  |
|  | Class of insulation: ‑ |  |
|  | Enclosure protection class (IP No): ‑ |  |
|  | Motor Efficiency: - |  |

**8.7.5 SCRUBBER/DUST EXTRACTOR FOR POLY ALUMINIUM CHLORIDE**

* 1. Method of extraction
  2. Country of origin
  3. Model No
  4. Made of material

**8.7.6 CONTROL PANEL FOR ALUM/ POLY ALUMINIUM CHLORIDE STIRRER**

|  |  |  |
| --- | --- | --- |
|  |  | **Alum/Poly aluminium chloride** |
|  | Name and Address of the Manufacture:- |  |
|  | Make: ‑ |  |
|  | Country of Manufacture: - |  |
|  | Make of MCB: - |  |
|  | Rating’s of MCB: - |  |
|  | Type of Starter: - |  |
|  | Make of Starter: - |  |
|  | Make of water level switch: - |  |
|  | Type/Operation of water level switch:- |  |
|  | Whether dry running protection is provided:- |  |
|  | Whether all control wires in the starter and LT Panel are lugged and connected:- |  |
|  | Whether all control wires are numbered: - |  |

**8.7.7 CONTROL PANEL FOR ALUM DOSING PUMP**

|  |  |  |
| --- | --- | --- |
|  |  | **Alum/Poly aluminium chloride** |
|  | Name and Address of the Manufacture:- |  |
|  | Make: ‑ |  |
|  | Country of Manufacture: - |  |
|  | Make of MCB: - |  |
|  | Rating’s of MCB: - |  |
|  | Type of Starter: - |  |
|  | Make of Starter: - |  |
|  | Make of water level switch: - |  |
|  | Type/Operation of water level switch:- |  |
|  | Whether dry running protection is provided:- |  |
|  | Whether all control wires in the starter and LT Panel are lugged and connected:- |  |
|  | Whether all control wires are numbered: - |  |
|  |  |  |

* 1. **DIAPHRAGM TYPE LIME DOSING PUMPS& ACCESSORIES**

**8.8.1 PUMP**

|  |  |  |
| --- | --- | --- |
|  | **Pump: -** | **Lime** |
|  | Make and Country of Origin :- |  |
|  | Type :- |  |
|  | Model No. :- |  |
|  | Maximum Capacity L/hr :- |  |
|  | Capacity at specified head, Is characteristic curve provided :- |  |
|  | Inlet diameter/outlet diameter mm :- |  |
|  | Pump Casing Material :- |  |
|  | Diaphragm Material :- |  |
|  | Type of Bearings :- |  |
|  | No. of Strokes/Min :- |  |
|  | Make, model and type of the pressure relief valve :- |  |
|  | Make, model and type of the pressure retention valve :- |  |

**8.8.2 MOTOR**

|  |  |  |
| --- | --- | --- |
|  | **Motor: -** | **Lime** |
|  | Make and Country of Origin :- |  |
|  | Model/Type No. :- |  |
|  | Model No :- |  |
|  | Nominal Supply voltage (V) :- |  |
|  | Allowable voltage fluctuation % :- |  |
|  | Synchronous speed (RPM) :- |  |
|  | Full load power factor :- |  |
|  | Insulation Class :- |  |
|  | Enclosure protection class (IP No):- |  |

**8.8.3 TANK**

|  |  |  |
| --- | --- | --- |
|  |  | **Lime** |
|  | Country of origin: |  |
|  | Name and Address of the Manufacture:- |  |
|  | Tank capacity:- |  |
|  | Material of construction:- |  |
|  | Material Thickness:- |  |
|  | Coating Material and Thickness:- |  |
|  | Whether coating material is food quality:- |  |
|  | Warranty certificate for the coating:- |  |
|  | Whether it provide suitable provision to put chemical easily:- |  |
|  | Other :- |  |

**8.8.4 STIRRER**

|  |  |  |
| --- | --- | --- |
|  |  | **Lime** |
|  | Name and Address of the Manufacture:- |  |
|  | Make: ‑ |  |
|  | Model: ‑ |  |
|  | Type: ‑ |  |
|  | Material of construction of the Impeller and Shaft |  |
|  | Number of blades in the Impeller and diameter of the shaft: - |  |
|  | Rotating Speed: - |  |
|  | Whether speed reduction Gear box provided: - |  |
|  | If yes, Mentioned the Gear ratio: - |  |
|  | Nominal supply voltage frequency and number of phase: ‑ |  |
|  | Allowable voltage fluctuation: ‑ |  |
|  | Full load out put power: ‑ |  |
|  | Full load current: ‑ |  |
|  | Power factor at full load: - |  |
|  | Class of insulation: ‑ |  |
|  | Enclosure protection class (IP No): ‑ |  |
|  | Motor Efficiency: - |  |

**8.8.5 CONTROL PANEL FOR LIME STIRRER**

|  |  |  |
| --- | --- | --- |
|  |  | **Lime** |
|  | Name and Address of the Manufacture:- |  |
|  | Make: ‑ |  |
|  | Country of Manufacture: - |  |
|  | Make of MCB: - |  |
|  | Rating’s of MCB: - |  |
|  | Type of Starter: - |  |
|  | Make of Starter: - |  |
|  | Make of water level switch: - |  |
|  | Type/Operation of water level switch:- |  |
|  | Whether dry running protection is provided:- |  |
|  | Whether all control wires in the starter and LT Panel are lugged and connected:- |  |
|  | Whether all control wires are numbered: - |  |

**8.8.6 CONTROL PANEL FOR LIME DOSING PUMP**

|  |  |  |
| --- | --- | --- |
|  |  | **Lime** |
|  | Name and Address of the Manufacture:- |  |
|  | Make: ‑ |  |
|  | Country of Manufacture: - |  |
|  | Make of MCB: - |  |
|  | Rating’s of MCB: - |  |
|  | Type of Starter: - |  |
|  | Make of Starter: - |  |
|  | Make of water level switch: - |  |
|  | Type/Operation of water level switch:- |  |
|  | Whether dry running protection is provided:- |  |
|  | Whether all control wires in the starter and LT Panel are lugged and connected:- |  |
|  | Whether all control wires are numbered: - |  |

**8. DEVIATIONS FROM SPECIFICATIONS**

**DEVIATIONS FROM SPECIFICATIONS**

**Preamble**

The Bidder is required to list any deviations of materials workmanship etc. from the Specifications including such information as has already been given elsewhere in the Tender Documents. The information shall be in sufficient detail to enable the Engineer to make a realistic assessment of the effect of such deviations on the performance or life of the materials to be supplied and also such deviation if any shall be subject to Clause 28.2 of Instructions to Bidders.

The list shall also include deviations from the Specifications relating to the mode of operation and/or control of any item of equipment, and any deviations from the specified design requirements for plant components.

**Deviations**

Note:

1. Bidder shall submit a detailed technical comparison (Specified Vs Supplied) if their products deviate from performance criteria manifested in the Specifications.
2. Additional sheets should be attached as necessary.

**9. SCHEDULE OF DAY WORKS**

* **PREAMBLE NOTES ON DAYWORKS SCHEDULES**
* **SCHEDULE OF DAYWORK RATES FOR LABOUR**
* **SCHEDULE OF DAYWORK RATES FOR MATERIALS**
* **SCHEDULE OF DAYWORK RATES FOR CONSTRUCTIONAL PLANT**

# SCHEDULES OF DAYWORKS

**PREAMBLE NOTES ON DAYWORK SCHEDULES**

**General**

Reference should be made to Clause 13.5 of the Conditions of Contract. Work shall not be executed on daywork basis except by written order of the Engineer. The rates specify shall apply to any quantities of daywork ordered by the Engineer. Daywork rates are exclusive of VAT.

The daywork rates for labour, material and Contractor’s Equipment do not include percentages to cover Contractor’s overhead and profit. Contractor may add maximum percentage over and above the daywork rate to cover overhead and profit as specified in each section below.

**Labour for daywork**

Only the time of different classes of labour directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing the work with the gangs will also be measured but not the time of foreman or other supervisory personnel.

The daywork rates for labour shall cover all direct costs to the Contractor, including the amounts of wages paid to such labour, transporting time, subsistence allowances and any sums paid to or in on behalf of such labour for social benefits in accordance with Sri Lankan Law.

The overhead and profit component, maximum of 15% of daywork rates to cover the Contractor’s profit, overhead, superintendence, liabilities and insurance and allowances to labour, time keeping, clerical and office work, the use of consumable stores, utilities, the cost of using, repairing and maintaining the tools necessary to each class of workman.

**Material for daywork**

The basic rates for material is based on the invoice price, freight, insurance, handling expenses, damages, losses, wastages etc. and shall provide and delivery to site as directed by the Engineer. The Contractor shall be entitled to payment in respect of materials used for daywork at the maximum of 6% of daywork to cover the overhead and profit.

**Contractor’s Equipment for daywork**

The Contractor shall be entitled to payment in respect of Contractor’s Equipment employed on daywork. The rates include due and complete allowance for depreciation, interest, indemnity and insurance, repairs, maintenance, supplies, fuel, lubricants and other consumables. Contractor may add a maximum of 10% overhead and profit component to the daywork rates to cover his profit, overhead, superintendence, administrative costs related to use such equipment, liabilities, time keeping and any other allied works.

In calculating the payment due to the Contractor for Contractor’s Equipment employed on daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time from the part of the site where the Contractor’s Equipment was located when ordered by the Engineer to be employed on daywork and the time of return journey there to shall be considered for payment.

**SCHEDULE OF DAYWORK RATES**

**FOR LABOUR**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ITEM NO** | **DESCRIPTION** | | **UNIT** | **RATE  Rs.** |
| 1 | Unskilled Labour |  | day | 1600.00 |
| 2 | Helper |  | day | 1650.00 |
| 3 | Pipe Layer |  | day | 2190.00 |
| 4 | Fitter |  | day | 2190.00 |
| 5 | Mason |  | day | 2000.00 |
| 6 | Carpenter and Joiner |  | day | 2120.00 |
| 7 | Steel Work Erector |  | day | 2130.00 |
| 8 | Tool Operator |  | day | 1760.00 |
| 9 | Tiller |  | day | 2190.00 |
| 10 | Plumber |  | day | 2130.00 |
| 11 | Welder |  | day | 2070.00 |
| 12 | Painter |  | day | 2130.00 |
| 13 | Electrician |  | day | 2200.00 |
| 14 | Mechanic |  | day | 2200.00 |
| 15 | Bar Bender |  | day | 2140.00 |
| 16 | Operator (Heavy Machine) |  | day | 2260.00 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Note :** | VAT not included |  |  |  |
|  | Contractor's O/H & P not included. |  |  |  |
| **Source:** | Market prices June 2020 |  |  |  |
|  |  |  |  |  |

**SCHEDULE OF DAYWORK RATES**

**FOR MATERIALS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item**  **No.** | **Description** | **Unit** | **Basic rate**  **(Rs.)** |
| 1. | Cement, ordinary Portland or equivalent in bags | kg | 21.50 |
| 2. | Tor Steel reinforcing bar | kg | 146.00 |
| 3. | Mild steel | kg | 146.00 |
| 4. | Fine aggregate as specified in Clause 1.6.1 of the  ICTAD specification (SCA/4/1) for Building Works –  Volume 1 |  |  |
| 4.1 | Fine Sand | cu | 18,426.00 |
| 4.2 | Coarse Sand | cu | 17,853.00 |
| 4.3 | Sea sand (wash) | cu | 11,344.00 |
| 6. | Quarry Dust | cu | 9,660.00 |
| 5. | Coarse aggregate for concrete as specified in Clause 302 of the General Specification for Civil Engineering construction of size; |  |  |
| 5.1 | ½” (Chips) | cu | 8,085.00 |
| 5.2 | ¾” | cu | 8,460.00 |
| 5.3 | 1” | cu | 8,366.00 |
| 5.4 | 1½” | cu | 8,336.00 |
| 5.5 | 2” | cu | 8,336.00 |
| 6. | Shuttering planks( ¾”) | m2 | 580.00 |
| 7. | Timber for Members |  |  |
|  | **Jack** |  |  |
| 7.1 | Timber 4”x3” – 6 ½ – 7 ft | m | 1,599.00 |
| 7.2 | Timber planks 1 1/8” | m2 | 5,799.00 |
|  |  |  |  |
|  | **Kempus/ Tulang** |  |  |
| 7.3 | Class I Timber 2”x1” | m | 102.00 |
| 7.4 | Class I Timber 2”x2” | m | 204.00 |
| 7.5 | Class I Timber 4”x2” | m | 568.00 |
| 7.6 | Class I Timber 4”x3” | m | 1,017.00 |
| 7.7 | Class I Timber 5”x2” | m | 930.00 |
| 7.8 | Class I Timber 3”x5” | m | 1,041.00 |
| 7.9 | Class I Timber 2”x6” | m | 1,017.00 |
| 7.10 | Class I Timber 3”x6” | m | 1,236.00 |
|  |  |  |  |
|  | **Other** |  |  |
| 7.11 | Valance Board 9”x 1” (Ginisapu) | m | 580.00 |
| 7.12 | Ceiling Planks ¾” (Lunimudella) | m2 | 1,249.00 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Item**  **No.** | **Description** | **Unit** | **Basic rate**  **(Rs.)** |
| 8. | Bricks Standard size | nr. | 16.00 |
| 9. | **Rubble** |  |  |
| 9.1 | 6” x 9” | cu | 5,697.00 |
| 9.2 | 6” x 4” | cu | 5,697.00 |
|  |  |  |  |

