



AAVANTIKA GAS LIMITED

(A JOINT VENTURE COMPANY OF GAIL & HPCL)

CITY GAS DISTRIBUTION PROJECT IN
INDORE, UJJAIN, PITHAMPUR & GWALIOR

FOR

DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF
IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) SYSTEM
AT INDORE AND PITHAMPUR LOCATION

E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]

OPEN DOMESTIC COMPETITIVE BIDDING

ISSUE DATE: 30.09.2025

Date & Time for online submission duration of Technical Bid & Price Bid at MSTC Portal:

Important Dates

| | |
|--|-----------------------------|
| Pre-Bid Clarification Duration | 01.10.2025 to 15.10.2025 |
| Physical Pre-Bid Meeting at AGL HO, Indore | 08.10.2025 (11:00 Hrs.) |
| Date of Start (Live) for Online Submission of Tender | 17.10.2025 (12:00 Hrs.) |
| Last Date & Time of Submission of Tender | 31.10.2025 up to 16:00 Hrs. |
| Date & Time of Opening of Un-Priced (Technical) Bid | 31.10.2025 at 16:30 Hrs. |

| BASIC INFORMATION OF TENDER | |
|--|---|
| e-Tender Number | AGL/Head Office/Contract and Purchase/9/25-26/ET/9 [ICCP SYSTEM] |
| Mode of Tendering | ONLINE e-Procurement System through https://www.mstcecommerce.com/eproc/ of MSTC Ltd. |
| Title | IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) SYSTEM |
| Description | Design, Supply, Installation and Commissioning of ICCP system at Indore and Pithampur Location |
| Tender Type | Public |
| Bid Type | Two Bid |
| Evaluation Criteria | Overall Lowest Basis |
| Date of NIT available to firms to download | 30.09.2025 |
| Online Pre-Bid Clarification Duration | Start Date & Time: 01.10.2025 (11:00 Hrs.) |
| | End Date & Time: 15.10.2025 (18:00 Hrs.) |
| | <p>The e-procurement shall also have the event of online pre-bid meeting duration as detailed mentioned above. For Technical/Commercial clarification(s) (if any), they may bring to the attention of officials of AGL. The queries raised during online Pre-Bid meeting duration shall be replied on line. In the interest of bidder(s), they are also requested to go through the final technical specifications and other terms & conditions, based on the clarifications given during the pre-bid meeting duration and accordingly submit online tender.</p> <p>Query (if any) shall be clarified during online pre-bid meeting, only. After closing of online pre-bid meeting duration, no further queries shall be entertained.</p> <p>Based on the replied queries, Corrigendum may be issued on the MSTC website, which is to be digitally submitted as integral part of the bid.</p> <p>All entries in the tender should be entered in online mode without any ambiguity.</p> |
| Offline Pre-Bid meeting Date & Time | Bidders also have an option of attending a physical pre bid meeting at AGL, HO Indore Dated 08.10.2024 from 11:00 Hrs. to 12:00 Hrs. |
| Earnest Money Deposit (EMD): | <p>Bid Security (EMD): 90,000 in the form of DD or BG</p> <p>Tender Fee: -Nil</p> <p>Bank details for BG/LC (SFMS) receiving through SFMS: Bank Name: ICICI Bank Limited Bank IFSC: ICIC0000041 Bank A/c No.: 004105013583 Bank Address: ICICI BANK LTD, MALAV PARISAR,4 CHOTI KHAJRANI, A.B. ROAD.INDORE 452008 (M.P), INDORE</p> <p>The bidders bank has to send the below details in the BG SWIFT message to our Banker:</p> <p>77C: Details of Guarantee 7035: ICIC0000041 7036: ICICI BANK LTD, INDORE AC NO 004105013583 7037: AG533170984 Unique Identifier Number (Mandatory) 7038: XXXXX 7039: XXXXXX(XX)DT XX.XX.2024</p> <p>(Note: For Participation in Tender, the Tender Fee has been waived off, however Tender processing charges of MSTC is applicable as per "Special Note towards Transaction fee" of MSTC mentioned in NIT MSTC instruction to bidders Sr. No. 2, Page no. 5 of Tender Document)</p> <p>Bidders registered with NSIC/MSME under its single point registration scheme are exempted from furnishing Bid Security. NSIC / MSME certificate (updated & valid as on due date of submission to be submitted) shall be duly attested by CHARTERED ACCOUNTANT (CA) AND NOTARY PUBLIC WITH LEGIBLE STAMP.</p> <p>NOTE:</p> |

| | |
|---|---|
| | <p>Bidder to upload the copy of EMD or NSIC/MSME Certificate along with the technical part, however copy of the same uploaded document is to be submitted in a separate envelope scribed with the Tender number, Tender Subject, Name of the bidder and Bid due date in physical form within 7 (Seven) days from the due date of submission of bid at the communication address: (PLEASE NOTE THAT CUTOUT SLIP TO BE PASTED OUTER OF THE EMD ENVELOPE WHICH IS ATTACHED AS PAGE No. 08)</p> <p>Contract & Procurement Dept. Aavantika Gas Limited 202-B, NRK Business Park, Vijay Nagar Square, Indore-452010 (M.P) Phone: 0731-4222520</p> |
| Date & Time of Starting of e-tender for online submission of Technical Bid & Price Bid at https://www.mstcecommerce.com/eproc/ | 17.10.2025 (12:00 Hrs.) |
| Date of Closing of e-tender for submission of Technical Bid & Price Bid | 31.10.2025 (16:00 Hrs.) |
| Date & time of opening of Un-Priced Bid/ Technical Bid Date of opening of Part II i.e. price bid shall be informed separately. [Under unforeseen circumstances, if the due dates (i.e. Date & time of opening of Part-I) fall on holiday, the same will be opened on the next full working day at the same time]. | 31.10.2025 (16:30 Hrs.) |
| Submission of Tender Document | Only digitally signed copy of all Tender documents will be accepted. Bids submitted in any other form will not be accepted and entertained by AGL and will not be considered for evaluation purpose. |
| Delay in Submission of online Tender Document | AGL will not be responsible for any delay in submission of online tender documents for any reason, whatsoever. |
| Good Practices | <ul style="list-style-type: none"> • Bidders are advised to submit their online bids timely. Do not wait for last time and avoid last minute of submission. • Bidder has to submit copy of EMD or NSIC/MSME Certificate in physical form within seven (07) days from the due date of submission; however, Bidder shall try to TIMELY SEND THE COPY OF EMD or NSIC/MSME CERTIFICATE TO AGL OFFICE |

NOTE:

- **BIDDERS SHALL ENSURE THAT ALL DIGITALLY SIGNED DOCUMENTS RELATED TO PRE-QUALIFICATION (TECHNICAL OR COMMERCIAL) ARE SUBMITTED AT THE FIRST INSTANCE ALONG WITH THE ORIGINAL BID.**
- **UPLOADED ATTESTED & NOTORIZED COPY OF EMD/NSIC/MSME CERTIFICATE TO BE SEND TO AGL OFFICE IN A SEPRATE ENVELOPE SCRIBED WITH THE TENDER NUMBER, TENDER SUBJECT, NAME OF THE BIDDER & BID DUE DATE WITHIN 7 (SEVEN) DAYS FROM THE DUE DATE & TIME OF SUBMISSION OF BID. PLEASE NOTE THAT CUTOUT SLIP TO BE PASTED OUTER OF THE EMD ENVELOPE. THE AGL RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL THE PROPOSALS IN WHOLE OR PART WITHOUT ASSIGNING ANY REASONS.**
- **INITIAL STEP FOR ONLINE BIDDING THROUGH MSTC PORTAL IS THAT VENDORS HAVE TO GET REGISTERED IN MSTC PORTAL FOR PARTICIPATING IN ANY UPLOADED AGL E-TENDER. FOR MORE INFORMATION, VENDORS CAN DOWNLOAD VENDOR REGISTRATION GUIDE THROUGH MSTC Portal "<https://www.mstcecommerce.com/eproc/> > Vendor Login > Register > Registration Guide".**

**KINDLY NOTE THAT ONLY ONLINE BID WILL BE
CONSIDERED AGAINST THIS TENDER**

**Website for Online bid Submission:
<https://www.mstcecommerce.com/eproc/>**

**Prior uploading all the Techno-Commercial PDF Tender Documents
on MSTC website please ensure that all the documents should be
Digitally Signed.**

Vendor to Sign (Digital) in the given below box area----->

1. PRE-BID MEETING & QUERIES

Online Pre-Bid queries duration shall be as per the dates mentioned on the Page No.1 of this Tender Document, Also bidder(s) or his official representative has an option to attend an offline pre-bid meeting which will take place as per the date mentioned on Page No.1 of this Tender Document. Bidder(s) queries if any, must send your queries online through MSTC Portal prior to pre-bid meeting duration end date as per the date mentioned on Page No.1 of this Tender Document.

BID CLARIFICATION AFTER OPENING OF TECHNICAL BID

Important Note: Bidders are strictly advised to upload all the documents along with their bid itself by the due date and time. In the absence of requisite documents submitted along with their bid, AGL reserves the right to evaluate the bids as per the submitted documents only and reject the bid without making any reference to the Bidder.

For any queries/clarification after opening of Technical-Bid, AGL will send only online queries to bidder through MSTC Portal and Bidder has to insure that he will reply the AGL queries online, through MSTC Portal only. No any queries/clarification/reply will be communicated / accepted through email.

AAVANTIKA GAS LIMITED
(A JOINT VENTURE COMPANY OF GAIL & HPCL)

CITY GAS DISTRIBUTION PROJECT IN
INDORE, UJJAIN, PITHAMPUR & INDORE & GWALIOR

NOTICE INVITING TENDER (NIT)

MSTC INSTRUCTIONS TO BIDDERS:

This is an e-Procurement event of **Aavantika Gas Limited**. The e-Procurement service provider is MSTC Ltd., 1st Floor, Tilhan Sangh Bhawan, 1 Arera Hills MPOILFED Building Bhopal-462004 (Madhya Pradesh).