**Note :** 1. Contractor’s O/H & P not included

2. VAT not included

**Source :-**

1. Market prices June 2020.

**RATES FOR DAYWORK SCHEDULES**

**CONSTRUCTIONAL EQUIPMENT**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ITEM NO** | **DESCRIPTION** | **CAPACITY** | **UNIT** | **RATE (Rs.)** |
|  | **Air Handling Equipment** |  |  |  |
| 1 | Air Compressor (including tools breakers etc:)\* | 1000 CFM | hr | 3240.00 |
| 2 | Air Compressor (including tools breakers etc:)\* | 500 CFM | hr | 2320.00 |
| 3 | Air Compressor (including tools breakers etc:)\* | 300 CFM | hr | 1390.00 |
| 4 | Air Compressor (including tools breakers etc:)\* | 200 CFM | hr | 1300.00 |
| 5 | Air Compressor \* |  | day | 200.00 |
| 6 | Blower |  | day | 460.00 |
| 7 | Vacum Cleaner |  | day | 1260.00 |
|  |  |  |  |  |
|  | **Breaking / Cutting Equipment** |  |  |  |
| 8 | Angle Grinder (06'',04") – Electrical |  | day | 210.00 |
| 9 | Angle Grinder (7") - Electrical |  | day | 510.00 |
| 10 | Asphalt cutter \* |  | hr | 1160.00 |
| 11 | Breaker Machine (70kg) - Electric |  | day | 3020.00 |
| 12 | Breaker Machine - Air (not included compressor) |  | day | 4530.00 |
| 13 | Grinder (large) - Electrical |  | day | 3020.00 |
| 14 | Grinder (medium) - Electrical |  | day | 4530.00 |
| 15 | Tile cutter (2'-0'' length) |  | day | 510.00 |
| 16 | Tile cutter (up to 2'-0'' length) |  | day | 360.00 |
|  |  |  |  |  |
|  | **Compacting Equipment** |  |  |  |
| 17 | Hand Rammers \* | 60kg | day | 3820.00 |
| 18 | Plate Compactor Mechanical \* | 90kg | day | 3520.00 |
| 19 | Pneumatic Roller \* | 8 - 10 t | hr | 3620.00 |
| 20 | Pneumatic Roller \* | 10 - 12 t | hr | 4280.00 |
| 21 | Soil compactor -Vibrating Roller \*(Min.4hrs/day) | 01 t | hr | 1260.00 |
| 22 | Soil compactor -Vibrating Roller \*(Min.4hrs/day) | 05 t | hr | 2120.00 |
| 23 | Soil compactor -Vibrating Roller \*(Min.4hrs/day) | 07 t | hr | 2720.00 |
| 24 | Soil compactor -Vibrating Roller \*(Min.4hrs/day) | 10 t | hr | 2940.00 |
| 25 | Soil compactor -Vibrating Roller \*(Min.4hrs/day) | 20 t | hr | 3890.00 |
| 26 | Soil compactor -Vibrating Roller \*(Min.4hrs/day) | 26 t | hr | 4350.00 |
|  |  |  |  |  |
|  | **Concrete Work Related** |  |  |  |
| 27 | Concrete mixer complete with scales etc. \* | 0.25m3 | hr | 500.00 |
| 28 | Concrete mixer complete with scales etc. \* | 0.5m3 | hr | 700.00 |
| 29 | Porker vibrator (Electric) | 25mm dia. | day | 1360.00 |
| 30 | Porker vibrator (Electric) | 32mm dia. | day | 1510.00 |
| 31 | Porker vibrator (with engine)\* | 25mm dia. | day | 3020.00 |

Revised on 04-03-2021

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ITEM NO** | **DESCRIPTION** | **CAPACITY** | **UNIT** | **RATE (Rs.)** |
|  | **Concrete Work Related** |  |  |  |
| 32 | Porker vibrator (with engine)\* | 32mm dia. | day | 3220.00 |
| 33 | Porker vibrator (with engine)\* | 38mm dia. | day | 3520.00 |
|  |  |  |  |  |
|  | **For Supply of Ready Mix Concrete (Colombo Area)** |  |  |  |
| 34 | Pump Cars -( Minimum 30 m3) - 21m length of pump car \* |  | m3 | 780.00 |
| 35 | Pump Cars -( Minimum 40 m3) - 32 m length of pump car\* |  | m3 | 870.00 |
| 36 | Pump Cars -( Minimum 50 m3) - 37 m length of pump car\* |  | m3 | 970.00 |
|  |  |  |  |  |
|  | **Earth Work Related Equipment** |  |  |  |
| 37 | Backhoe loader \* | 0.10m3 | hr | 1740.00 |
| 38 | Backhoe loader \* | 0.25m3 | hr | 2200.00 |
| 39 | Bob Cat \* (Min.4hrs/day) |  | day | 2220.00 |
| 40 | Bulldozer (Crawler Tractor) \* (Min.4hrs/day) | 85 hp | hr | 3380.00 |
| 41 | Bulldozer (Crawler Tractor) \* (Min.4hrs/day) | 120 hp | hr | 4150.00 |
| 42 | Excavator (Long Arm)\* | 0.4m3 | hr | 3350.00 |
| 43 | Excavator (Long Arm)\* | 0.5m3 | hr | 4560.00 |
| 44 | Excavator (Long Arm)\* | 0.9m3 | hr | 7580.00 |
| 45 | Excavator \* | 0.18m3 | hr | 1720.00 |
| 46 | Excavator \* | 0.35m3 | hr | 2210.00 |
| 47 | Excavator \* | 0.45m3 | hr | 2400.00 |
| 48 | Excavator \* | 0.7m3 | hr | 3090.00 |
| 49 | Excavator \* | 0.9m3 | hr | 3470.00 |
| 50 | Excavator with backhoe \* | 130hp | hr | 4210.00 |
| 51 | Motar Grader \* | 3.1 m | hr | 3370.00 |
| 52 | Motor Grader \* | 4.2 m | hr | 5000.00 |
| 53 | Wheel Loader \* | 0.1m3 | hr | 1690.00 |
| 54 | Wheel Loader \* | 1.4m3 | hr | 1970.00 |
| 55 | Wheel Loader \* | 2.0m3 | hr | 2470.00 |
|  |  |  |  |  |
|  | **Hoisting Equipment** |  |  |  |
| 56 | Chain Block 5T |  | day | 510.00 |
| 57 | Hoist Machine (300/500kg)\* |  | km | 7540.00 |
| 58 | Crane Truck (80 km/day) \* crane charge Rs.2500/hrs | 5t | km | 200.00 |
| 59 | Crane Truck (80 km/day) \* crane charge Rs.2500/hrs | 17t | km | 250.00 |
| 60 | Crane Truck (80 km/day) \* crane charge Rs.2500/hrs | 20t | km | 290.00 |
| 61 | Crawler Crane \* | 35 t | hr | 4230.00 |
| 62 | Crawler Crane \* | 50 t | hr | 5630.00 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ITEM NO** | **DESCRIPTION** | **CAPACITY** | **UNIT** | **RATE (Rs.)** |
|  | **Hoisting Equipment** |  |  |  |
| 63 | Fork lift \* (Min.4hrs/day) | 3 t | hr | 1460.00 |
| 64 | Fork lift \* (Min.4hrs/day) | 5 t | hr | 1940.00 |
| 65 | Hydraulic Crane \* | 20 t | hr | 7140.00 |
| 66 | Hydraulic Crane \* | 15t | hr | 5530.00 |
| 67 | Tower crane \* (without mobilization & demobilization) | 10 t | hr | 3350.00 |
| 68 | Tower crane \*(without mobilization & demobilization) | 12 t | hr | 4680.00 |
|  |  |  |  |  |
|  | **Miscellaneous Equipment** |  |  |  |
|  |  |  |  |  |
| 69 | Welding Generator | 16KVA | day | 640.00 |
| 70 | Welding Plant (3 phase) | 3-Phase 400A | day | 510.00 |
| 71 | Floor Polisher |  | day | 1210.00 |
| 72 | Jig Saw |  | day | 360.00 |
|  |  |  |  |  |
|  | **Power Generating Equipment** |  |  |  |
|  |  |  |  |  |
| 73 | Generating set (with fuel ) | 25kVA | hr | 2010.00 |
| 74 | Generating set (with fuel ) | 50kVA | hr | 2520.00 |
| 75 | Generating set (with fuel ) | 45kVA | hr | 2770.00 |
| 76 | Generating set (with fuel ) | 125kVA | hr | 4630.00 |
|  |  |  |  |  |
|  | **Pumping Equipment** |  |  |  |
| 77 | Pressure Pump (Electric domestic type-with operator) |  | day | 1090.00 |
| 78 | Sludge pump 4'' dia. (with fuel & without operator) |  | hr | 1000.00 |
| 79 | Water Pump 2" dia.(Electrical - without operator) |  | day | 1010.00 |
| 80 | Water Pump 2" dia.(with fuel & without operator) |  | hr | 420.00 |
| 81 | Water Pump 4" dia. (with fuel & without operator) |  | hr | 1050.00 |
|  |  |  |  |  |
|  | **Special Equipment** |  |  |  |
| 82 | Butt fusion Machine (Semi/Auto) with all necessary equipment - Electrical \* |  | month | 23520.00 |
|  |  |  |  |  |
|  | **Transportation / Moving** |  |  |  |
|  |  |  |  |  |
| 83 | Baby Dumper \* |  | day | 4560.00 |
| 84 | Container-Transport Trucks - 20 ft (up to 32kmfrom Colombo Port)  Additional transport (for night park add. Rs. 5000.00/day) |  | sum  km | 18090.00  250.00 |
|  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ITEM NO** | **DESCRIPTION** | **CAPACITY** | **UNIT** | **RATE (Rs.)** |
| 85 | Container-Transport Trucks - 30 ft ( up to 32km from Colombo Port)  Additional transport (for night park add. Rs. 5000.00/day) |  | sum  km | 21110.00  280.00 |
| 86 | Container-Transport Trucks - 40 ft ( up to 32km from Colombo Port)  Additional transport (for night park add. Rs. 5000.00/day) |  |  | 25130.00  320.00 |
| 87 | Crew cab (with driver & fuel) \* |  | km | 80.00 |
| 88 | Double cab (with driver & fuel) \* |  | km | 70.00 |
| 89 | Lorry \* (80 km/day) | 12t | km | 250.00 |
| 90 | Low loader truck \* | 30 - 40 km | km | 320.00 |
| 91 | Ordinary truck (100 km/day) \* | 6 t | day | 8060.00 |
| 92 | Ordinary truck (100 km/day) \* | 12 t | day | 10640.00 |
| 93 | Tractor with Tailor | 0.75cu | day | 5570.00 |
| 94 | Truck with Boom \* | 3 t | day | 11580.00 |
| 95 | Truck with Boom \* | 3.5 t | day | 12580.00 |
| 96 | Truck with Boom \* | 4 t | day | 15650.00 |
| 97 | Truck with tipper \* | 10t/5cu | km | 210.00 |
| 98 | Van (15 Sheet) or similar utility Vehicle \* |  | km | 70.00 |
| 99 | Water Bowser (80 km/day) \* | 7000lts. | km | 170.00 |
|  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Note :** | 1. VAT not included | |
|  | 2. \* Cost of Operator / Driver and fuel (if applicable) are included in rates | |
|  | 3. Contractors O/H& P not included. | |
| **Source:** | Market prices May 2020 |

**10. LIST OF DRAWINGS**

**LIST OF DRAWINGS**

|  |  |
| --- | --- |
| **Drg. No.** | Description |
|  |  |

**11. BILLS OF QUANTITIES**

* **PREAMBLE NOTES ON BILLS OF QUANTITIES**
* **BILLS OF QUANTITIES**
* **SUMMARY OF BILLS**
* **PREAMBLE NOTES**

**Note: Allow for all costs and expenses for complying with the General Conditions of Contract, Specification and Preamble Notes.**

*Select and Add*

*relevant preamble notes from*

***“Preamble Notes for BOQQ”***

*in NWSDB web*

### *(under the “Restrict Links”)*

* **Preamble Notes for Civil Engineering Works (Based on CESMM3).**
* **Preamble Notes for Building Works (based on SLS 573).**
* **Preamble Notes for Supply and Delivery of DI/PE Pipes & Fittings, Specials, Accessories, DI Valves and DI Manhole Covers.**
* **Preamble Notes for Supply and Delivery of uPVC Pipes, Fittings and Specials.**
* **Preamble Notes for M&E Works.**

**BILLS OF QUANTITIES**

*Select*

*Relevant sample sample BOQQ****”***

*in NWSDB web*

### *(under the “Restrict Links”)*

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**CONTRACT FOR ………………………………………………**

**………………………..…………….. WATER SUPPLY/SEWERAGE SCHEME**

**CONTRACT NO: ……………………………………..**

**SUMMARY OF BILLS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bill No. | From page No. | Description | Amount | |
| Rs. | Cts. |
| 01 |  | General | …………….. | …………….. |
| 02  03 |  | ……………………………  …………………………… | ……………..  ……………. | ……………..  ……………. |
| 03 |  | …………………………… | …………….. | …………….. |
| 04 |  | ……………………………. | …………….. | …………….. |
| 05 |  | …………………………….. | …………… | …………….. |
|  |  |  |  |  |
|  |  | **Sub Total (1)** |  |  |
|  |  | Less:Provisional Sums |  |  |
|  |  | **Sub Total (2)** |  |  |
|  |  | Less: Discount (if any) |  |  |
|  |  | **Sub Total (3)** |  |  |
|  |  | Add: Contingencies [Sub total (3) x10%]  Add: Provisional Sums |  |  |
|  |  | **Total of Bid carried to Form of Bid (excluding VAT) in page 4-1** |  |  |

VAT Registration Number : ………..……………….

(A copy of the VAT registration certificate shall be annexed.)

Note :- The NWSDB VAT Registration No :- 4090 31820 7000.

**12. STANDARD FORMS**

* **Bid Security**
* **Letter of Acceptance**
* **Agreement**
* **Performance Security**
* **Advance Payment Security**
* **Retention Money Guarantee**

FORM OF BID SECURITY

*-------------------------------------------------------------------------------------------------------*

*-------------------------------------------------------------------------------------------------------*

*[insert issuing agency’s name, and address of issuing branch or office]*

**Beneficiary:** The Chairman, National Water Supply & Drainage Board,

Galle Road, Ratmalana, Sri Lanka

**Date:** ---------------------------- *[insert (by issuing agency) date]*

**BID SECURITY No.:** -------------------------- *[insert (by issuing agency) number]*

We have been informed that --------------------------------------------------------------------------------------- *[name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated ---------------*[ date]* (hereinafter called "the Bid") for the execution of ………………………………………………

*………………………………………….[insert name of Contract]* under Contract No. -----------------------

Furthermore, we understand that, according to your conditions, Bids must be accompanied by a Bid Security.