| | |
|---|--|
| 1 | <p>Requirement for Vendors: P.C. connected with Internet. Registration with MSTC Portal "https://www.mstcecommerce.com/eproc/" as vendor. Registration is free of cost. The Vendor should possess Class III signing & encryption type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. MSTC/AGL in no way responsible for this. (Bids will not be recorded without Digital Signature). In case of any clarification, please contact MSTC/AGL (well in advance before the schedule closing time of the e-Tender).</p> <p>CONTACT PERSON at MSTC LTD for Online Assistance:</p> <p>1) MSTC IVRS Helpdesk number: 07969066600 2) Centralized Helpdesk: 033-23400020, 033-23400021, 033-23400022 3) MSTC Bhopal Office numbers: 0755-2552241, 2593772, 2593775, 2593776; 4) Mr. Neeraj Mathur, Dy. Manager, Mob. 8871111473, Email: bplpn4@mstcindia.in, mstcbpl@mstcindia.in,</p> <p>CONTACT PERSON at Aavantika Gas Limited:</p> <p>1) Mr. Varender Sharma, Ch Mngr: Mobile – 98889 25792 / Email: varender.sharma@aglonline.net 2) Mr. Himanshu Shrivastava, Mngr, Mobile – 9131099726 / Email: himanshu.s@aglonline.net 3) Mr. Anurag Singh, Engineer: Mobile – 86006 90470 / Email: anurag@aglonline.net 4) cp@aglonline.net 0731-4222520</p> |
| 2 | <p>Special Note towards Transaction fee: The vendors shall pay the transaction fee using "Transaction Fee Payment" Link in the vendor login. The vendor shall have the facility of making the payment either through NEFT or Online Payment. On selecting NEFT, the vendor shall generate a challan by filling up a form. The vendor shall remit the transaction fee amount as per the details printed on the challan without making change in the same. On selecting Online Payment, the vendor shall have the provision of making payment using its Credit/ Debit Card/ Net Banking. Once the payment gets credited to MSTC's designated bank account, the transaction fee shall be auto authorized vendor to submit the bid. <u>Transaction fee is non-refundable.</u> A vendor will not have the access to online e-tender without making the payment towards transaction fee. NOTE: Bidders are advised to remit the transaction fee well in advance before the closing time of the event so as to give themselves sufficient time to submit the bid.</p> |
| 3 | <p>Vendors are instructed to use "My Document" link in "EVENT" menu to upload all scanned copies of documents viz. testimonials, registration certificates etc. in document library. Hard copies of bidding document will not be considered for evaluation. Multiple documents can be uploaded. Once documents are uploaded in the library, vendors can attach documents through Attach Document link for respective e-Tender.</p> |
| 4 | <p>a) Technical Bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can witness electronic opening of bid. b) Price bid will be opened electronically of only those bidders(s) whose Technical Bid is found to be technically acceptable. Such bidder(s) will be intimated date of opening of Price bid, through valid email confirmed by them.</p> |
| 5 | <p>SPECIAL NOTE: a. Bidders are required to ensure that their registered email ID, provided is valid and updated at the stage of registration of vendor with MSTC. Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).</p> |

- b. Bidders are requested to see the web site once again before the due date of tender opening to ensure that they have not missed any corrigendum uploaded against the said tender after downloading the tender document. **The responsibility of downloading the related corrigendum, if any, will be that of the downloading parties.**
- c. Bidders are also requested to download vendor guide available in login under link "Download Guides" and study the same and post their queries, if any, to MSTC over e-mail well in advance.
- d. Bidders are requested to give sufficient time to bid in an organized manner and report any problem arisen to MSTC in advance & not in the closing stage.

6.0 AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S):

1) **AGL's Tender Website –**

http://www.aglonline.net/index.php?option=com_content&view=article&id=32&Itemid=59

2) **MSTC Tender Website – https://www.mstcecommerce.com/eproc/event_list.jsp**

Note - Bidders are requested to visit the website regularly to keep themselves updated.

Bid must be submitted only on <https://www.mstcecommerce.com/eproc/> Bid(s) received from bidders to whom tender/information regarding this Tender Document has been issued as well as offers received from the bidder(s) by downloading Tender Document from above mentioned website(s) shall be taken into consideration for evaluation & award provided that the Bidder is found responsive and subject to provisions contained in Instructions to Bidders.

7.0 All entries in the tender should be entered in online Technical & Commercial formats on the website of MSTC (e-procurement service provider) without any ambiguity.

8.0 Technical bid will be opened online on specified date and time as given in NIT.

9.0 Bidders are instructed to use **Upload Documents** link in **Document Library** to upload documents in document library. Multiple documents can be uploaded. Maximum size of single document for uploading is 5 MB.

Once documents are uploaded in the library, bidders can attach them through Attach Document link against the particular tender. Please note that if documents are not attached to any tender, the same cannot be downloaded by AGL and it will be deemed that vendor has not submitted the documents. For further assistance, follow instructions of vendor guide.

10.0 All notices and correspondence to the bidder(s) shall be sent by email only, till finalization of tender takes place by AGL as well as by MSTC. Hence, the bidders are required to ensure that email address provided by them is valid and updated with MSTC (i.e. service provider). Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).

11.0 (a) At any time prior to the deadline for submission of online tender, the AGL may for any reason, modify the Tender. Please note that there is no provision to take out list of parties downloading the RFP/ tender document from the web site mentioned in NIT. As such, bidders are requested to see the web site once again before the due date of opening to ensure that they have not missed any corrigendum uploaded against the said Tender after downloading the Tender document. The responsibility of downloading the related corrigendum, if any, will be of the bidder only.

(b) Intimation in respect of corrigendum to this NIT (if any) will be sent through email to tenderer(s) who have downloaded the documents from the website. Please see also website <https://www.mstcecommerce.com/eproc/> of MSTC Ltd. The AGL reserves the right to accept or reject any or all the proposals in whole or part without assigning any reasons.

12.0 E-tender cannot be accessed after the due date and time mentioned in NIT.

13.0 **Bidding in e-Tender**

- 1) Bidder to upload the copies of EMD/MSME/NSIC along with the technical part, however original copy of the same to be submitted in physical form within 7 (Seven) days from the due date of submission of bid. Refund of EMD in case of submission of DD will be made through e-payment or manual cheque (As per Tender terms).
- 2) The process involves Electronic Bidding for submission of Technical bid as well as Priced / Commercial bid.
- 3) Only those bidder(s) who have submitted the above fees can submit their Technical and Commercial bid through internet in MSTC website: www.mstcecommerce.com.
- 4) In all cases bidder should use their own ID and password along with Digital Signature at the time of submission of their bid.
- 5) During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
- 6) The e-tender floor shall remain open from the pre-announced date & time till the date and time as mentioned above in Notice Inviting Tender.
- 7) All electronic bids submitted, using valid Digital Signing Certificate, during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and the acceptance of the same by AGL (Buyer) will form a binding contract between Buyer and the Bidder for execution of work. Such successful tenderer shall hereafter be called VENDOR.
- 8) **It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.**
- 9) AGL reserves the right to cancel or reject or accept or withdraw or extend tender in full or part as the case may be without assigning any reason thereof.
- 10) No deviation from the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms and conditions for the tender.
- 11) Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupees as per UOM indicated in the e-tender floor/ tender document.

- 14.0 During pre-qualification and evaluation of the e-tender, the AGL may, at its discretion, ask respondents for clarifications on their proposal. The respondents are required to respond within the time frame prescribed by the AGL



CUT-OUT SLIP

(Outer Envelope / EMD/MSME/NSIC)

CLIENT : AGL, INDORE
PROJECT : CITY GAS DISTRIBUTION PROJECT
BID DOCUMENT : AGL/Head Office/Contract and Purchase/9/25-26/ET/9
NO. WORK [ICCP SYSTEMS]

DUE DATE & TIME : To,
C&P Department
Aavantika Gas Limited,
Second Floor 202-B, NRK Business Park,
Vijay Nagar Square, AB Road, Indore-
452010 Telephone: +91 (731) 4222520

FROM

NAME:

ADDRE



COVERING LETTER FORMAT IN BIDDER'S LETTERHEAD

Bidder Ref No.

Date:

To,
Contracts and Procurement Dept.
Aavantika Gas Limited
Second Floor 202-B, NRK
Business Park, Vijay Nagar
Square, AB Road, Indore-452010
Tel- +91 (731) 4222520

Tender No. AGL/Head Office/Contract and Purchase/9/25-26/ET/9 [ICCP SYSTEMS]

Subject: Letter of Bid Submission against Tender No. **AGL/Head Office/Contract and Purchase/9/25-26/ET/9 [ICCP SYSTEMS]** for Design, Supply and Installation of ICCP Systems at Indore and Pithampur Location.

Dear Sir,

With reference to above mentioned subject, please find enclosed herewith our Bid on behalf of "**BIDDER'S COMPANY NAME**", along with Tender documents and below enclosures as required for the Bid;

1. (Document Name e.g. EMD details, Bidder's General Information) 2.
3.
4.
5.
6.
7.

Thanks and Regards,

Submitted By: - "**BIDDERS COMPANY NAME**"
Authorized Person: -
Designation: -

Authorized Signatory



E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF ICCP SYSTEMS



| S.No. | Section | Particulars |
|-------|----------------|--------------------------------------|
| 1. | SECTION – I | Invitation for Bid (IFB) |
| 2. | SECTION – II | Instructions to Bidders (ITB) |
| 3. | SECTION – III | Technical Specification |
| 4. | SECTION – IV | Payment Terms |
| 5. | SECTION – V | General Conditions of Contract (GCC) |
| 6. | SECTION – VI | Schedule of Rates (SOR) |
| 7. | SECTION – VII | Packing and Marking |
| 8. | SECTION – VIII | Forms & Formats |



E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF ICCP SYSTEMS



SECTION I
INVITATION FOR BIDS (IFB)



**E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF ICCP SYSTEMS**



Aavantika Gas limited (AGL) (hereinafter referred as Owner), is supplying Piped Natural Gas (PNG) to domestic, commercial and Industrial consumers and Compressed Natural Gas (CNG) to automobiles in Indore, Ujjain and Gwalior cities of Madhya Pradesh. AGL invites sealed bids under single stage two bid system from eligible bidders for the Design, Supply and Installation of ICCP Systems at Indore and Pithampur Location as per the details given in Tender document.

The Scope of work under this contract shall be for the Design, Supply and Installation of ICCP Systems as per the specifications and other details given in tender document and Schedule of Rates (SOR).

- 1.0 PROJECT : CITY GAS DISTRIBUTION PROJECT FOR INDORE, UJJAIN, PITHAMPUR & GWALIOR**
- 2.0 ITEM & QUANTITY REQUIRED : MENTIONED IN SCHEDULE OF RATES (SOR)**
- 3.0 SCOPE OF WORK : DESIGN, SUPPLY AND INSTALLATION OF ICCP SYSTEMS**
- 4.0 COMPLETION PERIOD :**
- Completion Period shall be One (01) Year from the date of award of work.
 - During Contract period, Two (02) Sub-Orders (POs in SAP terminology) shall be issued for 2 locations, each having Completion Period of Six (06) months.

| Milestones | Job Description | Duration / Completion Period |
|----------------|--|---|
| Mile Stone - 1 | Initial mobilization | Within 30 days from the date of work front awarded through separate PO/Sub Orders |
| Mile Stone - 2 | Soil Survey, Attenuation calculation and submission of design & detail Engineering | Within 45 days from the work front awarded through separate PO/Sub Orders |
| Mile Stone - 3 | Supply of Equipment's and Materials at Site, ready for Installation | Within 30 days from the date of Design Approval, including Workshop inspection |
| Mile Stone - 4 | Installation Testing and Commissioning | Within 45 days from the date of Design Approval |
| Mile Stone - 5 | Post Commissioning Surveys | Within 90 days from date of Commissioning of PCP System |

- **Commissioning of ICCP System:** 90 Days from date of issuance of separate PO/Sub Orders.
- **Post Commissioning Surveys:** 90 Days from date of commissioning of ICCP System.