At the request of the Bidder, we ----------------------------------------------- *[insert name of issuing agency]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ------------------- *[insert amount in figures]*  -------------------------------------------------------------- ---------------------------------------------------------------- *[insert amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

(a) has withdrawn its Bid during the period of bid validity specified; or

(b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter “the ITB”) or

(c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This Security shall expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the Contract signed by the Bidder and of the Performance Security issued to you by the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) the successful bidder furnishing the performance security, otherwise it will remain in force up to ---------------- *(insert date)*

Consequently, any demand for payment under this Security must be received by us at the office on or before that date.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*[signature(s) of authorized representative(s) ]*

**LETTER OF ACCEPTANCE**

*[Letter heading paper of the Employer]*

…………… *[Date]*

To: ……………………………………………………………………………………………

*[Name of the Contractor]*

………………………………………………………………………………………………

*[Address of the Contractor]*

This is to notify you that your bid dated ………………………….*[insert date]* for construction and remedying defects of the …………………………….…………………..………………..*[name of the Contract and Contract number]*for the Contractor price of…………………………………………... ……………………………………………………..........................*[amount in figures and words, if multiple currencies are involved, indicate amounts under each currency separated by the word “and” between them]* as corrected in accordance with Instructions to Bidders and/or modified by a Memorandum of Understanding, is hereby accepted.

Applicable VAT will be payable on production of Tax Invoice. The Registered No. for NWSDB for VAT is 409031820700.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

The commencement date shall be : ………………………………….*(fill the date as per Conditions of Contract).*

Contract Period is …… days from the commencement date.

Liquidated Damages shall be Rs. ……………/day up to the limit of 10% of the Contract price.

The Amount of Performance Security is : ………………………

The Performance Security shall be submitted on or before ………………………………*(fill the date as per Conditions of Contract)*. Failing to submit the performance guarantee will be a breach of Contract and actions shall be taken as per Clause 17 of the Instruction to Bidders.

Please acknowledge the receipt of this letter by return fax and make arrangements to sign the agreement by prior appointment with the Asst. General Manager (Tenders &Contracts) within ….. days.

Please contact PD/DGM ( )/AGM ( ), Engineer’s Representative of this Contract, whose telephone number is ………………………. for further action on this Contract.

…………………………….

General Manager

National Water Supply & Drainage Board

THE GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

**MINISTRY OF …………………………………**

## NATIONAL WATER SUPPLY AND DRAINAGE BOARD

**BID FOR …………………………………………….**

**CONTRACT No.: …………………………………..**

**AGREEMENT**

This AGREEMENT, is made and entered into on this …………….day of……… Two Thousand and ……………..by and between National Water Supply and Drainage Board, a corporate body duly established under the provisions of the National Water Supply and Drainage Board Act No.2 of 1974 and having its Head Office at Ratmalana in Sri Lanka (hereinafter called “the Employer” or “the Board”) of the one part and Messrs .………………………………………………………………… …………………………………………………………………………………………… (Hereinafter called “the Contractor”) of the other part.

WHEREAS the Employer is desires that the Contractor execute ………..………………………….., ………………………………………………………………………………………………………

……………………………………………………………..[name and identification number of Contract] (hereinafter called “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.

2. The documents forming the Contract shall be interpreted in the following order of priority:

(1) Agreement,

(2) Letter of Acceptance,

(3) Memorandum of understanding (if any)

(4) Form of Bid,

(5) Contract Data,

(6) Conditions of Contract,

(7) Specifications,

(8) Drawings,

(9) Bills of Quantities,

(10) Any other document listed in the Contract Data as forming part of the Contract.

3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year aforementioned in accordance with the laws of Sri Lanka.

Revised on 20-11-2020

Signed by the said …………………………………………. Chairman, National Water Supply and Drainage Board and ……………………………………………. Board Member of the National Water Supply and Drainage Board at …………………………………… on the …………. day of ………………………….. Two Thousand and ……………….. in the presence of the following Witnesses..

Chairman …………………………………

Board Member ……………………………

**NATIONAL WATER SUPPLY AND DRAINAGE BOARD**

**Witnesses**

1. Signature ……………………. 2. Signature : ………………………

Name : ……………………. Name : ………………………

Address : ……………………. Address : ………………………

……………………. ………………………

……………………. ………………………

For and on behalf of the Contractor : signed by the said ……………………………………in the capacity of …………………………………………………………………………. and/or duly authorized to sign this Contract agreement for and on behalf of …………………...……..

…………………………………………………………………………………………………..

……………………………………………………………… (Block Letters)

**Witnesses**

1. Signature ……………………. 2. Signature : ………………………

Name : ……………………. Name : ………………………

Address : ……………………. Address : ………………………

……………………. ………………………

……………………. ………………………

**PERFORMANCE SECURITY**

**(Unconditional)**

……………………………………………………………………………………………………… *[Issuing Agency’s Name and address of Issuing Branch or Office]*

**Beneficiary : ……………………………………………………………………………………**

*[Name and Address of Employer]*

**Date** : ………………………………………………………

**PERFORMANCE SECURITY NO.: ………………………………………**

We have been informed that ……………………………………………………………………..

*[Name of Contractor](hereafter called “the Contractor”)* has entered into Contract No. *………………………………[reference number of the Contract]* dated …………………………with you, for the …………………………………………………………………………*[insert “Construction”]* of ……………………………………………………………………………….

*[name of Contract and brief description of Works] (hereinafter called “ the Contract”).*

Furthermore, we understand that, according to the conditions of the Contract, a performancesecurity is required.

At the request of the Contractor, we ……………………………………………………………………

*[name of Agency]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ………………………………………..…………………………………*[amount in figures]* (………………………………….……………………………………………………………………………………………………………) *[amount in words],* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This security shall expire, no later than the ………… day of …………. 20……. *[insert date, 28 days beyond the Defects Notification Period]* and any demand for payment under it must be received by us at this office on or before that date.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract document which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice or any such change, addition or modification.

……………........................................................ …….….

[Signature(s)] of the Guarantor Seal

Capacity …………………………..

**FORM OF ADVANCE PAYMENT SECURITY**

**………………………………………………………………………………………………………………………………………………….***[Name and address of Agency, and Address of Issuing Branch or Office]*

Beneficiary : ………………………………………………..………………………………………...

……………………………………………*[Name and Address of Employer]*

Date :……………………………………………

ADVANCE PAYMENT SECURITY No.:………………………….

We have been informed that ……………………………………………..…………………….. *[name of Contractor]* (hereinafter called “the Contractor”) has entered into Contract No…………………………. *[reference number of the Contract]* dated ………………….. with you, for the …………………….. construction of ………………………………. *[name of Contract and brief description]* (hereinafter called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum ……………………………………………………..……..………………*[amount in figures]* ………………………..……………………..…………………………………….)

*[amount in words]* is to be made against an advance payment security**.**

At the request of the Contractor, we ………………………………………………………

…………….*.[name of issuing agency]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ……….…………………………………*.[amount in figures]* (……………………………………………………………………..) *[amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation in repayment of the Advance payment under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

The maximum amount of this security shall be progressively reduced by the amount of the advance payment repaid by the Contractor.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract document which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice or any such change, addition or modification.

This guarantee shall be remain valid and in full effect from the date of the advance payment under the Contract until National Water Supply and Drainage Board, receives full repayment of the same amount from the Contractor.

Consequently, any demand for payment under this security must be received by us at this office on or before that date.

……………........................................................ …….….

[Signature(s)] of the Guarantor Seal

Capacity …………………………..

Witness Signature ……………………………………….

Name & Address ……………………………….

Capacity …………………………………..

**FORM OF RETENTION MONEY GUARANTEE**

………………………………………………………………………………………….

[ Issuing Agency’s Name, and Address of Issuing Branch or Office]

Beneficiary : ………………………………………………………………………………..

……………………………………………[Name and Address of Employer]

Date : ………………..

RETENTION MONEY GUARANTEE No.: ………………………………………

We have been informed that …………………………………………………………….

[name of Contractor] (hereinafter called “the Contractor”) has entered into Contract No…………………………………………………………………….. [reference number of the contract] dated …………………………… with you, for the execution of …………………………….

……………………………………………………………………….. [name of contract and brief description of Works] (hereinafter called “the Contract”).

Furthermore, we understand that, according to the Conditions of the Contract, when the works have been taken over and the first half of the Retention Money has been certified for payment, payment of the second half of the Retention Money may be made against a Retention Money guarantee.

At the request of the Contractor, we ……………………………………………………………………

[name of agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of …………………………………………………………………..……[amount in figures] (…………………………………………………………………………………..[amount in words] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor has not attended to the defects in accordance with the Contract.

This guarantee shall expire, at the latest, …………………………………….[insert 28 Days after the end of the Defects Notification Period]. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

…………….........................

[Signature(s)]

Revised on 04-03-2021

**13. APPENDICES**

**APPENDIX 1 – GENERAL INFORMATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *(i)* | *If pre-qualification is done the bidders are required to include information subsequent to that submitted with the pre-qualification application.* | | | |
| *(ii)* | *For joint ventures, each joint venture partner shall furnish information separately.* | | | |
| **ITB**  **Clause reference** | | **Description** | **Information**  ***(to be filled by the Bidder)*** | **Remarks** |
| **4.1(a)** | | **Legal Status** |  | *Provide certified copies of*  *Registration* |
|  | | Written power of attorney of the signatory to the Bid | *Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 4.1(a)* | |
|  | | If a Joint Venture, names and addresses of Joint Venture Partners | 1. ………………………….  2. ………………………….  3. …………………………. | *Provide a draft copy of the Joint Venture Agreement or alternatively the memorandum of understanding* |
|  | | If a Joint Venture, name of Lead Partner |  |  |
|  | | *For joint ventures, each joint venture shall furnish Legal Status separately* | | |
|  | | **Name (Lead partner)** |  | *Provide certified copies and label as attachment to Clause 4.1(a)* |
|  | | Legal status |  |
|  | | Place of registration |  |
|  | | Principle place of business |  |
|  | | Written power of attorney of the signatory to the Bid | *Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 5.1* | |
|  | | VAT Registration Number |  | |
|  | | **Name (Partner 2)** |  | *Provide certified copies and label as attachment to Clause 4.1(a)* |
|  | | Legal status |  |
|  | | Place of registration |  |
|  | | Principle place of business |  |

Revised on 04-03-2021

|  |  |  |  |
| --- | --- | --- | --- |
|  | Written power of attorney of the signatory to the Bid | *Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 4.1(a)* | |
|  | VAT Registration Number |  | |
|  | **Name (Partner 3)** |  | *Provide certified copies and label as attachment to Clause 4.1(a)* |
|  | Legal status |  |
|  | Place of registration |  |
|  | Principle place of business |  |
|  | Written power of attorney of the signatory to the Bid | *Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 4.1(a)* | |
|  | VAT Registration Number |  | |
| **4.2(a)** | **CIDA Registration** |  | *Provide certified copies and label as attachment to Clause 4.2(a)* |
|  | Registration number |  |
|  | Grade |  |
|  | Specialty |  |
|  | Expiry Date |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**APPENDIX 2A - FINANCIAL STATEMENT**

Summary of assets and liabilities based on the audited financial statements for the last three financial years (Current statement may be unaudited) together with the Financial Performance as indicated in the following schedule shall be submitted.

If the business has not been in operation for three years following schedule shall be submitted for the period that the business has been in operation together with the aforesaid financial statements.

Bidders whose financial capability is marginally less to undertake this bid may show credit facilities available to them fromaBanks.

# Financial performance for the last 3 years

|  |  |  |  |
| --- | --- | --- | --- |
| Year | xxxx | xxxx | xxxx |
| Turnover from Contracting |  |  |  |
| Fixed Assets (FA) |  |  |  |
| Current Assets (CA) |  |  |  |
| Current Liabilities (CL) |  |  |  |
| Long Term Liabilities (LL) |  |  |  |
| Net Worth =Total Assets – Total Liabilities |  |  |  |
| Current Ratio = Current AssetsCurrent Liability |  |  |  |
| Liquidity Ratio = Current Assets(except stock)Current Liability |  |  |  |
| Gearing Ratio = Debt Capital x 100 Total Capital Employed |  |  |  |
| Turnover x 100  Total Operating Assets |  |  |  |
| Net Profit x 100  Total Assets |  |  |  |

Note: Above details shall be supported with Audited Financial Statements.

Revised on 04-03-2021

**APPENDIX 2B – REVOLVING CREDIT LINE FACILITY**

Date : ………..

Name of Bidder : …………………………………..

Details of Commercial Banks providing revolving line of credit facilities.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the**  **Bank** | **Amount of**  **Credit Line**  **(Rs.ML)** | **Address** | **Contact**  **Telephone**  **No.** | **Contact Name**  **and Title** |
|  |  |  |  |  |

**Note : Attach original letters issued from commercial banks addressed to the NWSDB,**

**confirming the revolving line of credit facilities given to the Bidder.**

If prequalification is done, bidders are required to include information subsequent to that submitted with the prequalification application

………………………………….

Signature of Bidder/Authorized Representative

Company Seal :

**APPENDIX 2C- Authorization to obtain References from Bankers**.

**BIDDER SHALL FILL THIS FORM AND PROVIDE WITH THE BID**

…….………… *[Bidder’s Name]*

………………….........*[Address]*

………………………………….

..……………………………….

Manager …………………….. *[Name of Bank]*

………………..……………….*[Address]*

…………………………………………

…………………………………………

Dear Sir,

I hereby Authorize the National Water Supply & Drainage Board, on behalf of the Procurement Committee, to seek references of Bank details in order to evaluate the financial statues of our company M/s ……………………………………………………………………

*……………………………………………………………………….[Bidders Name&Address]* in connections with the ……………………………………………………… *[Contract Name &Contract Number]* bid, submitted by us.

Yours faithfully,

………………………………..

………………………………..

Authorized officer of the Bidder.

Note : If there are more than one bank given, separate letters should be submitted for each Bank.

Revised on 04-03-2021

**APPENDIX 3A - DETAILS OF ONGOING WORKSfor last TEN years (FOR CIVIL WORKS)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Name and Address of Employer** | **Name and details of Contract** | **Contract Price** | **Contract Period** | **Date of award** | **Current progress** | | **Annual value of work done**  **Rs.** | **% Time lapsed from date of commence-ment** | **Remarks** |
| **Physical %** | **Financial (Rs.)** |
| **Contracts under NWS&DB** | | | | | | | | | | |
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| **Contracts with Other Organizations** | | | | | | | | | | |
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**Note: Bidder shall submit awarding letters and other certificates from clients for ongoing works for the proof of above furnisheddetails.**

**Separate sheets for each year shall be used.**

Revised on 26-01-2021

**APPENDIX 3 B - DETAILS OF SIMILAR WORKS COMPLETED WITHIN THE LAST TEN YEARS (FOR CIVIL WORKS)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Name and Address of Employer** | **Name and details of Contract** | **Main or sub Contractor** | **Contract**  **value** | **Contract Period** | **Date of award** | **Annual value of work done**  **Rs.** | **Complete date** | | **Reasons for delay** |
| **original** | **actual** |
| **Contracts under NWS&DB** | | | | | | | | | | |
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| **Contracts with Other Organizations** | | | | | | | | | | |
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**Note: Bidder shall submit awarding letters,end user certificates, completion certificates and other certificates from clients for completed works for the proof of above furnished details.**

**Separate sheets for each year shall be used.**

**APPENDIX 3C - DETAILS OF OTHER WORKS (EXCLUDING SIMILAR WORKS) COMPLETED WITHIN THE LAST**

Revised on 26-01-2021

**TEN YEARS(FOR CIVIL WORKS)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Name and Address of Employer** | **Name and details of Contract** | **Main or sub Contractor** | **Contract**  **value** | **Contract Period** | **Date of award** | **Annual value of work done**  **Rs.** | **Complete date** | | **Reasons for delay** |
| **original** | **actual** |
| **Contracts under NWS&DB** | | | | | | | | | | |
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| **Contracts with Other Organizations** | | | | | | | | | | |
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**Note: Bidder shall submit awarding letters, end user certificates,completion certificates and other certificates from clients for completion works for the proof of above furnished details.**

**Separate sheets for each year shall be used.**

Revised on 26-01-2021

**APPENDIX 3D - DETAILS OF ONGOING WORKSfor last TEN years (FOR M&E WORKS)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Name and Address of Employer** | **Name and details of Contract** | **Contract Price** | **Contract Period** | **Date of award** | **Current progress** | | **Annual value of work done**  **Rs.** | **% Time lapsed from date of commence-ment** | **Remarks** |
| **Physical %** | **Financial (Rs.)** |
|  |  |  |  |  |  |  |  |  |  |  |
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**Note: 1. Bidder shall submit the relevant details for this annexure for the proposed M&E Manufacturers quoted for this Bid.**

**2. Bidder shall submit awarding lettersand other certificates from clients for ongoing works for the proof of above furnished details.**

**Separate sheets for each year shall be used.**

Revised on 26-01-2021

**APPENDIX 3 E - DETAILS OF SIMILAR WORKS COMPLETED WITHIN THE LAST TEN YEARS (FOR M&E WORKS)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Name and Address of Employer** | **Name and details of Contract** | **Main or sub Contractor** | **Contract**  **value** | **Contract Period** | **Date of award** | **Annual value of work done**  **Rs.** | **Complete date** | | **Reasons for delay** |
| **original** | **actual** |
|  |  |  |  |  |  |  |  |  |  |  |
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**Note: 1. Bidder shall submit the relevant details for this annexure for the proposed M&E Manufacturers quoted for this Bid.**

**2. Bidder shall submit awarding letters, completion certificates, end user certificates and other certificates from clients for completed works for the proof of above furnished details.**

**Separate sheets for each year shall be used.**

Revised on 04-03-2021

**APPENDIX 4A - DETAILS OF CONTRACT MANAGEMENT AND KEY TECHNICAL STAFF**

**Note:**

1. In case of Engineers and Technical officers Bio-data should be submitted.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Category** | **Name and**  **Qualifications** | **Experience in years** | **No. proposed** | |
| **By NWSDB** | **By Contract** |
| 1.  2.  3.  4.  5.  6.  7. | Contract Manager / Site Manager  Planning Engineer  QA/QC Engineer  Engineer (Civil)  Engineer (Mechanical)  Engineer (Electrical)  Quantity Surveyor |  |  |  |  |
| 8. | Technical Officers |  |  |  |  |
| 9. | Any Other services required by the Contractor for the Contract  1. Specialist Services  2.  3.  4. |  |  |  |  |

Revised on 06-11-2020

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **APPENDIX 4B – TIME SCHEDULE FOR KEY STAFF** | | | | | | | | | | | | | | | | | | |
|  |  |  | Months (in the form of a Bar Chart) | | | | | | | | | | | | | | | |
| **Name** | **Position** | **Activities** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **Number of Months** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Full-time:  Part-time: **…………….**

APPENDIX 5A - SCHEDULE OF CONTRACTOR’S EQUIPMENT PROPOSED

**FOR PIPE LAYING**

**Note:**

1. The Bidder should declare the actual plant and equipment that he proposes to use for the execution of the works. These plant and equipment should be in usage for not more than five years after their first purchase/use.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Description** | **Minimum**  **No. Provide by the Contractor** | **Minimum Period Proposed** | **Remarks (hired/own)** |
| 1. | Excavator/ Loader 1-2 m3 |  |  |  |
| 2. | Hand Rammers |  |  |  |
| 3. | Soil Compactor – Mechanical ½ ton |  |  |  |
| 4. | Hand Roller 2 – 3 ton |  |  |  |
| 5 | Dumper minimum capacity 1 m3 |  |  |  |
| 6. | Concrete mixer complete with scales etc. 0.25 – 0.5 m3 |  |  |  |
| 7 | Concrete vibrator 38mm dia. |  |  |  |
| 8. | Portable Air compressor complete with hose and pneumatic tools minimum capacity 2.83 m3 (100 cu.ft) per minute and pressure 70 kg/cm2 (100 psi) |  |  |  |
| 9.  10. | Mobile crane up to 5 ton  Portable welding set 500 A capacity complete with welding accessories. |  |  |  |
| 11. | Generating Set up to 4 kw |  |  |  |
| 12. | Bitumen sprayer up to 6 ton |  |  |  |
| 13 | Water Tanker 4 – 6 m3 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Description** | **Minimum**  **No. Provide by the Contractor** | **Minimum Period Proposed** | **Remarks (hired/own)** |
| 14 | Water Pump (complete with hoses etc.) 100 ft3/min |  |  |  |
| 15 | Rubber Roller up to 5 ton |  |  |  |
| 16 | Truck with Tipper 3 – 8 ton |  |  |  |
| 17. | Barbending Equipment. |  |  |  |
| 18. | Engineer’s Level |  |  |  |
| 19. | Theodolite. |  |  |  |
| 20. | Shoring |  |  |  |
| 21. | Pressure testing equipment |  |  |  |
| 22.  ….  ….  …. | Asphalt Cutter  ...........................  ..............................  .............................. |  |  |  |

Note:

1. The Bidder shall submit a documentary evidence for machinery to be

hired/lease for the Contract.

APPENDIX 5B - SCHEDULE OF CONTRACTOR’S EQUIPMENT PROPOSED

**FOR CIVIL CONSTRUCTION**

**Note:**

1. Bidder should declare the actual plant and equipment that he proposes to use for the execution of the works. These plant and equipment should be in usage for not more than five years after their first purchase/use.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | | **Minimum**  **No. Provide by the Contractor** | | **Minimum Period Proposed** | | **Remarks (hired/own)** | |
| 1. | Excavator/ Loader 1-2 m3 | |  | |  | |  | |
| 2. | Hand Rammers | |  | |  | |  | |
| 3. | Soil Compactor – Mechanical ½ ton | |  | |  | |  | |
| 4. | Hand Roller 2 – 3 ton | |  | |  | |  | |
| 5 | Dumper minimum capacity 1 m3 | |  | |  | |  | |
| 6 | Steel Wheel Roller up to 4 ton | |  | |  | |  | |
| 7. | Concrete mixer complete with scales up to 0.25 | |  | |  | |  | |
| 8 | Concrete mixer complete with scales etc 0.25 - 0.5 m3 | |  | |  | |  | |
| 9 | Concrete mixer complete with scales over 0.5 m3 | |  | |  | |  | |
| 10 | Concrete vibrator 38mm dia. | |  | |  | |  | |
| 11 | Portable Air compressor complete with hose and pneumatic tools minimum capacity 2.83 m3 (100 cu.ft) per minute and pressure 70 kg/cm2 (100 psi) | |  | |  | |  | |
| 12  13  14 | Mobile crane up to 2 ton  Mobile crane up to 5 ton  Lorry / Truck 5 ton capacity | |  | |  | |  | |
| **Item** | | **Description** | | **Minimum**  **No. Provide by the Contractor** | | **Minimum Period Proposed** | | **Remarks (hired/own)** | |
| 15 | | Portable welding set 500 A capacity complete with welding accessories. | |  | |  | |  | |
| 16 | | Generating Set up to 4 kw | |  | |  | |  | |
| 17. | | Bitumen sprayer up to 6 ton | |  | |  | |  | |
| 18 | | Road Roller 6 –10 ton | |  | |  | |  | |
| 19 | | Water Tanker 4 – 6 m3 | |  | |  | |  | |
| 20 | | Water Pump (complete with hoses etc.) 100 ft3/min | |  | |  | |  | |
| 21 | | Rubber Roller up to 5 ton | |  | |  | |  | |
| 22 | | Pneumatic Roller 10 ton | |  | |  | |  | |
| 23 | | Truck with Tipper 3 – 8 ton | |  | |  | |  | |
| 24 | | Bar-bending Equipment | |  | |  | |  | |
| 25 | | Engineer’s Level | |  | |  | |  | |
| 26  27 | | Theodolite.  Welding Plant | |  | |  | |  | |
|  | | 1m x 1m x 1 m scaffolding units with diagonal ties, bends, base plates, connecting couplings, clamps etc. made of 48 mm dia. DI tubes or scaffolding units equivalent to above | |  | |  | |  | |
| 28  29  30  31  32  …. | | Shoring  Power Analyzer  Insulation Resistance Tester  Earth Resistance Tester  Lugging Tool  ................. | |  | |  | |  | |

Note:

1. The Bidder shall submit a documentary evidence for machinery to be hired/lease for the Contract

**APPENDIX 6 - WORK PROGRAMME PROPOSED BY THE CONTRACTOR**

Scheme : *(To be filled the design Engineer)*

Contract No : *(To be filled the design Engineer)*

Contractor :

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Construction Activity** | **Programme (Months)**  *(1st ,2nd , etc are months from the start date)* | | | | | | | |
| **1st** | **2nd** | **3rd** | **4th** | **5th** | **6th** | **7th** | **8th** |
| *Design Engineer should provide major*  *components of the scheme.* |  |  |  |  |  |  |  |  |

Note : Contractor shall submit the predicted cash flow based on the work programme.

**APPENDIX 7 - BIDDER’s Authorization to sign the Contract**

[The Bidder shall require to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letter head of the Bidder and should be signed by a person with the proper authority to sign documents that are binding on the Bidder. The bidder shall include it in its bid].

Date :*[insert date (as day, month and year) of Bid Submission]*

No. : *[insert Contract number]*

Chairman,

National Water Supply & Drainage Board,

Galle Road,

Ratmalana, Sri Lanka.

**For ……………………………………………... of Water Supply Scheme**

**Contract No. …………………………………..**

We …………………………………………*[insert complete name of the Bidder]*, of ……………………………………….…………*[insert full address of Bidder],* do hereby authorize …………….………………………….. *[insert complete name of Bidders authorize officer who signs the Contract]* to submit a bid on behalf of our company and to subsequently negotiate and sign the Contract.

Specimen Signature of the Authorized officer to sign the Contract…………………………………. ………………………………………………………

Signed : …………………………………*[insert signature(s) of authorized representative(s) of the Bidder]*

Name : ………………………………………………………..*[insert complete name(s) of authorized representative(s) of the Bidder]*

Title : …………………………………….. *[insert title]*

Duly authorized to sign this Authorization on behalf of : ……………………………*[insert complete name of Bidder]*

This is to certify that the seal and signatures of legal representative and authorized person affixed to power of attorney attached hereto are found to be authentic.

………………………………

Signature of Attorney at Law

……………………………..

Seal of Attorney at Law

In the place of (…………………………………………………………………………….. address)

Date ……………………

# APPENDIX 8 - LIST OF MANUFACTURERS DETAILS FOR GOODS TO SUPPLY TO THIS CONTRACT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Name of the Good (item/s) | Manufacturer’s Name | Manufacturer’s **Address** | NWSDB PQ item or not | Remarks |
|  |  |  |  |  |  |
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# APPENDIX 9–FUNCTIONAL GUARANTEE FOR DI/PE PIPES, FITTINGS, SPECIALS, RUBBER RINGS AND ACCESSORIES

[Address of the Manufacturer]

…………………………………

…………………………………

…………………………………

Chairman,

National Water Supply & Drainage Board,

Galle Road,

Ratmalana, Sri Lanka.

**For ……………………………………………... of Water Supply Scheme**

**Contract No. …………………………………..**

We ………………………………………………………………………………………*(Complete Name & Address of the PE/DI pipe manufacturer)* hereby guarantee that,

1. The Supply of Pipes for the above Contract shall be manufactured at the manufacturing factory at ……………………………………………………………... ………………………………………………*(Address of the manufacturing factory)*.