Note: In the SAP terminology, initially Contract is issued followed by issuance of PO's

5.0 BID VALIDITY : 04 MONTHS FROM BID DUE DATE.

6.0 BID SECURITY / EMD : 90,000 in the form of DD or BG

The bid security shall be in the form of Demand Draft or Bank Guarantee in favour of Aavantika Gas Limited, Indore (India), valid for 2 months in excess of bid validity period i.e. for 06 months in the prescribed format (Form F-4) of the bid document.

Bidders registered with NSIC/MSME under its single point registration scheme are exempted from furnishing Bid Security. NSIC / MSME certificate (updated & valid as on due date of submission to be submitted) shall be duly attested by CHARTERED ACCOUNTANT (CA) AND NOTARY PUBLIC WITH LEGIBLE STAMP.

Submission of Bid Security/EMD is exempted only when bidder is relevantly registered under NSIC / MSME scheme.

NOTE:

Bidder to upload the copy of EMD or NSIC/MSME Certificate along with the technical part, however copy of the same uploaded document is to be submitted in a separate envelope scribed with the Tender number, Tender Subject, Name of the bidder and Bid due date in physical form within 7 (Seven) days

from the due date of submission of bid at the communication address:

(PLEASE NOTE THAT CUTOUT SLIP TO BE PASTED OUTER OF THE EMD ENVELOPE WHICH IS ATTACHED AS PAGE No. 08)

7.0 BID DOCUMENT FEE (NON-REFUNDABLE & NON-TRANSFERABLE): Nil.

8.0 The Bid Document calls for offers on single point "Sole Bidder" basis. Bidders are advised not to submit offers in "Consortium" or "Joint Bid". Joint bid referred herein is an offer, which seeks order to be placed on more than one party / co-bidder.

9.0 The prices once quoted shall not be changed whether resulting or arising out of any subsequent technical / commercial clarifications sought regarding the bid and even if any deviation or exclusion may be specifically stated in the bid.

10.0 Bidder is advised to quote strictly as per scope & terms and conditions of bid document and not to stipulate any deviation / exceptions.

11.0 Purchaser reserves the right to accept or reject any or all bids received at its absolute discretion without assigning any reason, whatsoever.

12.0 Bid document is non-transferable. Bids received from bidders in whose name Bid Document has been issued shall only be considered. Bidder must submit the Bid Document Fee in their name. Bid Document Fee will be submitted by Bidders as per Clause 7.0 above.

13.0 Bidder shall ensure that Bid Security having a validity of 2 months beyond the offer validity, i.e. validity of 5 months from the bid due date, must accompany the offer in the format made available in the Bid Document. Offer, if unaccompanied with Bid Security, shall be rejected.

14.0 Bids complete in all respects should reach on or before the BID DUE DATE AND TIME. Fax / /Telegraphic/ E-Mail bids shall be rejected.

15.0 AGL shall not be responsible for cost incurred in preparation and delivery of bids.

16.0 This is **ZERO DEVIATION** bid document. The bids shall be evaluated as received without any Reference to the bidder. The Bids not meeting the Technical of this Tender Document will be rejected.

17.0 AGL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

18. BID EVALUATION CRITERIA - TECHNICAL:

The Bidder should have executed minimum One (01) similar work of Design, Supply & Installation of complete Impressed Current Cathodic Protection (ICCP) System for any Oil & Gas Sector in India in Single Order within last five years reckoned from Bid due date.

19. SUPPORTING DOCUMENTS & SPECIAL CONDITIONS:

Bidder has to submit a copy of **Order of Award** along with corresponding **Work Execution Certificate** duly issued by the Client. The **Completion Certificate** should have cross reference with the order of award indicating **Executed Value** (INR).

In the absence of requisite documents, AGL reserves the right to reject the bid without making any reference to the Bidder.

20. BID EVALUATION CRITERIA - FINANCIAL:

➤ **Turnover**

The contractor should have achieved a minimum turnover of ₹ 23 Lakhs in any one of the last 3 (three) audited financial year

➤ **Working Capital**

The contractor should have achieved a minimum working of ₹ 4.50 Lakhs in the last audited balance sheet.

➤ **Net Worth:**

Net worth must be positive as per last audited financial statement.

Contractors must submit a copy of financial statements including Balance Sheet and Profit & Loss account statement certified by Chartered Accountant for last three audited financial years in support of the above.

- **Declaration Letter/Certificate for line of credit (If the bidder's working capital is inadequate)**
 - i) Declaration Letter/Certificate for line of credit due to short fall of working capital shall be from single bank only. Letters from multiple banks shall not be applicable. However, banking syndicate will also be acceptable wherein a group of banks can jointly provide line of credit to the bidder.
 - ii) The bank shall be required to issue the letter from declaration/certificate of line of credit on their letter head along with the contact details of the issuing authority like email id, contact number etc. The Format for certificate from Bank for Line of Credit is attached as FORM-3C.

AUTHENTICATION OF DOCUMENTS TO BE SUBMITTED IN SUPPORT OF BEC:

| |
|---|
| <p><u>Technical Criteria of Bid Evaluation Criteria (BEC):</u> All documents in support of Technical Criteria of Bid Evaluation Criteria (BEC) to be furnished by the bidders shall necessarily be duly certified / attested by Chartered Engineer and notary public with legible stamp. # Documents duly issued by AGL can be submitted without any certification / attestation / authentication.</p> |
| <p><u>Financial Criteria of Bid Evaluation Criteria (BEC):</u> Bidder shall submit "Details of financial capability of bidder" in prescribed format 'F-03' duly signed and stamped by a chartered accountant. All documents in support of Bid Capacity to be furnished by the bidders shall necessarily be duly certified by the Chartered Accountant. Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of tender document. However, UDIN may not be required for documents being attested by Chartered Accountants in terms of provisions of tender document.</p> |

All documents in support of BEC should be scanned and uploaded in the e-tendering portal. In absence of requisite documents, AGL reserves the right to reject the bid without making any reference to bidders.

21. EVALUATION & COMPARISON OF BIDS:

- Evaluation will be done on overall lowest basis.
- Bidder to quote for all SOR Items mentioned in the Price Schedule.
- In case it is observed that a bidder has not quoted for any item in the Schedule of Rates, for the purpose of evaluation the maximum rate quoted by the other qualified bidders for such items shall be considered.
If after evaluation, such bidder is found to be the lowest evaluated bidder, the rate for the missing item, the minimum rate quoted by the other qualified bidders for such item shall be considered for award and an overall discount shall be obtained from the bidder so as to maintain his total quoted amount unchanged. In case bidder does not agree to offer discount to maintain his originally evaluated overall price then the bid is liable for rejection.

22. PENALTY:

| Sr. No | Parameter | Description / Milestone | Penalty |
|--------|------------------------------|--|--|
| 1 | Commissioning of ICCP System | 90 Days from date of issuance of Sub Orders (POs) against Contract NOTE: In SAP terminology, Contract is issued followed by issuance of Purchase Orders. | In case contractor fails to complete the work/ services within stipulated period then unless such failure is due to force majeure as defined in Bid document, there will be reduction in order price @ 0.5% respective of Purchase Order value for each week of delay or part thereof subject to maximum of 5% of individual Purchase Order value (excluding taxes and duties). |

| | | | |
|---|--|--|--|
| | Post Commissioning Surveys | 90 Days from date of commissioning of ICCP System. | Rs 200 per delayed day per site from the RA bills submitted subsequent to start of the work or outstanding from payment pending with AGL |
| | HR Compliances | Statutory/Legal requirement | Rs 1000 per instance |
| 2 | HSE Compliance | AGLs HSE requirement | Rs 500 per instance* during the execution of job |
| 3 | Use of Equipment /Instruments | Meeting Calibration requirement | Rs 500 equipment /Instruments observed without calibration |
| 4 | Manpower Competency | Deployment of Man Power as per required Skill Set | Rs 500 against non-availability of skilled manpower per instance |
| 5 | Up-keeping of First Aid Kit & its availability | AGLs HSE requirement | Rs 200 per instance |
| <p>Note: Penalties specified at Sr. No. 2,3,4 & 5 related to HSE/Poor Workmanship shall be duly applicable to over and above the penalty specified at Sr. No. 1</p> | | | |



E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF ICCP SYSTEMS



SECTION - II
INSTRUCTIONS TO BIDDERS

A. Introduction

1 SCOPE

- 1.1 The Purchaser invites sealed bids for the entire work as specified in the Bid documents (Hereafter referred to as the Work).
- 1.2 The Bid document specifies the contractor scope of work, terms & conditions.
- 1.3 All terms, conditions and specifications of the Bid document shall be construed as applicable in general, unless specifically indicated to the contrary.
- 1.4 Bidders shall quote in the manner as specified in the Bid document. Purchaser reserves the right to evaluate and accept bids at their sole discretion. The provisions of this clause shall supersede any contrary provisions expressly stated or implied anywhere else in the Bid document.

2 ELIGIBILITY OF BIDDERS.

- 2.1 Bidders shall as part of their bid, submit a written Power of Attorney/Authorization Letter authorizing the signatory of the bid to bind the bidder.
- 2.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consultancy services for the preparation of the design, specifications, and other documents to be used for carrying out similar Works under this Invitation for Bids.
- 2.3 The Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Purchaser in accordance with ITB.

3 ONE BID PER BIDDER

- 3.1 A bidder shall submit only one bid in the same bidding process. A bidder who submits or participates in more than one bid will be disqualified.
- 3.2 Alternative bids are not acceptable.

4 COST OF BIDDING

- 4.1 The bidder shall bear all costs incurred & associated with the preparation and submission of the bid, and Purchaser will in no case be responsible or liable for this cost, regardless of the conduct or outcome of the bidding process.

5 NON-TRANSFERABILITY OF THE BID DOCUMENTS

- 5.1 Bid Documents are non-transferable. The party to whom the Bid documents are issued may only furnish the bid. The bid received from any party other than to whom the Bid documents are issued shall be rejected immaterial of fact of any relationship between party to whom Bid documents are issued and party, who furnished the bid.

6 SITE VISIT

- 6.1 The bidder is advised to visit and examine the site of works and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing of the bid and entering into contract. The cost of visiting the site shall be at bidder's own expenses.
- 6.2 The bidder or any of its personnel or agents will be granted permission by the Purchaser to enter upon its premises and land for the purpose of such visits, but only upon the Express condition that the bidder, its personnel, and agents will release and indemnify the Purchaser and its personnel and agents from and against all liabilities in respect thereof, and will be responsible for death or personal injury, loss of or damage to

property, and any loss, damage, costs, and expenses incurred as a result of the inspection.

B. BID DOCUMENTS

7 CONTENTS OF BID DOCUMENTS

- 7.1 The Bid Documents are those stated below and should be read in conjunction with any corrigendum issued in accordance with clause 9.2 of Instruction to Bidder (ITB):
- 7.1.1 Invitation for Bid (IFB)
 - 7.1.2 Instruction to Bidder (ITB)
 - 7.1.3 Technical Specification, Drawing, Scope of Work, etc.
 - 7.1.4 Payment Terms
 - 7.1.5 General Conditions of Contract
 - 7.1.6 Schedule of Rates (SOR)
 - 7.1.7 Packaging and Marking
 - 7.1.8 Forms & Formats

- 7.2 The bidder is expected to examine all instructions, forms, terms, specifications and drawings in the bid documents. The Bid Documents together with all its attachment thereto, shall be considered to be read understood and accepted by the bidder. Failure to furnish all information required by the Bid documents or submission of a bid not substantially responsive to the Bid documents in every respect will be at bidder's risk and may result in the rejection of the Bid.