2. The Supply of Pipe Fittings for the above Contract shall be manufactured at the manufacturing factory at …………………………………………………………... …………………………………………..…… *(Address of the manufacturing factory)*.

3. The Supply of Rubber Rings for the above Contract shall be manufactured at the manufacturing factory at ……………………………………………………………... …………………………………………...… *(Address of the manufacturing factory)*.

4. The Supply of Couplings for the above Contract shall be manufactured at the manufacturing factory at ……………………………………………………………... ……………………………………………….. *(Address of the manufacturing factory)*.

5. The Supply of Restraint Joints shall be manufactured at the manufacturing factory at …………………………………………………………………………………………... …………………………………………….. *(Address of the manufacturing factory)*.

We , Manufacturer of DI/PE pipes ,hereby guarantee that,

1. DI/PE pipes, fittings and rubber rings supplied under the Contract shall fit properly and adequately to ensure leak proof pipeline installations under all working conditions.
2. We will unconditionally undertake to replace any material rejected by the Engineer within the time period as agreed with the Engineer during implementation stage at no additional cost to NWSDB ensuring the timely implementation of the project.
3. We will unconditionally undertake that the Nominated Inspection Agency issues a certificate ensuring that DI/PE pipes, fittings and rubber rings inspected shall fit properly and adequately to ensure leak proof pipeline installations under all working conditions upon shipment.

…………………………….

Signature of the Authorised

Officer on behalf of the Pipe manufacturer

Name : ……………………………………………………….

Capacity : ……………………………………………………….

Witness :

1 Signature : ……………………………………………………………

Name : ……………………………………………………………

Capacity : ……………………………………………………………

Address : ……………………………………………………………

2 Signature : ……………………………………………………………

Name : ……………………………………………………………

Capacity : ……………………………………………………………

Address : ……………………………………………………………

**APPENDIX 10- Manufacturer’s Authorization to sign the ContractAND CONFIRMATIONOF CAPABILITYOF PRODUCTION of GOODS&Supplyof goods according to Delivery Schedule.**

[Address of the Manufacturer]

…………………………………………..

………………………………………….

Chairman, ………………….Procurement Committee,

…………………………………………,

………………………………………....,

………………………………………….

**For ……………………………………………... of Water Supply Scheme**

**Contract No. …………………………………..**

We ………………………………………… [*insert complete name and address of Manufacturer*], who are official manufacturers of …………………………. [*insert relevant Goods and Accessories*] having factories at ………………………………*[insert full address of Manufacturer’s factories],* do hereby authorize …………….…………………. *[insert complete name of Bidder]* tosupply to this Contract the purpose of which is to provide ………………………………. [*insert relevant Goods and Accessories*] manufactured by us and to subsequently negotiate and sign the Contract.

We, confirm that we have sufficient production capacity to produce the quantity of aforesaid Goods to supply to this Contract and shall deliver them according to the delivery schedule indicated in the bid.

We hereby extend our full guarantee and warranty in accordance with Clause 15 of the General Conditions of Contract, with respect to the …………………………. [*insert relevant Goods and Accessories*] offered by the above firm.

Signed : …………………………………*[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name : ………………………………………………………..*[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title : …………………………………….. *[insert title]*

Duly authorized to sign this Contract on behalf of : ……………………………*[insert complete name of Manufacturer]*

……………………………..

Seal of the Company.

**APPENDIX 11 - Manufacturer’s awareness of the TOR for Independent Inspection Agency**

[Address of the Manufacturer]

…………………………………………..

………………………………………….

………………………………………….

Chairman, …………………… Procurement Committee,

National Water Supply & Drainage Board,

Galle Road,

Ratmalana, Sri Lanka.

**For ……………………………………………... of Water Supply Scheme**

**Contract No. …………………………………..**

We, …………………………………………………………………….[*name of manufacturer*] of ……………………………………………………...…………………………………………………………….……………………………………………………….*[address of manufacturer]*confirm that we have noticed that

a) Appendix 13 – TOR for Independent Inspection Agency.

b) Clause 21.3 of Contract Data in Volume 2.

……………………………................... ………………………….

Authorised Officer of the Manufacturer. Seal of the Company.

Name :……………………………………

**APPENDIX 12 - Manufacturer’s Warranty for the goods supplied**

**under the Contract**

[Address of the Manufacturer]

…………………………………………..

………………………………………….

Chairman,

National Water Supply & Drainage Board,

Galle Road,

Ratmalana, Sri Lanka.

**For ……………………………………………... of Water Supply Scheme**

**Contract No. …………………………………..**

We, ……………………………………………………………….[*name of manufacturer*] of ………………………………………………………………………………………………………………….…………………………………..…….*[address of manufacturer]*warrant that the ………………………………………. [*insert the Goods and accessories*] supplied under this Contract are new, unused, of the most recent or current models and have incorporated all recent improvements, and no defects arising out of the design, material or workmanship from any act that may be develop under normal use of the supplied goods.

If there is any defects during the warranty period specified in the Clause 21.7 of the General Conditions of Contract, we shall attend to repair or replace the defective goods with all reasonable speed without any cost to the Purchaser.

………………………………………… ..…………….………

Authorised Officer of the Manufacturer. Seal of the Company.

Name :…………………………………… Date :…………………..

In the capacity of …………………………

This is to certify that the seal and signatures of authorized officer of the manufacturer affixed to Manufacturer’s warranty, are found to be authentic.

………………………………

Signature of Attorney at Law

……………………………..

Seal of Attorney at Law

In the place of (…………………………………………………………………………….. address)

Date ……………………

**Appendix 13A - TOR FOR INDEPENDENT INSPECTION AGENCY for DI pipes & fittings**

**(Appendix 13A- 1 of 6)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per Specification** |
| **1.**  **1.1** | **Physical Proportion**  **Socket & Spigot Pipes**  Pipe wall thickness  External Diameter  Internal Diameter  Length of Pipe  Socket Length  Chamfering of Spigot end  C - Class  Grooves in the Socket.  Thickness of Internal Cement lining  Smoothness of Internal Cement lining.  External Zinc Coating.  Thickness & Weight of external Zinc Coating.  Compressive Strength of the Cement Lining.  Curing period of Pipes after Cement Lining.  Smoothness of external Bitumen Coating. |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **(Appendix 13A-2of 6)** | | | | |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per Specification** |
| **1.2**  **1.3** | Flanged Pipes  Flange thickness  Flange diameters  No. of bolt holes  Length of pipe  Wall Thickness of Pipe  C – Class of Pipe  Cleanliness of Flange  Raised Face or Flat Face  Smoothness of Raised Face/Flat Face  Integrally casted or Factory Welded  Condition of weld if welded.  Thickness of Internal Cement lining  Smoothness of Internal Cement Lining.  External Zinc Coating.  Thickness & Weight of external Zinc Coating  Method of Application of Bitumen Coating.  Compressive Strength of the Cement Lining  Curing period of Pipes after Cement Lining.  Smoothness of external Bitumen Coating  **Socketed Bends**  Socket Diameter  Length of Bend  C -Class of Bend  Wall Thickness of bend  Grooves in the Socket. |  |  |  |

**(Appendix 13A-3 of 6)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per Specification** |
| **1.4** | Thickness of Internal Cement lining  Smoothness of Internal Cement lining  External Zinc Coating  Thickness & Weight of external cement coating  Method of Application of Bitumen Coating  Compressive Strength of the Cement Lining  Curing period of Bends after Cement Lining  Smoothness of external Bitumen Coating.  **Flanged Bends**  Flange Diameter  Length of Bend  Thickness of Flange  No. of Bolt holes  Wall Thickness of Pipe  Raised Face or Flat Face  Smoothness of Raise Face/ Flat Face  Integrally Casted / Factory welded condition of  Weld if welded  C – class  Thickness of Internal Cement lining  Smoothness of Internal Cement lining  External Zinc Coating  Thickness & Weight of External Coating  Compressive Strength of the Cement Lining. |  |  |  |

**(Appendix 13A-4 of 6)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per Specification** |
| **1.5** | Method of Application of Bitumen Coating  Compressive Strength of the Cement Lining  Curing period of Bends after Cement  Smoothness of external Bitumen Coating.  **Tees**  **Socketed Tees**  Length of Tees  Length of Branch  Diameter of Tee (all faces)  Wall Thickness of Tees  Wall Thickness of Branch  Condition of grooves in socket  C – Class  Thickness of Internal Cement lining  Smoothness of Internal Cement lining.  External Zinc Coating  Thickness & Weight of External Zinc Coating  Method of Application of Bitumen Coating  Compressive Strength of the Cement Lining  Curing period of Tees after Cement Lining  Smoothness of external Bitumen coating. |  |  |  |

**(Appendix 13A-5 of 6)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per Specification** |
| **1.6** | **Flanged Tees**  Length of Tee  Length of Branch  Diameter of Tee (all Branches)  Wall Thickness of Tee  Diameter of Flanges (All faces)  No of Bolt holes  Flange thickness  Integrally Casted or Factory Welded  Condition of weld if welded  Flanges of Raised Face or Flat Face  Smoothness of Raised Face/ Flat Face  C – Class  Thickness of Internal Cement lining  Smoothness of Internal Cement lining.  External Zinc Coating  Thickness & Weight of external Zinc Coating  Method of Application of Bitumen Coating  Compressive Strength of the Cement Lining  Smoothness of external Bitumen coating. |  |  |  |

**(Appendix 13A-6 of 6)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per Specification** |
| **2.**  **2.1** | **Strength &Metallurgical Properties**  **DI Pipes & Fittings**  1. Method of CastingMetallurgical Properties  ……………. Tensile Strength  Hardness minimum Elongation Positive  Internal Hydrostatic Pressure Negative  Internal Pressure  2. Manufacturing Standards of Pipes &  Fittings.  3. Lubricant make & seal type of designation  of lubricant.  4. Manufacturing of lubricant  5. Manufacturing Standard of lubricant  Joint Rings/ Gaskets  6. Materials of Joint Ring/ Gasket  7. Manufacturing Standards of Joint Ring/  Gasket  8. Hardness of materials of Joint Ring/  Gasket.  9. Seal Type designation of Joint Ring/  Gasket Nuts & Bolts.  10. Materials of Nuts & Bolts Washers  11. Manufacturing Standard of Nuts & Bolts  12. Number of Washers/ Bolt. |  |  |  |

**APPENDIX 13B - TOR FOR INDEPENDENT INSPECTION AGENCY FOR PE PIPES & FITTINGS**

**(Appendix 13B-1 of 4)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per specification** |
| 1. | **Physical Proportion/properties** |  |  |  |
| 1.1 | **Socket & Spigot Pipes** |  |  |  |
|  | Pipe wall thickness  External Diameter  Length of Pipe  SDR category  PE designation  Elongation at Break for e <5 m  5m < e <12 mm  e >12 m  Melt Mass flow rate (MFR)  Oxidation Induction time  Ovalty  Density  Effect on water quality |  |  |  |
| 1.2 | **Flanges** |  |  |  |
|  | Flange thickness  Flange diameters  No. of bolt holes  Cleanliness of Flange  Raised Face or Flat Face  Smoothness of Raised Face/Flat Face  Integrally casted or Factory Welded  Condition of weld if welded  Elongation at Break for e <5 m  5m < e <12 mm  e >12 m  Ovalty  Melt Mass flow rate (MFR)  Oxidation Induction time  Density  Effect on water quality |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per specification** |
| 1.3 | **Bends** |  |  |  |
|  | Diameter  Length of Bend  SDR  PE designation  Wall thickness of bend  Melt mass flow rate (MFR)  Oxidation induction time  Cohesive resistance  Tensile strength  Ovalty  Density  Effect on water quality |  |  |  |
| 1.4 | **Tees** |  |  |  |
|  | Length of tees  Length of Branch  Diameter of tee (all faces)  Wall thickness of Tees  Wall thickness of Branch  SDR  PE Designation  Melt mass flow rate (MFR)  Oxidation induction time  Density  Ovalty  Tensile strength  Effect on water quality  Cohesive resistance |  |  |  |
| 2. | **Strength & Mechanical Properties** |  |  |  |
| 2.1 | **PE Pipes & Fittings** |  |  |  |
|  | Hydrostatic strength at 20 0C  Hydrostatic strength at 80 0C  Manufacturing Standards of Pipes & Fittings. |  |  |  |

**(Appendix 13B-2 of 4)**

**(Appendix 13B-3 of 4)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per specification** |
| 3. | **Accessories** |  |  |  |
| 3.1 | **Steel flange converter** |  |  |  |
|  | Dimension  Physical appearance  Ovality |  |  |  |
| 3.2 | **Slim flange assembly** |  |  |  |
|  | Dimension  Physical appearance  Ovality |  |  |  |
| 3.3 | **Nuts & Bolts** |  |  |  |
|  | Dimensions  **Tensile strength**   * 1. yield stress or stress at permanent set limit of 0.2%   2. percentage elongation after fracture   3. stress under proof load   4. strength under wedge loading   5. hardness   thickness of galvanized coating  Ovality |  |  |  |
| 4. | **Joint rings & Gaskets** |  |  |  |
|  | Appearance & finish  Tensile strength  Elongation of break  Compression hardness  Micro biological deterioration |  |  |  |
| 4. | **Material Characteristics** |  |  |  |
|  | Compound Density  Carbon black content (black compound) % by mass  Carbon Black dispersion (black compound) grade range |  |  |  |
| 5. | **Quality Assurance** |  |  |  |
| 5.1 | **Raw Materials (R/M)**  R/M received and kept separately in quarantine area on R/M test report received (Report Ref. No.) on |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | | **Test Performed** | **Results** | **Acceptability as per specification** |
| 5.2 | **Manufacture**  Date and Time of commencement of batch  Date and Time of completion of batch  Date batch sent to quarantine area |  |  |  |
| 5.3 | **Physical/Mechanical Checkings (by In-House Q/A Department and Laboratory)**   1. Dimension and appearance checking 2. Heat reversion test 3. General test 4. Batch test 5. Tensile test |  |  |  |
| 5.4 | Pipe sample sent for chemical test |  |  |  |
| 5.5 | Pipes passed by inspector for release to general storage area |  |  |  |
| 5.6 | General storage area for packing  Wrapping/packing completed and labelled and separately stored, awaiting chemical test results for pipe. |  |  |  |
| 5.7 | **Verification of Quality**  Chemical tests results of pipe received. |  |  |  |
| 5.8 | Separation of coils pipes not complying With BS |  |  |  |
| 5.9 | Test certificate submitted for inspection agent/NWSDB’s approval |  |  |  |
| 5.10 | Purchaser’s approval received for shipment |  |  |  |
| 5.11 | **Containerisation & Final Approval**  Pipe stocks loading in to container & passed by Q/A Department & Inspection Agent |  |  |  |
| 5.12 | Final approval for transport & shipment |  |  |  |