8 CLARIFICATION ON BID DOCUMENTS

- 8.1 A prospective bidder requiring any clarification of the Bid Documents may notify Purchaser in writing or by fax at the address mentioned in the Invitation for Bid (IFB). Purchaser will respond in writing to any request for clarification of the Bid documents which it receives after issue of bid documents. Written copies of Purchaser's response (including an explanation of the query, if required, but without identifying the source of the query) will be sent to all prospective bidders who have received the Bid documents.

9 AMENDMENT OF BID DOCUMENTS

- 9.1 At any time prior to the bid due date, Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bid documents, by issuing corrigendum.
- 9.2 Any corrigendum thus issued shall be part of the Bid documents pursuant to ITB Clause-17 and shall be notified in writing by fax / post to all prospective bidders, who have received the Bid documents. Prospective bidders shall promptly acknowledge receipt of each corrigendum by fax/ post to the Purchaser.
- 9.3 The Purchaser may, at its discretion, extend the bid due date in order to allow prospective bidders, a reasonable time to furnish their most competitive bid taking into account the amendments issued.
- 9.4 In order to allow reasonable time to respond to bidders' queries, bidders must submit their queries, if any, at least seven (07) days before the bid submission due date. Queries received after this period will not be considered.

C. PREPARATION OF BID DOCUMENT

10 LANGUAGE OF BID

- 10.1 The bid prepared by the bidder as well as all correspondence/ drawings and documents relating to the bid exchanged by bidder shall be written in English language, provided that any printed literature furnished by the bidder may be written in another language so long as accompanied by an ENGLISH translation, in which case, for the purpose of interpretation of the bid, the ENGLISH translation shall govern.

11 DOCUMENTS COMPRISING THE BID

- 11.1 The bid prepared by the bidder shall comprise of the following components:

11.1.1 Techno-Commercial Un priced - Bid (PART-I).

- A. Covering letter with bidder's offer number.
- B. Bidder's General Details / information as per format F-1.
- C. Bid Security (EMD) as per format F- 4. **(Bids received without EMD shall be rejected)**
- D. Copies of various documents as required as per F-2, F-3, F-3A & 3B, F-5 on bidder letterhead, F-8, F-10 (on Bidder's Letterhead), F-11 (on Bidder's Letterhead) and F-12 (on Bidder's Letterhead).
- E. NO Deviation Confirmation as per F- 6 on bidder's letter head.
- F. Copy of Un-Priced SOR marked "QUOTED" against the items quoted.
- G. Documentary evidence established in accordance with ITB that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
- H. Addendum / Corrigendum, if any, to the Tender.
- I. Power of Attorney / Authorization letter authorizing the signatory of the bid.

11.1.2 Online Price Bid – Not to be Opened with Un-Priced Bid”.

Bidder has to quote rate in the Price Format duly available on Bidding floor during submission of Price against the SOR on MSTC Portal

12 BID PRICES

- 12.1 The Prices should be quoted in INR only.
- 12.2 The Bidder shall indicate in the appropriate Price Schedule, the unit prices (where applicable) and total price of the services/ works it proposes to execute under the contract. If quoted in separate typed sheets and any variation in item description, unit or quantity is noticed, the bid is liable to be rejected.
- 12.3 Bid quoted for part scope is liable to be rejected (As Applicable).
- 12.4 Prices quoted by the bidder, shall remain firm, fixed and valid until completion of the contract and will not be subjected to any variation, except statutory variation (as specified in Bid document.)
- 12.5 All corrections and alterations in the entries shall be signed in full by the bidder with date. No erasures or over-writings are permissible.
- 12.6 Bidder shall quote the all-inclusive prices as per scope of work and SOR, taking into consideration all applicable taxes, duties, overheads, provision of safety gadgets to their personnel, transportation, conveyance, trainings, recruitments, communication charges,

cost for providing tools & tackles, equipment's, machineries, minimum spares, etc. and nothing extra shall be payable by the Purchaser.

13 PERIOD OF VALIDITY OF BIDS

- 13.1 The bid shall remain valid for 4 months from the bid due date. Purchaser may reject a bid which is valid for a shorter period being non-responsive.
- 13.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Purchaser may request that the bidder extend the period of bid validity for a specified additional period. The requests and the responses thereto shall be made in writing (by fax/ post/ e-mail). A bidder can refuse the request without forfeiture of his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of its bid security for the period of the extension and in accordance with ITB clause 14 in all respects.

14 BID SECURITY

- 14.1 Pursuant to IFB Clause No. 6, the bidder shall furnish, as part of his bid, bid security in the amount specified in the Invitation for Bids.
- 14.2 The bid security is required to protect the Purchaser against the risk of bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause- 14.7
- 14.3 The bid security will be in Indian Rupees and shall be in the form of Demand Draft / Banker's Cheque is to be drawn in favor of **Aavantika Gas Ltd**, payable at Indore or in the form of Bank Guarantee as per format F-4 enclosed in the Bid Document.
- 14.4 Any bid not secured in accordance with ITB Clause 24 and ITB Clause 14.3 may be rejected by the Purchaser as non-responsive.
- 14.5 Unsuccessful bidder's bid security will be discharged/ returned, as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the Purchaser, pursuant to ITB Clause-13.
- 14.6 The successful bidder's bid security will be discharged upon the bidder's accepting the Order, pursuant to ITB Clause- 34 and furnishing the Contract Performance Guarantee pursuant to ITB Clause- 35.
- 14.7 The bid security may be forfeited:**
- 14.7.1 If a bidder withdraws his bid during the period of bid validity.
- 14.7.2 In the case of a successful bidder, if the bidder fails:
- i) To accept the Delivery Order in accordance with ITB Clause- 34 or
 - ii) To furnish Performance Guarantee in accordance with ITB Clause-35
 - iii) To accept correction of errors pursuant to ITB Clause- 26
- 14.8 Bid Security must indicate the Bid Document number and the item for which the bidder is quoting. This is essential for proper co-relation at a later date. The Bid Security in the form of Bank Guarantee shall be as per the format provided in the Bid Document.
- 14.9 The Indian / Domestic firms registered with NSIC/MSME, under its single point registration scheme are exempted from furnishing Bid Security. NSIC / MSME certificate submitted shall be duly attested by CHARTERED ACCOUNTANT (CA) AND NOTARY PUBLIC WITH LEGIBLE STAMP.

15 FORMAT AND SIGNING OF BID

- 15.1 The bidder shall prepare the document comprising the bid as per clause 11 of ITB.

- 15.2 The bid shall be typed or written in indelible ink and shall be signed by the person or persons duly authorized to sign on behalf of the bidder. The name and position held by each person signing must be typed or printed below the signature. All pages of the bid except any catalogues / literatures shall be signed and sealed by the person or persons signing the bid.
- 15.3 The bid shall contain no alterations, omissions or additions, unless such corrections are signed & sealed by the person or persons signing the bid.

16 ZERO DEVIATION

- 16.1 Bidder to note that this is a **zero deviation tender**. AGL will appreciate submission of offer based on the terms and conditions in the enclosed General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Instructions to Bidder (ITB), Scope of work, technical specifications, Invitation for Bid (IFB) etc. to avoid delay in seeking clarifications on technical/commercial aspects of the offer. Bids with any deviation to the bid conditions shall be **liable for rejection**.

D. SUBMISSION OF BIDS

17 SEALING AND MARKING OF BIDS (Not Applicable)

- 17.1 Bid shall be submitted in the following manner in separate sealed envelopes duly super scribed as below:
- Envelope - I – Techno-commercial / Un-priced bid
 - Envelope - II- Priced Bid “Not to be opened with Un-Priced Bid”
 - Envelope – III – Tender Fees / MSME / NSIC
- 17.2 All three envelopes containing EMD/MSME/NSIC & Bid Documents, Price Bids and Tender Fees shall further be sealed in one Master (outer) envelope super - scribing Name of Project, Tender Document Number and shall be addressed to the Purchaser at the address given in IFB.
- 17.3 Each envelop shall indicate name and address of the bidder to enable the bid to be returned unopened, if warranted.
- 17.4 If the outer envelope is not sealed and marked as above, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid and its consequential rejection. The Purchaser recommends submission of Bids in – person and will assume no responsibility for any delay / damage to the bids received by Post / Courier.

18 DEADLINES FOR SUBMISSION OF BID

- 18.1 The Bid must be online submitted at MSTC Portal during Bidding period not later than the time and date as specified in IFB.
- 18.2 The Purchaser may, in exceptional circumstances and at its discretion, on giving reasonable notice by fax or any written communication to all prospective bidders who have been issued the bid document extend the deadline for the submission of bids in which case all rights and obligations of the Purchaser and bidders, previously subject to the original deadline will thereafter be subject to deadline as extended.

19 LATE BIDS

- 19.1 Any bid received by the Purchaser after the deadline for submission of bid pursuant to clause no. 18 of ITB will be declared "Late" and rejected and may be returned unopened to the bidder at the sole discretion of the Purchaser.

20 MODIFICATION AND WITHDRAWAL OF BIDS

- 20.1 The bidder may modify or withdraw its bid after the bid submission, but, before the due date of submission provided that written notice of the modification, including substitution or withdrawal of the bid, is received by the Purchaser prior to the deadline prescribed for submission of bids.
- 20.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the Bid document, with the outer envelopes additionally marked "modification" or "withdrawal" as appropriate. A withdrawal notice may also be sent by fax/post, but followed by signed confirmation copy, post marked not later than the deadline for submission of bids.
- 20.3 No bid shall be modified after the deadline for submission of bid.
- 20.4 No bid shall be allowed to be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the bid form. Withdrawal of a bid during this interval shall result in the bidder's forfeiture of its bid security, pursuant to clause 14.7 of ITB.

E. BID OPENING AND EVALUATION

21 BID OPENING (NOT APPLICABLE FOR ONLINE BID)

- 21.1 The Purchaser will open all bids in the presence of Bidders' representatives who choose to attend, at the time, on the date and place (as specified in IFB). The Bidders' representatives, who are present, shall sign a register evidencing their attendance, if so required by the Purchaser.
- 21.2 The Bidder's names, bid modifications or withdrawals, and the presence or absence of requisite Bid Security (EMD) and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be later returned unopened to the concerned Bidder pursuant to ITB Clause 29.
- 21.3 Bids (and modifications sent pursuant to ITB Clause 30) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Bidder's specific attention is drawn to this stipulation to enable the representative of the Bidder at the bid opening time to bring out to the attention for the Purchaser any documents pertaining to its bid is not being acknowledged and relevant portions read out.
- 21.4 The Purchaser will prepare a bid opening statement to be signed by all representatives present during bid opening.

22 CLARIFICATION OF BID

- 22.1 During evaluation of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

23 CONTACTING THE PURCHASER

- 23.1 From the time of the bid opening to the time of the award, if any bidder wishes to contact the Purchaser for any matter relating to the bid it should do so in writing.
- 23.2 Any effort by a bidder to influence the Purchaser in any manner in respect of bid evaluation or award will result in the rejection of that bid.

24 PRELIMINARY EXAMINATION OF BIDS

24.1 Techno-Commercial Bid Evaluation

- 24.1.1 The Purchaser will examine the bids to determine whether they are complete, whether required securities have been furnished, whether the documents have been properly signed and whether the bids are generally in order.
- 24.1.2 Prior to the detailed evaluation, the Purchaser will determine whether each bid is of acceptable quality, is generally complete and is responsive to the Bid Documents. For the purpose of this determination, a responsive bid is one, which confirms to all the terms, conditions and specification of the Bid document, without deviations, objections, conditionality or reservations.
- 24.1.3 No deviation, whatsoever, is permitted in the Bid Documents and the price bids of those bidders, whose technical and commercial bids contain any exception to the conditions and stipulations of the Bid Documents may not be opened.
- 24.1.4 The Purchaser's determination of bid responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. If a bid is non-responsive, it may be rejected by the Purchaser.
- 24.1.5 The Purchaser will carry out a detailed evaluation of the bids previously determined to be responsive in order to determine whether the technical aspects are in accordance with the requirements set forth in the Bid documents. In order to reach such a determination, the Purchaser will examine and compare the technical aspects of the bids on the basis of the information supplied by the bidders, taking into account the following factors:
 - 24.1.5.1 Overall completeness and compliance with the Technical Specifications, quality functions and operations of any process control concept included in the bid. The bid that does not meet minimum acceptable standard of completeness, consistency and detail will be rejected as non-responsive.
 - 24.1.5.2 Any other relevant factor, if any that the Purchaser deems necessary or prudent to be taken into consideration.
 - 24.1.5.3 Requisite forms contain all necessary information stipulated in the Bid Document.

25 REJECTION CRITERIA

- 25.1 Minor unconformities may be neglected and/or bidders may be required to rectify such minor unconformities.
- 25.2 The provisions of the following clauses of the Bid document must be adhered to, failing which the bid shall be considered as non-responsive and shall be summarily rejected:
 - 25.2.1 Tender fee, Bid Security i.e. non-submission, shorter Value (EMD) or Bid Security (EMD) not complying with the specified requirements.
 - 25.2.2 Submission of Contract Performance Bank Guarantee as per tender.
 - 25.2.3 Period of validity of bid.
 - 25.2.4 Firm & fixed Prices throughout execution of work
 - 25.2.5 Offer for complete scope of work
 - 25.2.6 Warranty and guarantee for work executed/ defect liability

- 25.2.7 Resolution of Dispute/ Arbitration clause.
- 25.2.8 Payment terms.
- 25.2.9 Validity of Contract.
- 25.2.10 Prices as per Schedule of Rates.
- 25.2.11 Price reduction schedule provisions.
- 25.2.12 Penalty provisions.

25.3 **If any Vendor is adjudged as POOR Performer by AGL in preceding 12 Months from Tender bid due date, the bid submitted by such Vendor will NOT be considered.**

26 OPENING OF PRICE BID

- 26.1 The Bidder whose bid is found substantially responsive shall be invited to attend the opening of price bid. Such bidders may be required to attend the price bid opening at a short notice. The place, date and time of price bid opening will be informed to all such Bidders. The Bidders' representatives who are present shall sign a register evidencing their attendance.
- 26.2 The bid prices and discounts, if any stated in the price schedules will be announced during price bid opening.

27 ARITHMETIC CORRECTIONS

- 27.1 The bids will be checked for any arithmetical errors as follows if any, will be rectified on the following basis:
 - 27.1.1 If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected;
 - 27.1.2 If there is a discrepancy between words and figures, the amount in words will prevail;
- 27.2 If the bidder does not accept the correction of errors, its bid will be rejected and the bid security will be forfeited.

28 EVALUATION AND COMPARISON OF BIDS: Refer Section I IFB clause no. 18.3 "Evaluation and Comparison of Bids".

- 1. When rate quoted by contractor in figure and words tallies but amount is incorrect, the rate quoted by contractor shall be taken as correct and not the amount and amount shall have corrected.
- 2. When it is not possible to ascertain the correct rate, the rate quoted in words shall be adopted and the amount worked out, for comparison purposes.
- 3. In case it is observed that any bidder has not quoted for any item in Schedule of Rates (such unquoted item not being in large), the quoted price for the purpose of evaluation shall be considered as the maximum rate quoted by remaining bidder for such items.
- 4. If after evaluation such bidder is found to be lowest evaluated bidder, the rates of missing items should be considered as included in quoted bid price.
- 5. If the estimated price impact of the unquoted items is more than 10% of bidder's quoted price, the above provisions shall not be applicable and such bid shall be rejected.

29 POST-QUALIFICATION

- 29.1 In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated

responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB.

- 29.2 The determination will take into account the Bidder's financial, technical, and production Capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.
- 29.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Purchaser will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

F. AWARD

30 AWARD CRITERIA

- 30.1 Subject to ITB Clause 21 to 29 of section E, the Purchaser will place the order on the successful bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the order satisfactorily. The Award of work shall be done in accordance with Clause No. 24 of IFB of this Document.

31 PURCHASER'S RIGHT TO VARY QUANTITIES

- 31.1 Purchaser reserves the right to increase or decrease the quantities specified in the Schedule of Rates, without any change in unit price or other terms and conditions.
- 31.2 Bidder shall note that the quantities mentioned against each activity in Schedule of Rates are tentative only and subject to change based on actual requirement. The unit rates quoted by the bidders shall remain fixed and firm, no price adjustment shall be allowed after bid submission.

32 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

- 32.1 Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligations to inform the affected bidder or bidders the reason for the Purchaser's action.

33 NOTIFICATION OF AWARD / FAX OF INTENT

- 33.1 Prior to the expiration of period of bid validity, the Purchaser will notify the successful bidder in writing by fax or e-mail to be confirmed in writing that his bid has been accepted.
- 33.2 The date of Fax of Intent for notification of Award will constitute effective date.
- 33.3 Upon the successful bidder's furnishing of Contract Performance Bank Guarantee (CPBG), pursuant to ITB Clause 35, the Purchaser will promptly notify each unsuccessful bidder and will discharge the bid security of such bidders.

34 ACCEPTANCE OF ORDER

- 34.1 Purchaser will issue the Order to the successful bidder within 10 days of award of work. Bidder shall sign all pages and return the acceptance copy of the Purchase/Delivery Order to the Purchaser.

35 CONTRACT PERFORMANCE BANK GUARANTEE

- 35.1 Within Fifteen (15) days from the date of award of Delivery Order/ Purchase Order, the successful bidder shall furnish the performance guarantee in accordance with General Conditions of Contract in the form provided in the Bid documents.
- 35.2 The Contract Performance Bank Guarantee shall be for an amount as defined in General Conditions of Contract (GCC) towards faithful performance of the contractual obligations. This bank guarantee shall be valid for a period of 03 months beyond the expiry of the contract, including the defect liability period and warranty period.
- 35.3 Failure of the successful bidder to comply with the requirements of this clause shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security.

36 CORRUPT AND FRAUDULENT PRACTICES

- 36.1 The Purchaser requires that Bidders observe the highest standard of ethics during the execution of Contract. In pursuance of this policy, the Purchaser defines, for the purposes of this provision, the terms set forth below as follows:
- i) "Corrupt Practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of public official in contract execution; and
 - ii) "Fraudulent Practice" means a misrepresentation of facts in order to influence the execution of a Contract to the detriment of the Purchaser, and includes collusive practice amongst bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition;
- 36.2 Purchaser will reject a proposal for award, if it determines that the bidder recommended for award is engaged in corrupt or fraudulent practices in competing for the award in question;
- 36.3 Purchaser will declare a firm ineligible, either indefinitely or for a stated period of time, if at any time the Purchaser determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing a contract.

37 INCOME TAX LIABILITY

- 37.1 The bidder shall bear all Income Tax liability, both corporate as well as for his personnel.

38 EMPLOYEE PROVIDENT FUND (EPF) (As Applicable)

- 38.1 Bidders have to furnish the proof of existing Employee Provident Fund details.

39 GENERAL

- 39.1 Any failure on the part of the Purchaser at any time to enforce the strict observances of the performance of any of the term(s) and condition(s) or rights, shall not effect or deprive the Purchaser to exercise the same at any later date.
- 39.2 The work will be supervised by Purchaser's Engineer-In-Charge or his representative and the Contractor has to strictly adhere to his instructions.
- 39.3 During the tenancy of this contract, Purchaser can increase and/or decrease the quantity of the work/ service (s) required. The quantity of work / service (s) shown in the Schedule of rates is tentative.

- 39.4 The contract period shall be reckoned from the date of Purchase Order (PO).
- 39.5 The agreed rates shall remain firm & fixed till the expiry of contract and the contractor shall not be entitled to any inflation, escalation or revision (statutory or otherwise) or any right to claim, whatsoever by way of representation, explanation, statement or alleged representation or an outstanding or promise given or alleged to have been given by any employee of the Purchaser or due to contractor's own ignorance or on account of the difficulties or hardships faced by him. The rates quoted shall be all-inclusive of applicable taxes/ duties and shall remain firm till expiry/entire tenancy of this contract. It is agreed that the bidder has inspected the sites and assessed the nature and the extent of the work including the conditions prevalent under which the work is to be carried out.

40.0 VENDOR EVALUATION PROCEDURE

1.0 PROCEDURE FOR EVALUATION FOR PERFORMANCE OF VENDORS/SUPPLIERS/CONTRACTORS/CONSULTANTS

2.1 GENERAL

A system for evaluation of Vendors/Suppliers/Contractors/Consultants and their performance is a key process and important to support an effective purchasing & contracting function of an organization.

Performance of all participating Vendors /contractors /consultants need to be closely monitored to ensure timely receipt of supplies from a vendor, completion of an assignment by a consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of project and meeting the operation & maintenance requirement of Operating Plant / Location, it is necessary to monitor the execution of order or contract right from the award stage to completion stage and take corrective measures in time.

2.2 OBJECTIVE

The objective of evaluation of performance aims to recognize, and develop reliable Vendors/ Suppliers/ Contractors/ Consultant so that they consistently meet or exceed expectations and requirements.

The purpose of this is to put in place a system to monitor performance of Vendors/ Suppliers/ Contractors / Consultants associated with AGL in Project and O&M so as to ensure timely completion of various project, timely receipt of supplies including completion of works & services for operation and maintenance of Operating Plant / Location and quality standards in all respects.