**(Appendix 13B-4 of 4)**

**APPENDIX 13C - TOR FOR INDEPENDENT INSPECTION AGENCY FOR DI VALVES, MANHOLE COVERS AND SURFACE BOXES**

**(Appendix 13C-1 of 7)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Test performed** | **Results** | **Acceptability as per specification** |
| 1. **GATE/SLUICE VALVES**    1. Performance test – 2. Operate Fully Closed to Fully Open – times 3. Operate Fully open to Fully close – times    1. Leakage test for internal pressure    2. Material   Body  Spindle  Metal faces and seal   * 1. Length between flanges   1.5 End flanges -  Pressure Rating  Dimensions  Bolt Circle dia  1.6 Gear Ratio  Unbalanced head  Seat test pressure  Body test pressure   * 1. Internal protection coating   2. External protective finish coating  1. **BUTTERFLY VALVES**    1. Performance test – 2. Operate Fully Closed to Fully Open – times 3. Operate Fully open to Fully close – times    1. Leakage test for internal pressure    2. Leakage test for external pressure    3. Hydrostatic test    4. Seat tightness test   2.7 Material  Valve body  Valve disc  Valve seat  **(Appendix 13C-2 of 7)**  Shaft  Shaft seals  2.8 Face to face dimensions of the valves  2.9 End Flanges  Pressure rating  Dimensions  Bolt circle dia  2.10 Gear ratio of gearing  Unbalanced head  Seat test pressure  Body test pressure  2.11 Internal protective finish:  Material  Thickness  2.12 External protective finish:  Material  Thickness  **3**. **AIR VALVES**  3.1. Performance test –   1. Operate Fully Closed to Fully Open – times 2. Operate Fully open to Fully close – times   3.2. Body strength test  3.3. Leakage test  3.4. Material of Ball (Stainless Steel  or Plastic)  3.5. Flanges (if applicable)  Pressure rating  Standard Dimensions  Bolt circle dia  3.6 Seat test pressure  3.7 Body test pressure  3.8 Internal protective finish  3.9. External protective finish  **4 CHECK VALVES**  **(Appendix 13C-3 of 2)**  4.1. Performance test –   1. Operate Fully Closed to Fully Open – times 2. Operate Fully open to Fully close – times   4.2 Is this non Slam  4.3 Is this Spring loaded  4.4 Material  Valve body  Hinge pin and bushes  Disc  Disc encapsulating material  4.5. End Flanges  Pressure rating  Dimensions  Bolt circle dia  4.6. Face to face dimensions of the valve  4.7. Seat test pressure  4.8. Body test pressure  4.9. Internal protective finish  4.10. External protective finish  **5. PRESSURE REDUCING VALVES**  5.1 Material  Main valve  Body  Internal valve  Indicator rod  Relay Valve  Body  Spindle  Diaphragm.  Spring  5.2 Length between flanges  5.3 End Flanges  Pressure rating  Dimensions  Bolt circle dia  **(Appendix 13C-4 of 7)**  5.4 Minimum running pressure difference  5.5 Minimum control pressure  5.6 Internal protective finish  5.7 External protective finish  **6. PRESSURE SUSTAINING/RELIEF VALVES**   * 1. Material   Main valve  Body  Internal valve  Indicator rod  Relay Valve  Body  Spindle  Diaphragm  Spring  6.2. Length between flanges  6.3 End Flanges  Pressure rating  Dimensions  Bolt circle dia   * 1. Internal protective finish   2. External protective finish   **7. FLOW CONTROL VALVES**  7.1 Material  Main valve  Body  Internal valve  Indicator rod  Relay Valve  Body  Spindle  **(Appendix 13C-5 of 7)**  Diaphragm  Spring  7.2. Length between flanges   * 1. End Flanges   Pressure rating  Dimensions  Bolt circle dia   * 1. Minimum flow   2. Constant flow   3. Internal protective finish   4. External protective finish   **8. ALTITUDE VALVES**  8.1. Material  Main valve  Body  Internal valve  Indicator rod  Relay Valve  Body  Spindle  Diaphragm  Spring  8.2 Length between flanges  8.3 End Flanges  Pressure rating  Dimensions  Bolt circle dia  8.4. Internal protective finish  8.5. External protective finish  **9. BALL FLOAT VALVES** 9.1. Body test pressure9.2 End FlangesPressure rating Dimensions  Bolt circle dia  **(Appendix 13C-6 of 7)** 9.3 Material Valve Body  Float  Lever and links 9.4 Body test pressure9.5 Close assembly test pressure **10. FLAP VALVES**   MaterialFrame and door Sealing  Hinge pin  Links Flanges Pressure rating  Dimensions  Bolt circle dia 11. FIRE HYDRANTS 11.1 Screw Down Type 11.1.1. Inlet Flanges Pressure rating  Dimensions  Bolt circle dia 11.1.2 Body test pressure11.1.3 Valve and seat test pressure11.1.4. Internal protective finish11.1.5. External protective finish **11.2. Dry Barrel Type** 11.2.1 No. of outlet nozzles 11.2.2. Nominal diameter 11.2.3 Inlet Flange Pressure rating  Dimensions  Bolt circle dia 11.2.4. Material, Hardness range of Gaskets **(Appendix 13C-7 of 7)** 11.2.5. Material of Nuts and Bolts **12. SURFACE BOXES AND MANHOLE COVERS**   * 1. Material   2. Class   Manhole Covers  Surface Boxes  12.3. Coating |  |  |  |

**APPENDIX 13D - TOR FOR INDEPENDENT INSPECTION AGENCY FOR joint protection Material**

**(Appendix 13D-1 of 1)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item No** | **Description** | **Test Results** | **Measurement Value /**  **Observation Comments** |
|  | **General** |  |  |
| 1 | Volatile Organic Compound Content |  |  |
| 2 | Self-Supporting |  |  |
| 3 | Cracking |  |  |
| 4 | Moisture and state limit |  |  |
| 5 | Resistivity to;  Mineral Acid  Alkalis  Salts |  |  |
| 6 | Suitability Climate |  |  |
|  | **Mastic Primer** |  |  |
| 1 | Specific Gravity |  |  |
| 2 | Flash Point |  |  |
|  | **Mastic Paste** |  |  |
| 1 | Specific Gravity |  |  |
| 2 | Flash Point |  |  |
| 3 | Specific Volume |  |  |
| 4 | Maximum Service Temperature |  |  |
| 5 | Solid Content |  |  |
|  | **Mastic Tape** |  |  |
| 1 | Flash Point |  |  |
| 2 | Maximum Service Temperature |  |  |

**APPENDIX 13E - TOR FOR INDEPENDENT INSPECTION AGENCY FOR Pump MOtOr Assemblies**

**(Appendix 13E-1 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test** | **Measurement Value** /  **Observation Comments** |
| 01. | **Visual Tests**  Casting , Machining, Welding ,  Dimensions, finish data like fillets, corners etc.  Surface finish, surface preparation, painting.  Alignment of the whole assembly. |  |
| 02. | **Test Set – up / facilities**  Suitability of the factory test set – up for the specified pump tests.  Suitability of the instrumentation for measurements, data transfer / storage / processing ,report generation, including acceptable calibration. |  |
| 03. | **Status of the tested equipment, whole set –up,**  **Instrumentation etc after running for an adequate time stabilization.**  Temperature at various points.  noises  Vibrations  Leakages  Distortions  Cavitations  Others |  |
| 04. | **Measurements ( General)**  Voltage  Currant  Power  Power Factor  Insulation Resistance  (others specific to the particular Contract) |  |

**(Appendix 13E-2 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test** | **Measurement Value** /  **Observation Comments** |
| 05. | **Operational Measurements**  Flow rate  Delivery pressure  Suction pressure  Power drawn by motor |  |
| 06. | **Hydrostatic Test**  For pumps between 20 – 75 kw.  Test the components at 150% of the pump shut off head for 10 minutes.  For pumps larger than 75 kw.  Test the components at 150% of the pump shut off head for 30 minutes. |  |

Revised on 01-01-2021

**APPENDIX 13F - TOR FOR INDEPENDENT INSPECTION AGENCY FOR GAS CHLORINATORS, CHEMICAL EQUIPMENTS& ACCESSORIES**

**(Appendix 13F-1 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test/Activity** | **Measurement Value/Observations & Comments** |
| 01 | **Visual Tests**  Castings  Machining  Welding, fillets, corners and similar features  Surface finish and painting  Drillings, positioning etc.  Assembly |  |
| 02 | **Operational status of the equipment under test** ( after operation until stabilisation)  Temperature at various points  Excessive noise emissions  Excessive shaking or vibration  Excessive leakages  Any distortions of parts  Possible cavitation  Measuring equipment |  |

**(Appendix 13F-2 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test/Activity** | **Measurement Value/Observations & Comments** |
| 03 | **Measurements** (General)  Voltage  Current  Power  Power factor  Insulation resistance |  |
| 04 | **Operational Measurements**  Flow rate  Delivery pressure  Suction pressure  Power drawn by motor |  |
| 05 | **Hydrostatic Test**  For pumps between 20 – 75 kw.  Test the components at 150% of the pump shut off head for 10 minutes.  For pumps larger than 75 kw.  Test the components at 150% of the pump shut off head for 30 minutes. |  |

**APPENDIX 14 - LOCAL ACCREDITED AGENT’S Confirmation of Supply OF GOODS according to WORK PROGRAMME.**

***Note: This is to be typed on a company letter heading***

[Address of the Local Accredited Agent]

…………………………………………..

………………………………………….

………………………………………….

Chairman,

National Water Supply & Drainage Board,

Galle Road, Ratmalana.

Sri Lanka.

# Bid for ……………………………… Water Supply Scheme

**Contract No…………………………………….**

We, ………………….…………………………………………………………………[*name ofthe Local Accredited Agent*] of ……………………………………………………… …………………………………………….……………………………………………………………….…….*(address of the Local Accredited Agent)* confirm that we willSupply& Deliver………………………….. [insert the relevant Goods and accessories] to this Contract to the bidder M/s. ……………………………………………………….*(Name& Address of the bidder)* according to the Work programme.

…………………………….

Authorised Signatory Attested by the Attorney at Law

and the Company Seal

…………………………………..

Signature of the Attorney at Law

Name : ………..……………………………….

In the Capacity of :……………………………… Seal ……………………………

In the place of …………………….…

……………………………...*(address)*

Witnesses :

1 Signature : ……………………………………………………………

Name : ……………………………………………………………

Capacity : ……………………………………………………………

Address : ……………………………………………………………

2 Signature : ……………………………………………………………

Name : ……………………………………………………………

Capacity : ……………………………………………………………

Address : ……………………………………………………………

**APPENDIX 15A- PRE-SHIPMENT INSPECTION OF DI PIPES & FITTINGS**

# BY THE EMPLOYER -CHECK LISTS

**(Appendix 15A-1of 13)**

Name & Location of the Factory

Pipe : - ………………………………………………………………………………

………………………………………………………………………………

Fittings : - ………………………………………………………………………………

….……………………………………………………………………………

Valves : - ..………………………………………………………………………………

..………………………………………………………………………………

Couplings :- …………………………………………………………………………………

…………………………………………………………………………………

Adaptors :- …………………………………………………………………………………

…………………………………………………………………………………

Flanged Pipes : - …………………………………………………………………………………

…………………………………………………………………………………

(Requirement - Pipes and fittings should be manufactured by same manufacturer or manufacturing group.)

Applicable Standards

Manufacturing Standards : (ISO 2531 :2009/BSEN 545: 2010) …………….

Of pipes & Fittings

Manufacturing Standards of

Joint Rings : (BSEN 681-1:1996/ISO 4633:2015) ………….

Quality Assurance Standards : (ISO 9001: 2015) ……………

Parameters to be checked

Markings to casted on, painted or cold stamped

Mechanical Properties, Hardness, Elongation,

Hydrostatic Pressure Tests

Wall Thickness

Length of straight pipes

Straightness

External Coating

Internal Coating

Testing of Welded Flanges

Chemical Composition of Pipes & Fittings (Composition of metals).