2.3 METHODOLOGY

- i) Preparation of Performance Rating Data Sheet
Performance rating data sheet for each and every Vendor/Supplier/Contractor/Consultant for all orders/Contracts with a value of Rs 07 Lakhs and above is recommended to be drawn up. Further, Performance rating data sheet for orders/contracts of Vendor/Supplier/Contractor/Consultant who are on watch list/holiday list/banning list shall be prepared irrespective of order/contract value. These data sheets are to be separately prepared for orders/contracts related to Projects and O&M within 30 days after execution of Order/Contract. Format, Parameters, Process, responsibility for preparation of Performance Rating Data sheet are separately mentioned.
In case of non-performance, these data sheets are to be prepared, as and when need arises.
- ii) Measurement of Performance

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/Supplier/Contractor/Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

- iii) Initiation of Measures:
Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/Supplier/Contractor/Consultant. Response of Vendor/Supplier/Contractor/Consultant would be considered before deciding further course of action.
- iv) Implementation of Corrective Measures:
Based on the response of Vendor/Supplier/Contractor/Consultant pertaining to ongoing or completed orders/contracts, concerned Authority as specified in PO/WO would take approval from Competent Authority and recommend for continuation or discontinuation of such party from the business of AGL.
- v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

Note: All departments other than Projects like O&M, HSE, HR, F&A, Marketing etc. will be covered under definition of O&M.

2.4 **EXCLUSIONS:**

The following would be excluded from the scope of evaluation of performance of Vendor/Supplier/Contractor/Consultant:

- i) Orders/Contracts below the value of Rs 07 Lakhs if Vendor/Supplier/Contractor/Consultant is not on watch list/holiday list/banning list.
- ii) Orders for Miscellaneous/Administrative items/Non stock Non valued items.

However, concerned Engineer-in-Charge/OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M due to non-performance of Vendor/Supplier/Contractor/Consultant in all such cases.

2.5 **PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/CONTRACTOR/CONSULTANTS**

2.5.1 **FOR PROJECTS:**

- i) Evaluation of performance of Vendors/Suppliers/Contractors/Consultants in case of PROJECTS shall be done within 30 days of Commissioning of any Project / Completion of Contract.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge shall prepare a Performance Rating Data Sheet (Format enclosed) for all Orders and Contracts excluding cases under Para 2.4.
- iii) Depending upon the Performance Rating, following action need to be initiated by Engineer-in-charge/Project-in-charge:

| Sr. No. | Performance rating | Action |
|---------|--------------------|---------------------------------------|
| 1 | POOR | Seek explanation for Poor performance |
| 2 | FAIR | Seek explanation for Fair performance |

| | | |
|---|-----------|---|
| 3 | GOOD | Letter to the concerned for improving performance in future |
| 4 | VERY GOOD | No further action |
| 5 | EXCELLENT | Appreciation Letter to the concern |

- iv) Reply from the concerned Vendor/Supplier/Contractor/Consultant shall be examined by EIC. In case of satisfactory reply, Performance Rating data sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken based on recommendations of site level committee and HO level committee:

The methodology for processing of cases of "POOR" (as per Performance Rating) shall be as under:

i) *Within 7 days of issuance of explanation Letter by EIC or no reply/receipt of non-satisfactory reply to explanation letter for "Poor" Performance Rating, site level committee will recommend the case to HO level committee.*

ii) *On receipt of above details from Site level committee, HO level committee will take approval from Competent Authority and accordingly HOD (C&P) will issue Advisory notice (duly vetted by Law Department) to Vendor/Supplier/Contractor/Consultant for putting them on watch list for a Period of Three (03) Years.*

The copy of Advisory notice will also be sent to all OICs/HoDs for instructing EICs to closely monitor the performance of such Vendor/Supplier/Contractor/Consultant in other ongoing/new Orders/Contracts placed on them.

Simultaneously AGL's SAP/Portal will be Yellow Flagged for such Vendor.

iii) *For the case of "Subsequent Instances" in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant, the matter will be deliberated by the site level committee and recommendations to be forwarded to C&P for further deliberation by a HO Level Committee consisting of following:*

(1) HOD (C&P)

(2) HOD (F&A)

(3) HOD (HSE-Q)

(4) HOD of Concerned department.

All other subsequent process of committee recommendation for issuance of Show Cause Notice (SCN) cum suspension order, vetting of same etc will be as per vendor performance.

On receipt of reply to SCN, C&P will forward the same to concerned OIC/HoD at HO for point wise reply to issues brought out by Vendor/Supplier/Contractor/Consultant in their reply to show cause notice.

On receipt of recommendation from site committee through OIC/HoD at HO, the matter will once again be deliberated by the aforesaid HO level committee. All other subsequent process of committee recommendation for keeping the Vendor/Supplier/Contractor/Consultant on holiday or otherwise, vetting of speaking order, approval etc. will be as per vendor performance.

- A) **Where Performance rating is "POOR"** (as per Performance rating carried out after execution of Order/Contract and where no reply/unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/Consultant along with Sharing the Performance rating)

Recommend such defaulting Vendor/Supplier/Contractor/Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):
 - a) **First Instance: Holiday (Red Card) for Two Years, and effect of Holiday will be as mentioned in Clause No. 2.7**
 - b) **Subsequent instance (s) in other ongoing order (s) / contract (s) or new order (s) / contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Three Years**
2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):
 - a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/Consultant shall be put on watch list for a period of Three (03) Years.
 - b) **Second such instance in other ongoing order (s) / contract (s) or new order (s) / contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (red Card) for a period of One Year.**
 - c) **Subsequent instances (more than two) in other ongoing order (s) / contract (s) or new order (s) / contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for Three Years**

(B) Where Poor/Non-Performance leading to termination of contract or offloading of contract due to poor performance attributable to Vendor/Supplier/Contractor/Consultant (under relevant Contract Clauses)

- a) **First Instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/Consultant shall be put on watch list for a period of Three (3) Years.

Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated/offloaded. Moreover, it will be insured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.

However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/contract (s) or new contract / order (s).

The Yellow card will be automatically revoked after a period of three years unless the same is converted into Red Card due to subsequence instances of poor/non-performance in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant.

- b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for suspension.
- c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant: **Holiday (Red card) for period of Three Years and they shall also to be considered for suspension.**

A provision in AGL's SAP/Portal will be made for flagging **(Yellow card and Red card)** of such Vendor/Supplier/Contractor/Consultant so as to track their performance. List of

such Vendor/Supplier/Contractor/Consultant shall also be uploaded on the AGL's intranet/web site.

Further, the bidder status regarding Yellow card should be mentioned in the **TCR/Proposal for Price Bid Opening** so that delivery/execution may be closely monitored by the concerned.

2.5.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described above in 2.5.1 except the functions of Project Manager will be performed by concerned In-charges of user departments such as Project, Marketing, HR, Finance, HSE etc.

2.5.3 FOR OPERATION & MAINTENANCE:

- i) Evaluation of performance of Vendors/Suppliers/Contractors/Consultants in case of Operations and maintenance shall be done within 30 days of execution of order/contract or Completion of Contract.
- ii) After execution of orders/contracts a Performance Rating Data Sheet (Format enclosed) shall be prepared by respective Engineer-in-Charge excluding cases under Para 2.4.
- iii) Depending upon the Performance Rating, following action need to be initiated by Engineer-in-charge:

| Sl. No. | Performance rating | Action |
|---------|--------------------|---|
| 1 | POOR | Seek explanation for Poor performance |
| 2 | FAIR | Seek explanation for Fair performance |
| 3 | GOOD | Letter to the concerned for improving performance in future |
| 4 | VERY GOOD | No further action |
| 5 | EXCELLENT | Appreciation Letter to the concern |

- iv) Reply from the concerned Vendor/Supplier/Contractor/Consultant shall be examined. In case of satisfactory reply, Performance Rating data sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken based on recommendations of site level committee and HO level committee:

The methodology for processing of cases of "POOR" (as per Performance Rating) shall be as under:

- i) *Within 7 days of issuance of explanation Letter by EIC or no reply/receipt of non-satisfactory reply to explanation letter for "Poor" Performance Rating, site level committee will recommend the case to HO level committee.*
- ii) *On receipt of above details from Site level committee, HO level committee will take approval from Competent Authority and accordingly HOD (C&P) will issue Advisory notice (duly vetted by Law Department) to Vendor/Supplier/Contractor/Consultant for putting them on watch list for a Period of Three (03) Years.*

The copy of Advisory notice will also be sent to all OICs/HoDs for instructing EICs to closely monitor the performance of such Vendor/Supplier/Contractor/Consultant in other ongoing/new Orders/Contracts placed on them.

Simultaneously AGL's SAP/Portal will be Yellow Flagged for such Vendor.

- iii) For the case of "Subsequent Instances" in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant, the matter will be deliberated by the site level committee and recommendations to be forwarded to C&P for further deliberation by a HO Level Committee consisting of following:

- (5) HOD (C&P)
- (6) HOD (F&A)
- (7) HOD (HSE-Q)
- (8) HOD of Concerned department.

All other subsequent process of committee recommendation for issuance of Show Cause Notice (SCN) cum suspension order, vetting of same etc will be as per vendor performance.

On receipt of reply to SCN, C&P will forward the same to concerned OIC/HoD at HO for point wise reply to issues brought out by Vendor/Supplier/Contractor/Consultant in their reply to show cause notice.

On receipt of recommendation from site committee through OIC/HoD at HO, the matter will once again be deliberated by the aforesaid HO level committee. All other subsequent process of committee recommendation for keeping the Vendor/Supplier/Contractor/Consultant on holiday or otherwise, vetting of speaking order, approval etc. will be as per vendor performance.

- A) **Where Performance rating is "POOR"** (as per Performance rating carried out after execution of Order/Contract and where no reply/unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/Consultant along with Sharing the Performance rating)

Recommend such defaulting Vendor/Supplier/Contractor/Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):
 - a) First Instance: Holiday (Red Card) for Two Years, **and effect of Holiday will be as mentioned in Clause No. 2.7**
 - b) Subsequent instance (s) in other ongoing order (s) / contract (s) or new order (s) / contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Three Years
2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):
 - a) First such instance: Advisory notice (Yellow Card) shall be issued and Vendor/Supplier/Contractor/Consultant shall be put on watch list for a period of Three (03) Years.
 - b) Second such instance in other ongoing order (s) / contract (s) or new order (s) / contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (red Card) for a period of One Year.
 - c) Subsequent instances (more than two) in other ongoing order (s) / contract (s) or new order (s) / contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for Three Years

- (B) Where Poor/Non-Performance leading to termination of contract or offloading of contract due to poor performance attributable to Vendor/Supplier/Contractor/Consultant (under relevant Contract Clauses)

- (a) **First Instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/Consultant shall be put on watch list for a period of Three (3) Years.

Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated/offloaded. Moreover, it will be insured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.

However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/contract (s) or new contract / order (s).

The Yellow card will be automatically revoked after a period of three years unless the same is converted into Red Card due to subsequence instances of poor/non-performance in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant.

- (b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for suspension.
- (c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s)/ contract (s) on such Vendor/Supplier/Contractor/Consultant: **Holiday (Red card) for period of Three Years and they shall also to be considered for suspension.**

A provision in AGL Portal will be made for flagging (**Yellow card and Red card**) of such Vendor/Supplier/Contractor/Consultant so as to track their performance. List of such Vendor/Supplier/Contractor/Consultant shall also be uploaded on the AGL's web site. Further, the bidder status regarding Yellow card should be mentioned in the **TCR/Proposal for Price Bid Opening** so that delivery/execution may be closely monitored by the concerned.