Condition of Pipes& Fittings

Warping or shrinkage

Surface or other defects detrimental to functionality : Satisfactory/Unsatisfactory

Handling of pipes, Fittings after production : Satisfactory/Unsatisfactory

Inspection Procedure

Witness testing a sample with Factory QC Team : Yes/No

Witness testing with Independent Inspection Agency : Yes/No

**(Appendix 15A-2of 13)**

Revised on 04-03-2021

**PRE-SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

Mark Yes or No in the Remarks Column as Appropriate Date of Inspection …………

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Technical  Specifications  Clause No. | Description | | Values as per  Specifications | Satisfactory/  Unsatisfactory | | Remarks | |
| GENERAL | | | | | | | |
| Quality  Assurance | Availability of Valid Quality Standard  Certificates | | ISO 9001:2008/2015 |  | |  | |
| Independent  Inspection | Availability of Inspection Agency.  Certificate before Shipment | | - |  | |  | |
| Markings | Pipe Material (Ductile Iron) | | - |  | |  | |
|  | Year of Manufacture (Last Two Digits) | | - |  | |  | |
|  | Manufacturers Identification Mark/Name | | - |  | |  | |
|  | Nominal Diameter in mm | | - |  | |  | |
|  | Class Designation | | - |  | |  | |
|  | Quality Standard & Product Conformity certificate | | - |  | |  | |
|  | Client Identification | | - |  | |  | |
|  | Socket Penetration Lines (2 Lines) | | - |  | |  | |
|  | In case of Fittings, these marks shall appear on the body of each fitting together with its main characteristics such as angle of bend, pressure rating of flange etc. | | - |  | |  | |
| Material Characteristics | | | | | | | |
|  | Mechanical Properties |  | | |  | |  |
|  | Minimum Tensile Strength | 420 N/mm2 | | |  | |  |
|  | Minimum Bending Strength | Table B1 BSEN-545 2010 | | |  | |  |
|  | Modulus of Elasticity | 14- 18 N/mm2 | | |  | |  |
|  | Brinell hardness for pipes | 230HB | | |  | |  |
|  | Brinell hardness for fittings | 250 HB | | |  | |  |

**(Appendix 15A-3of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Test Hydrostatic Test | | | | | | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF) Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010 - Clause 6.5 & Table 14  ISO 2531:2009 - Clause 6.5 & Table 10 | | | | | | | | | | | | |
| Sample  No | Item of Testi- ng | Pressure class (“C” class)/  Test pressure | Test Condition | | | | | | Deviation | Tolerance  Allowed | Comply? | Remarks |
| Flexible joints | | Push-fit joints | | Flanges & flanged joints | |
| +ve int. pressure | -ve int. pressure | +ve ext. Pressure | Dynamic int. pressure | Flanged joints | Screwed & welded flanges |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | | | | | | |
| Name : 1. Name : 2. | | | | | | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | | | | | | |
| Date : | | | | | | | | | | | | |

**(Appendix 15A-4of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Length of Straight Pipes and Fittings | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF), Fittings Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010 – Clause 4.2.3 & Table 3,4,5,6  ISO 2531 :2009 - Clause 4.2.3 & Tables 2,3,4,5 | | | | | | | |
| Sample  No | Item of testing | Physical/Measured  Value | | Deviation | Tolerance  Allowed | Comply?  (Yes/No?) | Remarks |
| Standard | Measured |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | |
| Name : 1. Name : 2. | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | |
| Date : | | | | | | | |

**(Appendix 15A-5of 13)**

Revised on 23-10-2018

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Straightness | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF) Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010 – Clause 4.2.4  ISO 2531 :2009 -Clause 4.2.4 | | | | | | | |
| Sample  No | Item of testing | Physical/Measured  Value | | Deviation | Tolerance  Allowed | Comply?  (Yes/No?) | Remarks |
| Standard | Measured |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | |
| Name : 1. Name : 2. | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | |
| Date : | | | | | | | |

**Appendix 15A–6of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Internal & External Diameter of Pipes & Fittings | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF) , Fittings Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010 – Clause 4.2.2  ISO 2531 :2009 - Clause 4.2.1 | | | | | | | |
| Sample  No | Item of testing | Physical/Measured  Value | | Deviation | Tolerance  Allowed | Comply?  (Yes/No?) | Remarks |
| Standard | Measured |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | |
| Name : 1. Name : 2. | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | |
| Date : | | | | | | | |

**(Appendix 15A-7of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Wall Thickness of Pipes & Fittings | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF), Fittings Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010 – clause 4.2.1  ISO 2531 :2009 - Clause 4.2.2 | | | | | | | |
| Sample  No | Item of testing | Physical/Measured  Value | | Deviation | Tolerance  Allowed | Comply?  (Yes/No?) | Remarks |
| Standard | Measured |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | |
| Name : 1. Name : 2. | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | |
| Date : | | | | | | | |

**(Appendix 15A-8of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Internal Coating ( Strength & Thickness) | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF) , Fittings Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010 – Clause 4.4.3 & 4.5  ISO 2531 :2009 - Clause 4.4.2 & 4.5.2 | | | | | | | |
| Sample  No | Item of testing | Physical/Measured  Value | | Deviation | Tolerance  Allowed | Comply?  (Yes/No?) | Remarks |
| Standard | Measured |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | |
| Name : 1. Name : 2. | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | |
| Date : | | | | | | | |

**(Appendix 15A-9of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test External Coating ( Thickness of Zinc Mass & Paint coating) | | | | | | | |
| Bill No: Item No. & Qty. Sample size:  Description of Item : DI Pipes (SS/DF), Class : Dia x Length :  & Coating for fittings and Accessories  Tech Spec Clause No: Reference Standard : BSEN545:2010- clause 4.4.2 & 4.5  ISO 2531 :2009 - clause 4.4.1 & 4.5.1 | | | | | | | |
| Sample  No | Item of testing | Physical/Measured  Value | | Deviation | Tolerance  Allowed | Comply?  (Yes/No?) | Remarks |
| Standard | Measured |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| Inspection & Testing Witnessed by | | | | | | | |
| Name : 1. Name : 2. | | | | | | | |
| Signature: 1. Signature: 2. | | | | | | | |
| Date : | | | | | | | |

**(Appendix 15A-10of 13)**

**PRE –SHIPMENT INSPECTION OF DI PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test **Chemical Composition** | | | | |
| Bill No: Item No. & Qty. : Sample size:  Description of Item : Class : Dia x Length :  Tech Spec Clause No: Reference Standard : BSEN545:2010& ISO 2531 :2009 | | | | |
| Sample  No | Item of testing | Name of the Metal | Available % | Remarks |
| 1 |  | Fe |  |  |
|  |  | C |  |  |
|  |  | Zn |  |  |
|  |  | Cr |  |  |
|  |  | …. |  |  |
|  |  | ….. |  |  |
|  | | | | |
| Microscopic Inspection of DI sample : % of DI | | | |  |
|  | | | | |
| Inspection & Testing Witnessed by | | | | |
| Name : 1. Name : 2. | | | | |
| Signature: 1. Signature: 2. | | | | |
| Date : | | | | |

**(Appendix 15A-11of 13)**

**INSPECTION OF DI PIPES & FITTINGS**

**CHECK LIST**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Technical Specifications**  **Clause No.** | **Description** | **Requirements as per Specifications** | **Satisfactory/**  **Unsatisfactory** | **Remarks** |
| HANDLING OF PIPES AND FITTINGS AFTER PRODUCTION | | |  |  |
|  | Packing |  |  |  |
|  | Handling |  |  |  |
|  | Stacking |  |  |  |
|  | Inspection by Factory/Inspection Authority |  |  |  |
|  | Transport Arrangements within manufacturers Country |  |  |  |
|  | Shipping Arrangements |  |  |  |
|  | Freight Insurance Arrangements |  |  |  |
| CONCLUSION AT THE END OF THE INSPECTION TOUR | | |  |  |
| Total Process of Production, Testing, Packing,  Handling, Insurance and Freight  Arrangements Satisfactory | | |  |  |

**Observations :**

**Signature 1 Signature 2**

**Name & Designation 1: Name & Designation 2:**

**(Appendix 15A -12 of 13)**

**Rubber rings / Gaskets**

**Physical Parameter**

1. Dimensions :…………………..
2. Diameter :…………………..
3. Hardness :………………….
4. Appearance :…………………..
5. Lot Numbers : …………………..

**Quality**

1. Product Conformity certificate
2. ISO 9001:2015 certificate

**Packing Arrangements**

1. Inspection by Independent Inspection Agency : ………….
2. Shipping Arrangements :……………..

**(Appendix 15A -13 of 13)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample No** | **Diameter** | **Thickness mm** | **Hardness** | **Appearance** | **Deviation** | **Tolerance allowable** | **Whether Comply** | **Remarks** |
|  |  |  |  |  |  |  |  |  |

Product conformity certificate available acceptable : ………………..

(witness the original certificate)

ISO 9001;2015 Quality Management System certificate available and acceptable: ……………..

(witness the original certificate)

**APPENDIX 15B - PRE-SHIPMENT/ PRE-delivery INSPECTION OF PE PIPES & FITTINGS BYTHE EMPLOYER - CHECK LISTS**

**(Appendix 15B -1 of 7)**

Name & Location of the Factory

Pipe : - …………………………………………………………………………………

…………………………………………………………………………………

Fittings : -…………………………………………………………………………………

…………………………………………………………………………………

(Requirement - Pipes and fittings should be manufactured by same manufacturer or manufacturing group.)

Applicable Standards

Manufacturing Standards : (ISO 4427:2019 EN12201-1 TO 5):2011

Of pipes & Fittings

Manufacturing Standards of

Joint Rings : (EN681-1):1996 …………….

Quality Management System : (ISO 9001: 2015) ……………

Parameters to be checked

Markings

Mechanical Properties

Hydrostatic Pressure Tests

Wall Thickness

Length of straight pipes

Straightness

Testing of Flanges

Joint Rings

Chemical Composition of Pipes & Fittings

ConHDPEtion of Pipes & Fittings

Tolerances

Handling of pipes, Fittings after production : Satisfactory/Unsatisfactory

Inspection Procedure

Witness testing a sample with Factory QC Team : Yes/No

Witness testing with Independent Inspection Agency : Yes/No

**(Appendix 15B -2 of 7)**

**PRE-SHIPMENT/ PRE-delivery INSPECTION OF PE PIPES & FITTINGS**

**CHECK LIST**

Mark Yes or No in the Remarks Column as Appropriate Date of Inspection…………

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Technical  Specifications  Clause No. | Description | Values as per  Specifications | Satisfactory/  Unsatisfactory | Remarks |
| **GENERAL** | | | | |
| **Quality**  **Assurance** | **Availability of Valid Quality Standard Certificates** | **ISO 9001:2015** |  |  |
| **Independent**  **Inspection** | **Availability of Inspection Agency.**  **Certificate before Shipment** | **-** |  |  |
| **Markings** |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
|  |  | **-** |  |  |
| **Material Characteristics** | | | | |
|  | **Mechanical Properties** |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**(Appendix 15B -3 of 7)**

**PRE –SHIPMENT/ PRE-delivery INSPECTION OF PE PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Hydrostatic Test** | | | | | | | | |
| **Bill No: Item No. & Qty. Sample size:**  **Description of Item :) Class : HDPEa x Length :**    **Tech Spec Clause No: Reference Standard :** | | | | | | | | |
| **Sample**  **No** | **Item of Testing** | **Test results** | | | **Deviation** | **Tolerance**  **Allowed** | **Comply?** | **Remarks** |
| **1** |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |  |
| **Inspection & Testing Witnessed by** | | | | | | | | |
| **Name** | | | | | | | | |
| **Signature : Date :** | | | | | | | | |

**(Appendix 15B -4 of 7)**

**PRE –SHIPMENT/ PRE-delivery INSPECTION OF PE PIPES & FITTINGS -CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Length of Straight Pipes and Fittings** | | | | | | | |
| **Bill No: Item No. & Qty. Sample size:**  **Description of Item : PE Pipes (SS/DF) , Fittings Class : PEa x Length :**  **Tech Spec Clause No: Reference Standard :** | | | | | | | |
| **Sample**  **No** | **Item of testing** | **Physical/Measured**  **Value** | | **Deviation** | **Tolerance**  **Allowed** | **Comply?**  (Yes/No?) | **Remarks** |
| Standard | Measured |
| **1** |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |
| **Inspection & Testing Witnessed by** | | | | | | | |
| **Name** | | | | | | | |
| **Signature Date** | | | | | | | |

**(Appendix 15B -5 of 7)**

**PRE –SHIPMENT/ PRE-delivery INSPECTION OF PE PIPES & FITTINGS -CHECK LIST**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Wall Thickness of Pipes & Fittings** | | | | | | | |
| **Bill No: Item No. & Qty. Sample size:**  **Description of Item : PE Pipes , Fittings SDR: PEa x Length :**  **Tech Spec Clause No: Reference Standard** | | | | | | | |
| **Sample**  **No** | **Item of testing** | **Physical/Measured**  **Value** | | **Deviation** | **Tolerance**  **Allowed** | **Comply?**  (Yes/No?) | **Remarks** |
| Standard | Measured |
| **1** |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |
| **Inspection & Testing Witnessed by** | | | | | | | |
| **Name** | | | | | | | |
| **Signature Date** | | | | | | | |

**(Appendix 15B -6 of 7)**

**PRE –SHIPMENT/ PRE-delivery INSPECTION OF PE PIPES & FITTINGS - CHECK LIST**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Chemical Composition** | | | | | | |
| **Bill No: Item No. & Qty. Sample size:**  **Description of Item : PE Pipes SDR : PEa x Length :**  **Tech Spec Clause No: Reference Standard** | | | | | | |
| **Sample**  **No** | **Item of testing** | **Physical/Measured**  **Value** | **Deviation** | **Tolerance**  **Allowed** | **Comply?** | **Remarks** |
| **1** |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |
| **Inspection & Testing Witnessed by** | | | | | | |
| **Name** | | | | | | |
| **Signature Date** | | | | | | |

**(Appendix 15B - 7 of 7)**

**INSPECTION OF PE PIPES & FITTINGS**

**CHECK LIST**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Technical Specifications  Clause No. | Description | Requirements as per Specifications | Satisfactory/  Unsatisfactory | Remarks |
| HANDLING OF PIPES AND FITTINGS AFTER PRODUCTION | | |  |  |
|  | Handling |  |  |  |
|  | Stacking |  |  |  |
|  | Inspection by Factory/Inspection Authority |  |  |  |
|  | Transport Arrangements within manufacturers Country |  |  |  |
|  | Shipping Arrangements |  |  |  |
|  | Freight Insurance Arrangements |  |  |  |
| CONCLUSION AT THE END OF THE INSPECTION TOUR | | |  |  |
| Total Process of Production, Testing  Handling, Insurance and Freight  Arrangements Satisfactory | | |  |  |

Observations :

Signature 1 Signature 2

Name & Designation 1: Name & Designation 2:

**APPENDIX 15C– PRE-SHIPMENT Inspection of Pump AND Motor**

**Assemblies BY THE EPLOYER -CHECK LISTS**

**(Appendix 15C - 1 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test/Activity** | **Measurement Value/Observations & Comments** |
| 01 | **Visual Tests**  Comments on castings  Comments on machining  Comments on welding, fillets, corners and similar features  Comments on surface finish and painting  Comments all drillings, positioning etc.  Comments on assembly |  |
| 02 | **Operational status of the equipment under test** ( after operation until stabilisation)  Observation on temperature at various points  Observations on excessive noise emissions  Observations on excessive shaking or vibration  Observations on excessive leakages  Observations of any distortions of parts  Observations of possible cavitation  Observations on the measuring equipment |  |

**(Appendix 15C - 2 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test/Activity** | **Measurement Value/Observations & Comments** |
| 03 | **Measurements** (General)  Voltage  Current  Power  Power factor  Insulation resistance |  |
| 04 | **Operational Measurements**  Flow rate  Delivery pressure  Suction pressure  Power drawn by motor |  |
| 05 | **Hydrostatic Test**  For pumps between 20 – 75 kw.  Test the components at 150% of the pump shut off head for 10 minutes.  For pumps larger than 75 kw.  Test the components at 150% of the pump shut off head for 30 minutes. |  |

**APPENDIX 15D–PRE-SHIPMENT Inspection oF GAS chlorinators BYTHE EMPLOYER - CHECK LISTS**

**(Appendix 15D - 1 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test/Activity** | **Measurement Value/Observations & Comments** |
| 01 | **Visual Tests**  Comments on castings  Comments on machining  Comments on welding, fillets, corners and similar features  Comments on surface finish and painting  Comments all drillings, positioning etc.  Comments on assembly |  |
| 02 | **Operational status of the equipment under test** ( after operation until stabilisation)  Observation on temperature at various points  Observations on excessive noise emissions  Observations on excessive shaking or vibration  Observations on excessive leakages  Observations of any distortions of parts  Observations of possible cavitation  Observations on the measuring equipment |  |

Revised on 04-03-2021

**(Appendix 15D - 2 of 2)**

|  |  |  |
| --- | --- | --- |
|  | **Test/Activity** | **Measurement Value/Observations & Comments** |
| 03 | **Measurements** (General)  Voltage  Current  Power  Power factor  Insulation resistance |  |
| 04 | **Operational Measurements**  Flow rate  Delivery pressure  Suction pressure  Power drawn by motor |  |
| 05 | **Hydrostatic Test**  For pumps between 20 – 75 kw.  Test the components at 150% of the pump shut off head for 10 minutes.  For pumps larger than 75 kw.  Test the components at 150% of the pump shut off head for 30 minutes. |  |

**APPENDIX 15E – PRE-DELIVERY INSPECTION OF uPVC PIPES AND FITTINGS BY THE EMPLOYER - CHECK LISTS**

**(Appendix 15E - 1 of 2)**

1) Minimum wall thickness

|  |  |  |
| --- | --- | --- |
| **dn** | **Minimum wall thickness** | **Satisfactory / not satisfactory** |
| dn < 225 | …………………… | …………………… |
| 225 < dn < 315 | …………………… | …………………… |

2) Leak tightness of joints

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test** | **Test requirements** | | **Test conditions**  **uPVC Pipes** | **Satisfactory / not satisfactory** |
| Internal hydrostatic  Pressure | - test pressure  1.5 x PFA + 5 bar  - test duration : 2h  - no leakage during test  period. | | - joint of maximum annulus,  aligned withdrawn and  subjected to shear load  - temperature between 15ºC  and 25° C |  |
| - joint of maximum annulus,  deflected  - temperature between 15ºC  and 25° C |  |
| Negative  internal  pressure | - test pressure : 0.8 bar  - test duration : 2h  - maximum pressure  changeduring test  period : 0.08 bar | | - joint of maximum annulus,  aligned, withdrawn, and  subjected to shear load  - temperature between 15ºC  and 25° C |  |
| - joint of maximum annulus,  deflected  - temperature between 15ºC  and 25° C |  |
| Cyclic internal hydraulic pressure : | - test pressure : between  0.5 PFAand PFA  - test period : 24 000  cycles | | - joint of maximum annulus,  aligned, withdrawn and  subjected to shear load  - temperature between 15ºC  and 25° C |  |
|  | |

PFA = Allowable Operating Pressure of the joint declares by the manufacture.

**(Appendix 15E - 2 of 2)**

3) Hydro-static pressure test : ……………………. (Satisfactory/ not satisfactory)

4) Hardness : ………………. (Satisfactory/ not satisfactory)

5) Tensile strength …………………………… (Satisfactory/ not satisfactory)

6) Colour …………………………

7) Dimension ……………………………

8) Ovalty ……………………….. (Satisfactory / not satisfactory)

Recommendation …………………………………………………………………………...

………………………………………………………………………………………………

Authorized signatures of NWSDB representatives

i. Name : Name :

ii. Designation : Designation :

iii. Signature : Signature :

**APPENDIX 16 - Details of Local Accredited Agent**

1.Name of Local Accredited Agent:

2. Official Address:

3. Details of Local Accredited Agent’s Company

3.1 Names of Directors

3.2 Qualifications of Directors and their experience in business

3.3 Registration with the Registrar of companies

(a). Registration Number

(b). Date of Registration

3.4 Financial Capacity

(Prove with Audit Financial Statements for last 3 years)

3.5 Technical Competence

3.6 Supporting staff

(a) Name :

(b) Qualification:

(c ) Experience

3.7 Office area (m2)

3.8 Stores capacity :

(Indicate the area and location)

3.9 Yard capacity

(Indicate the area and location)

3.10 Past Experience and history of performance

Details of previous supplies to the NWSDB:

(Copies of the letters of ContractAwards and completion certificates shall be attached)

Revised on 26-01-2021

**APPENDIX 17A – NWSDB PRE-QUALIFIED MANUFACTURERS AND THEIR PRE-QUALIFIED ITEMS**

**Note:**

Pre-Qualified pipe manufacturer has been pre-qualified together with pipe fitting manufacturer and rubber ring manufacturer. Therefore, when selecting a pre-qualified pipe manufacturer, his relevant pipe fitting manufacturer and rubber ring manufacturer shall be selected.

*When Bidding Document is prepared please include updated list of prequalified manufactures under this Appendix for*

* *PVC pipes , fittings & rubber rings*
* *PE pipes & fittings*
* *DI pipes , fittings & rubber rings*
* *DI Valves*
* *DI Manhole covers*
* *DI Couplings, Flange Adaptors, Stepped Couplings and Dismantling joints for DI. Asbestos, GRP, PE & PVC Connection*

Revised on 26-01-2021

**APPENDIX 17B – NWSDB RECOMMENDED M&E MANUFACTURERS AND ITEMS**

* **BRAND/MANUFACTURER/MAKE LIST – MECHANICAL PLANT & EQUIPMENT**

Revised on 15-03-2021

| **S. NO** | **DESCRIPTION** | **MANUFACTURER/MAKE** |
| --- | --- | --- |
|  | Surface Mounted Water Pumping Sets | Grundfos Pumps  Ebara Pumps  KSB Pumps  SPP Pumps  Wilo SE  Standard  Ideal Bombasa  WEIR  Kubota  Caprari  ABS/ Sulzer  Lowara  Zaylam  Flow Serve  Bell & Gossett |
|  | Submersible Water Pumping Sets | Flygt Pumps  KSB  Grundfos Pumps  Wilo SE  Franklin  WEIR  ABS/ Sulzer  Xylem  HOMA  Caprari |
|  | Sludge Sewerage Pumping Sets | Flygt Pumps  Grundfos Pumps  Tsurumi  Wilo SE  Xylem  HOMA  ABS/ Sulzer |
|  | Progressive Cavity pumps | Seepex  Netzsch  Daurex  Flowrox  All Weiler  VEGAN |
|  | Motors | TEC Motors  WEG  TEE Motors  Lafert  ABB  Siemens  MMG  CMG  Paco  Gamak |
|  | Flash Mixture, Flocculator Mixtures and Chemical Mixers | Daqchem  Lightning  Doseuro  Huber  Sulzer  ABS  Dynamix  Milton Ray  KSB |
|  | Submersible Mixtures | Grundfos  Wilo SE  Flygt  Sluzer |
|  | Surge Vessels | Charlotte  Ibbiando  Bermad  Ametech  Flo-Dyne Control |
|  | Gantry Crane | Hitachi  YALE  KITO  RWM  KONE  RWM  VHT Crane  BMK  DEMAG |
|  | Motor Operated Electrical Actuator | Rotork  Auma  Honeywell  KSB  Geartrok  Centrok  Revised on 26-01-2021  Changshu  ABRO  Karon Valves  FAF  TEKO |
|  | Flow Control Valves | CLAVAL  Singer  TALIS  VAG |
| 12 | Blower | Kaeser  Hibon  RKR  KMF  Everest  Ingersoll (IR)  KFMC (Korean Fluid Machinery)  Mapner  Jiangso  Jeumount-Schinder |

* **BRAND/MANUFACTURER/MAKE LIST – ELECTRICAL PLANT, EQUIPMENT**

| **S. NO** | **DESCRIPTION** | **MANUFACTURER/MAKE** |
| --- | --- | --- |
| 1 | Switch Gear  ACB  MCCB  MCB | Siemens  Schneider  Fuji  Mitsubishi  ABB  Terasaki  Hager  Lovata |
| 2 | VFD  SS | Siemens  Schneider  TOSHIBA  Danfoss  ABB  YASAKAWA  Amtech |
| 3 | Cable | ACL  Kelani  Sierra  Orange  LAP |
| 5  Revised on 07-04-2021 | Electrical Panel  (MCC) | KIK SL  Siemens AG  Terasaki Sin  EMP  Pubudu  LVS  Schneider Electric  Venora  ABB |
| 6 | Generators | Tempest - UK  CUMMINS  Teksan  Pramac  Spectra  Doosan  FG Wilson  Leroy Somer  Stanford  Caterpillar  Perkins  POTISE  ADPOWER |

* **BRAND/MANUFACTURER/MAKE LIST - INSTRUMENTATION**

Revised on 26-01-2021

| **S. NO** | **DESCRIPTION** | **MANUFACTURER/MAKE** |
| --- | --- | --- |
| 1 | Level Indicator Transmitter | EMERSON  ABB  Siemens  Endress+Hauser  Yokogawa  VEGA |
| 2 | Flow Meters/Flow Indicator/ Transmitter | EMERSON  ABB  Siemens  Yokogawa  Endress+Hauser  Krohne  Euromag  ISOIL /ISOMAG  Flexin  FHC  EVOQUA  DENORA  ALIA |
| 3 | Level/Float Switches | EMERSON  ABB  Endress+Hauser,  Kobold  flyght |
| 4 | Pressure Gauges/Pressure Switches | Warry  ABB,  Wika  Gen Inst Co  Dandfoss  Schneider  Delta  SIEMENS |
| 5 | Pressure Indicator Transmitter | EMERSON  ABB,  Kobold  Siemens  Switzer  Rosemount  Endress+Hauser |
| 6 | Online Residual Chlorine Analyzer | Hach Company  SWAN  HF SCIENTIFIC, INC  Endress+Hauser  Yokogawa  Wallace & Tiernen/Siemens |
| 7 | Temperature Indicator Transmitters | Endress+Hauser  ABB  Siemens  Hach Company  Yokogawa |
| 8 | Analytical Online Instruments (DO, ORP, etc.) | Hach Company  Jenco  Endress+Hauser  ABB  SWAN  HF SCIENTIFIC, INC  Siemens  WTW  Toshcon  Yokogawa |
| 9 | SCADA | Siemens  Yokogawa  Citect  ABB  Honeywell  Rockwell  Mitsubishi  Schneider |
| 10 | HMI Touch Screen, PLCand Peripheral Hardware | Siemens  Schneider  Allen Bradley  ABB  Yokogawa  Fuji  Unitronics |
| 11 | Lighting Fixtures | Philips, Wipro |

* **BRAND/MANUFACTURER/MAKE LIST –PROCESS SYSTEMS**

***Note: Some of the below listed Equipment have been covered under the Category of Mechanical Plant & Equipment above. Note that, it is mentioned here to emphasize the need for the whole Package in the Item is to be Supplied by one Manufacturer)***

| **S. NO**  Revised on 15-03-2021 | **DESCRIPTION** | **MANUFACTURER/MAKE** |
| --- | --- | --- |
| 1 | Dissolved Air Flotation System (DAF) | Suez  Purac  Salcon  Ovivo  Sepa  Clean Water Technologies Inc |
| 2 | Dual Lateral Filter Floor System | Leopold  Enviro  Hydroblock  Tetra |
| 3 | Chemical Dosing Systems | Grundfos  Prominent  Milton Roy  Doseuro  Hydro  ITC, Spain  Doseuro  Lutz Jesco  SIEMENS  EVOQUA  JESCO  ProMinent |
| 4 | Chlorine Dosing System (including Scrubber) | Grundfos  Siemens  Prominent  Capital Controls  Olin Corporation  Aqus  Shinzhen Jinhe  Jesco  Hydro  Grundfos-Alldos  Severn Trent  EVOQUA  Injecta  Modern |
| 5 | Thickener | PURAC  Suez  Jeffcon Engineering/Salcon  Ham Baker  Weaverbrooks  Passavant |

**APPENDIX 18 - ENTITLED ALLOWANCES ON FOREIGN TRAVELS &**

**RELATED EXPENSES**



Revised on 26-01-2021

**APPENDIX 19– AFFIDAVIT BY THE BIDDER**

I ………………………………………… of ………………………………………… being a ……………………… (Buddhist or any other religionist), do hereby solemnly sincerely and truly declare and affirm as follows.

01. I am the Affirmant above named.

02. I hereby declare that I have applied for the Contract of National Water Supply and Drainage Board bearing No: …………………………………….. and my spouse or dependent does not work in National Water Supply and Drainage Board on permanent, casual or Contract basis.

The foregoing affidavit having been read over and explained to the affirmant above named who having understood its nature content and context affirmed hereto and set his usual signature hereto in ……………... on this ………….……………… day of …………….…….. 20...

Before me ……………………

Declarant

…………………………………

Justice of the Peace /

Commissioner for oaths

Revised on 26-01-2021

Revised on 08-08-2016