2.6 REVIEW & RESTORATION OF PARTIES PUT ON HOLIDAY

An order for Holiday passed for a certain specific period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/Supplier/Contractor/Consultant is put on a Holiday due to quality, and new order is placed on bidder after restoration of Vendor/Supplier/Contractor/Consultant, such order will be properly monitored during execution stage by the concerned site incharge.

2.7 EFFECT OF HOLIDAY

- A) If a Vendor/Supplier/Contractor/Consultant is put on Holiday, such Vendor/Supplier/Contractor/Consultant should not be considered in ongoing tenders/future tenders.
- B) However, if such Vendor/Supplier/Contractor/Consultant is already executing any other order/contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and condition of the contract.
- C) Effect on other ongoing tendering:

- i) After issue of the enquiry/bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- ii) After opening of the Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.
- iii) After opening of Price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. If errant party emerges as the lowest (L-1), then such tender shall also be cancelled and re-invited.

- 2.8** While putting the Vendor/Supplier/Contractor/Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/Supplier/Contractor/Consultant shall not be considered for putting on holiday list.

Any Bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

- 2.9** In an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to AGL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

2.10 APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY

- a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the date of receipt of Holiday order.
- b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- d) "Appellate Authority" shall mean Committee of nominee director of either GAIL or HPCL other than Chairman of the AGL Board and Executive management i.e. Managing Director and Director (Commercial) of Aavantika Gas Limited.

2.11 ERRANT BIDDER

In case after price bid opening the lowest evaluated bidder (L-1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, AGL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in retendering of the same job(s)/item(s).

Further, such bidder will be put on watch List (Yellow card) for a period of three years after following the due procedure. However, during the period in watch list such vendor will be allowed to participate in all other tenders and to execute other ongoing order/contract (s) or new contract/ order (s).

In case of subsequent instances of default in other tender(s) during aforesaid watch list period, the action shall be initiated as per provision of SI. No. 2 of Para (A) of Clause no. 2.5.1 (v).



The Yellow card will be automatically revoked after specified period unless the same is converted into Red Card.

- 2.12** In case GST department or any other Statutory department brings to the notice of AGL that a party has not paid to the credit of the Government the GST or any Statutory payment collected from AGL, then party will be put on holiday for a period of Six months after following the due procedure, including holding his payment.
- 2.13** All departments other than Projects like O&M, HSE, HR, F&A, Marketing etc. will be covered under definition of O&M.
- 2.14** Further, **PERFORMANCE RATING DATA SHEET** (FOR PROJECTS/CONSULTANCY JOBS/O&M) is enclosed for reference for Evaluation of Performance of Vendors/ Suppliers/ Contractors/ Consultants.
- 2.15** Site level committee of Three members shall be formed for location other than Indore (HO), comprising of OIC of the location and available senior most members at the location of User and HSE-Q department.
Site level committee of Two members shall be formed for Indore location, comprising of available senior most members of User and HSE-Q department below HOD level.
- 2.16** As per the recommendations received from Site level Committee and HO level Committee, Head of the C&P department has to take Approval from Competent Authority prior issuing any letter to vendor regarding putting a vendor on a Watch list or Holiday list.
However, Show Cause/Explanation notices for putting vendors on Watch list or Holiday list may be issued by HOD of user department or HOD (C&P).

AAVANTIKA GAS LIMITED
PERFORMANCE RATING DATA SHEET

- (i) Project/Work Centre :
- (ii) Order/Contract No. & Date :
- (iii) Brief description of Items Works/Assignment:
- (iv) Order/Contract value (Rs.) :
- (v) Name of Vendor/Contractor/ Supplier/Consultant :
- (vi) Contractual delivery/ Completion Schedule:
- (vii) Actual delivery/ Completion date:

| Performance Parameter | Delivery/Completion Performance | Quality Performance | Reliability Performance# | Total |
|-----------------------|---------------------------------|---------------------|--------------------------|-------|
| Maximum Marks | 40 | 40 | 20 | 100 |
| Marks Allocated (*) | | | | |

Note:
Remarks (if any)

PERFORMANCE RATING (**)

Note:

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/ sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.
- (*) Allocation of marks would be as per enclosed instructions
- (**) Performance rating shall be classified as under:

| Sl. No. | Range (Marks) | Rating |
|---------|---------------|-----------|
| 1. | 60 & below | POOR |
| 2. | 61 - 70 | FAIR |
| 3. | 71 - 80 | GOOD |
| 4. | 81 - 90 | VERY GOOD |
| 5. | MORE THAN 90 | EXCELLENT |

Signature of Authorized signatory with Name & Designation

INSTRUCTIONS FOR ALLOCATION OF MARKS

Marks are to be allocated as under:

i. DELIVERY/COMPLETION PERFORMANCE: 40 MARKS

| Delivery Period / completion Schedule | | Delay in Weeks | Marks |
|---------------------------------------|----------------|----------------------|-------|
| a) | Up to 3 months | Before CDD | 40 |
| | | Delay up to 3 weeks | 35 |
| | | Delay up to 6 weeks | 30 |
| | | Delay up to 9 weeks | 25 |
| | | Delay up to 12 weeks | 20 |
| | | Delay up to 15 weeks | 15 |
| | | More than 15 weeks | 0 |
| b) | Above 3 months | Before CDD | 40 |
| | | Delay up to 4 weeks | 35 |
| | | Delay up to 8 weeks | 30 |
| | | Delay up to 10 weeks | 25 |
| | | Delay up to 16 weeks | 20 |
| | | Delay up to 20 weeks | 15 |
| | | Delay up to 24 weeks | 10 |
| | | More than 24 weeks | 0 |

ii. QUALITY PERFORMANCE 40 MARKS

For Normal Cases: No Defects/No Deviation/No failure: 40 marks

| | | | |
|----|-------------------|--|----------|
| i) | Rejection/Defects | Marks to be allocated on pro-rata basis for acceptable quantity as compared to total quantity for normal cases | 10 Marks |
|----|-------------------|--|----------|

| | | | |
|------|---|--|-----------------------------------|
| ii) | When quality failure endangers the system integration and safety of the system. | Failure of severe nature - Moderate nature - low severe nature | 0 marks 5 marks 10-25 marks |
| iii) | Number of deviations | No. deviation No. of deviations <=2 No. of deviations >2 | 5 Marks 2 marks 0 marks |

**iii. RELIABILITY PERFORMANCE
FOR WORKS / CONTRACTS**

20 MARKS

i) Submission of order acceptance, agreement, PBG, 4 marks

| | | |
|------|---|---------|
| | Drawings and other documents within time | |
| ii) | Mobilization of resources as per Contract and in time | 4 marks |
| iii) | Liquidation of Check-list points | 4 marks |
| iv) | Compliance to statutory and HS & E requirements Or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs | 4 marks |
| v) | Timely submission of estimates and other documents for Extra, Substituted & AHR items | 4 marks |

FOR SUPPLIES

| | | |
|------|--|---------|
| i) | Submission of order acceptance, PBG , Drawing and other documents within time | 5 marks |
| ii) | Attending complaints and requests for after Sales service/warranty repairs and/or query/advice (up to the evaluation period) | 5 marks |
| iii) | Response to various correspondence and conformance to standards like ISO | 5 marks |
| iv) | Submission of all required documents including Test Certificates at the time of supply | 5 marks |

EIC Signature:

EIC Remarks:



E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF ICCP SYSTEMS



SECTION III

SCOPE OF WORK AND TECHNICAL SPECIFICATION

Bidder Seal & Sign

NATURAL GAS- CLEAN ENERGY, GREEN ENERGY



1. DEFINITIONS

Definitions of the terms used in this bid document, (unless the context otherwise requires), shall have the same meaning as respectively assigned hereinafter.

The "AGL" or "Company" or "Owner" shall mean AAVANTIKA GAS LIMITED (AGL). hereinafter mentioned as "AGL" which expression shall, unless repugnant to the context or meaning or meaning thereof, include all its successors, administrators, executors and assigns.

The "Bid" shall mean the Bid submitted by the CONTRACTOR for acceptance by the AGL.

The "Contract" shall mean the agreement and all other documents between the company and the contractor for providing the services mentioned herein.

The "Service Provider" or "CONTRACTOR" or "Bidder" shall mean the person or persons, firm or Company whose Bid has been accepted by AGL and includes the Service Provider's legal representatives, his successors and permitted assigns.

The "Supervisor" shall mean the person deployed by the contractor for control & supervision of the work of his work force, as per the Scope of work mentioned and to receive instructions from Engineer-In-Charge or his representative.

The "AGL Engineer-In-Charge" or "AGL's representative" shall mean the person designated as such by the AAVANTIKA GAS LIMITED and shall include his authorized nominee or agent, provided however that the AGL's Representative to be so designated by AGL may be one person for certain aspects of this agreement and another person for other aspects of work covered by this Bid / Contract.

The "Vendors" shall mean the agreement between the AGL and the Manufacturer for supplying the Material at AGL Designated store or Site through the transporter with required documents.

"Stores" shall mean the Company's Stores located at various locations within the area of the operation of AGL.

"Site" shall mean the land, buildings and water and other places on, under, in or through which the Permanent Works are to be carried out for the purpose of contract together with any other places designated in the Contract as forming a part of the site.

The "Permanent Works" or "Works" shall mean and include all works to be executed in accordance with the Contract or part thereof as the case may be and shall include all extras, additional, altered or substituted works as required for the purpose of contract.

"Temporary Works" shall mean all temporary works of every kind required in or about the execution, completion or maintenance of the works, which are not permanent.

The "Specification" shall mean all directions, the various technical specifications, provisions attached and referred to in the Bid documents which pertain to the method and manner of performing the work or works to the quantities and qualities of the work or works and the materials to be furnished under the contract or works as may be amplified or modified by the COMPANY during the performance of Contract in order to provide the unforeseen conditions



or in the best interests of the work or works. It shall also include the latest edition of relevant standard specifications including all addenda / corrigenda published before entering into the contract.

“Approved” shall mean approved in writing including subsequent written confirmation of previous verbal approval and ‘Approval’ means approved in writing including as aforesaid.

The "Drawings" shall include maps, plans, tracings, prints & sketches thereof with any modifications approved in writing by the Engineer – In-charge and such other drawing as may from time to time, be furnished or approved in writing by the Engineer – In-charge.

“Emergency” means any incident / fire / explosion / gas leakage on AGL pipelines including installations.

“Construction Equipment” means all appliances / equipment and things of whatsoever nature for the use in or for the execution, operation, or maintenance of the work or temporary works but does not include materials or other things intended to form or to be incorporated into the WORK, or camping facilities.

"Mobilization" shall mean establishment of sufficiently adequate infrastructure by the SERVICE PROVIDER at site comprising of construction equipment, aids, tools tackles including setting of Site Offices / Site Camp with facilities such as power, water, communication, legal & statutory compliances per Government laws, etc., establishing manpower organization comprising of resident engineer, supervising personnel and an adequate strength of skilled, semi-skilled and unskilled workers, who with the so established infrastructure shall be in a position to commence execution of work at site (s). MOBILIZATION shall be considered to have been achieved, if the SERVICE PROVIDER is able to establish infrastructure as indicated above to commence work at all site (s)/ locations as per time schedule, where so warranted in accordance with agreed schedule of work implementation to the satisfaction of COMPANY / engineer – in-charge.

“Working Day” means any day, which is not declared to be holiday or rest day by COMPANY.

“Commissioning” shall mean pressing into service of the ICCP system including the plant(s), equipment(s), vessel(s), pipeline, machinery (ies), or any other section or sub-section of installation(s) pertaining to the work of the SERVICE PROVIDER after successful testing and trial runs of the same.

“CP System” Shall mean Cathodic Protection System. A technique to reduce the corrosion of a metal surface by making that surface the “Cathode” of an electrochemical cell.

“ICCP / PCP” shall mean Impressed Current Cathodic Protection / Permanent Cathodic Protection System.

“Guarantee” means the period and other conditions governing the warranty / guarantee in respect of the work as detailed in section hereunder.

“HSE” means Health, Safety & Environment.

2. CODES AND STANDARDS

The system Design, Material Specification and all the procedures shall be prepared in conformance to the requirements of latest relevant applicable codes and standards but not be limited to the following:

| Sl.No. | Codes & Standards | Applicable for |
|--------|-------------------|----------------|
|--------|-------------------|----------------|

| | | |
|----|---|--|
| 1 | NACE standard SPO169 - 2013 formerly RP0169 | Control of external Corrosion on underground or submerged metallic piping system (21001-SG) |
| 2 | RP0286-97 | Electrical isolation of CP pipeline |
| 3 | SP0200-2014 | Steel- cased pipeline practices (21091-SG) |
| 4 | SP0177-2014 formerly RP0177 | Mitigation of alternating current & lightning effect on metallic structures and corrosion (21021-SG) |
| 5 | NACE standard TM0497 2012 | Measurement of technique related to criteria for cathodic protection on buried or submerged metallic piping system. |
| 6 | NACE SP0572-2007 | Design installation, operation and maintenance of impressed current deep anode beds. |
| 7 | IS 8062 | Code of practice for cathodic protection of buried pipeline/structures for transportation of oil, NG & liquids. |
| 8 | IS 3043 | Code of practice for earthing |
| 9 | ISO 15589 (Part-1) | Petroleum & natural gas industries – Cathodic Protection of pipeline transportation system- part-1: On shore pipeline Petroleum & natural gas industries external coating for buried or submerged metallic piping system used in transportation system |
| 10 | ISO21809 Part-1 Part-2 Part-3 | 3LPE coating FBE coating Field joint coating |
| 11 | DIN 30670-2012 | PE coating for steel pipeline & fittings- requirement & testing |
| 12 | BS 7361, part-1 | Cathodic protection, code of practice of land & marine applications |
| 13 | ASTM A518 M | Corrosion Resistance High Silicon Iron castings |
| 14 | ASTM B418 | Cast and wrought galvanic zinc anodes |
| 15 | ASTM B338 | Specification for seamless and welded Titanium and Titanium alloy tubes for condenser and heat exchangers. |
| 16 | ASTM B843 | Magnesium alloy anodes for cathodic Protection |
| 17 | IS 1554, part-1 | PVC insulated (heavy duty) cables |
| 18 | IS 8502 Grade A | Applicable IS standard for Supply of Calcined Petroleum Coke |
| 19 | OISD-188 | Corrosion monitoring of Off shore & onshore pipeline |
| 20 | PNGRB-T4S | Technical standard & specification including safety standards for petroleum & petroleum product pipeline regulations2014. |
| 21 | VDE 0150 | Protection against corrosion due to stray current from DC installations. |

3. SCOPE OF WORK

The scope of this document defines the requirements of corrosion surveys, design, engineering, supply of material, installation, quality assurance, testing and commissioning of temporary and impressed current cathodic protection system for external surface of 3LPE / FBE coated underground distribution NG steel pipelines including post commissioning pipeline surveys, investigation for interference/interaction problems at overhead HT power lines and railways crossings including mitigation of the same and integration of commissioned system with the owners SCADA system. Contractor's scope of work includes, but is not limited to the following:

- Corrosion Survey- Soil Resistivity Survey, Soil Sample Analysis, etc.
- Additional data to be collected viz. foreign service/ supply pipelines (parallel or crossing), diameter and coating of foreign pipelines, depth, existing CP Systems, location and type of ground beds and their data, existing and proposed DC/AC power sources and systems, crossing and parallel running of electrified and non-electrified traction rail tracks, crossing or parallel running of any existing or proposed EHV/HV AC/DC overhead power lines along with details of voltages, any other relevant information that may be needed in designing and implementing of proper CP scheme for the proposed line.
- Synchronization of the new ICCP network with the existing ICCP to avoid over/under-protection for proposed 4" to 10" Pipeline network.
- ICCP Design and Calculations and its approval of Owner
- Mobilization of adequate number of resources, manpower, equipment, machineries for time bound execution of works involved during various phases of ICCP implementation.
- Execution of works in line with Technical Specifications & Scopes Annexure-1, Data Sheets, Design & detailed Engineering and drawings.
- Installation, Testing and Commissioning of ICCP system including all the civil works required for foundation and post of TLP, AJB, CJB, etc.
- Preparation of As-built Drawings and submission to EIC prior to commissioning of system.
- Post commissioning monitoring procedures and surveys for adequacy check.
- Study of Interference problems and mitigation.
- ICCP Monitoring procedure including pipeline protection criteria based on coating material.
- Operation & Maintenance requirements till complete handover to AGL.

4. CONTRACTOR'S DETAILED SCOPE OF WORK

Contractor's detailed scope of work includes:

4.1 Corrosion Survey for site data generation and interpretation report and design -basis for cp system.

- Pre-design surveys
- Soil resistivity survey.
- Soil Ionic and microbial analysis.

4.2 Design, Detailed Engineering of ICCP including the following:

- Corrosion survey and Additional data collection
- Design Basis
- Basis & Assumptions
- Protection Criteria and Parameters
- Synchronization of the new ICCP network with the existing ICCP network
- Design Formulae and List of Code and Standard used
- Design and all the Calculations
- System Details
- QA/QC Plan
- Attenuation Calculation
- Drain Potential calculation
- Drawings
- Commissioning
- Interference and Mitigation

4.3 All Material test certificates Contractor shall submit the execution /maintenance procedures and QA/QC plans before commencement of work to Owner / Owner's representative in line with the AGL issued Technical specifications for approval.

4.4 Procurement which includes supply, factory inspection, transportation, loading and unloading of Cathodic Protection transformer rectifier units, sacrificial and impressed current anodes, cables, test stations, junction boxes, permanent reference cells, polarization coupons and all other material required for complete ICCP work. Materials shall be procured as per specification/material data sheet approved by AGL.

4.5 Installation, testing, pre-commissioning and commissioning of ICCP works as defined in this tender including approved job procedures for field testing, pre-commissioning and commissioning.

4.6 Barricading, Caution Boards, and Barricading Tape will be made available as per OWNER drawing, specifications.

4.7 Supply, installation, testing & commissioning of additional test lead points as per AGL requirement besides of the planned test lead points along the pipeline route.

4.8 Supply, installation, testing and commissioning of each CP unit (CPTR/PPSM).

4.9 CONTRACTOR shall carry out permanent earthing arrangement for TR unit installation/shifting/replacement from available earthing grid.

4.10 Supply, installation, testing and commissioning of permanent reference cells-Cu-CuSO₄.



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- 4.11 Supply, testing, laying and termination of CP cables in various junction boxes, etc. and repair/replace when necessary.
- 4.12 Supply, installation, testing & commissioning of distribution board ACDB /DCDB at CP locations.
- 4.13 Identification of anode bed locations for each CP station along with suitability/adequacy/current drainage survey test.
- 4.14 Supply, installation, testing & commissioning of deep well type anode beds at CP locations and integration with CP units.
- 4.15 Complete civil works including material and services required for ICCP system are in the scope of contractor.
- 4.16 Co-ordination and Conducting AC interference survey and mitigation including testing of solid state De-coupler and polarization cell devices& zinc anodes.
- 4.17 Co-ordination and Conducting DC (Mutual) interference survey with other pipelines/ Railways/DC/AC system in mainline and mitigation thereof.
- 4.18 Protection of insulating joints through supply, installation, testing & commissioning of grounding cell & surge diverter.
- 4.19 Measuring, recording and submitting PSP values & CP station data to assess the status of protection in the stretches of pipeline.
- 4.20 Supply, installation & testing of Bond stations wherever required for maintaining the pipelines at equipotential level to avoid any mutual interference and co-ordination with other pipeline owner for the same. Any damage to owner/ foreign pipeline/ installation/utility/ property shall be rectified by contractor at no extra cost to the AGL.
- 4.21 Protection of Hot Spot areas along the pipeline stretches. Repair of all coating damages occurred during connection of cables to the piping intended to be cathodically protected.
- 4.22 Retesting, measuring, recording data of all the stretches after mitigation of interference and extending protection at Hot spots for full protection of the pipeline stretches.
- 4.23 Submission of complete documentation, consisting of design guidelines, drawings, procedures and other relevant data for owner's approval & record.
- 4.24 CONTRACTOR shall depute AGL assessed, & trained competent manpower to carry out the jobs as per AGL's requirement and ensure that they carry out the roles and responsibilities effectively.
- 4.25 CONTRACTOR shall carry out all work as per applicable codes & standards as mentioned in this tender document.
- 4.26 CP system monitoring for three months from the date of commissioning with monthly progress reports & mitigation of any anomaly required to tune up the functioning of ICCP system.
- 4.27 All civil works associated with complete cathodic protection work – ICCP which includes providing cable trenches, foundation for equipment etc. In case transformer rectifier unit shall be located outside, proper kiosk to prevent direct sunlight shall have to be supplied by CP contractor.
- 4.28 After installation of the ICCP system, disconnection of existing TCP works and depolarization of the entire pipeline section, taking PSP readings from TLPs to ensure depolarization and acceptance of readings by AGL commissioning team before commissioning of ICCP system.
- 4.29 As-Built documents along with drawings shall be submitted at the time of handing over the entire system.
- 4.30 Document / Drawing and the design it covers are property of AGL. They are merely loaned and on the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, not used except in the limited way and private use permitted by any written consent given by the lender to the Borrower.
- 4.31 The CP contractor shall accordingly mobilize work and deploy adequate skilled & trained manpower conversant with work procedure, adequate number of tools, tackles, testing and Construction Equipments requisite for smooth work progress so that CP work could also be completed within Schedule specified for the project. The CP contractor shall work in close coordination with the main pipeline contractor.

5. GENERAL TERMS AND CONDITIONS

- 5.1 CONTRACTOR shall promptly pay directly to the appropriate governmental authority all taxes, levies and assessments imposed on CONTRACTOR and its employees by any governmental authority having or claiming jurisdiction in the areas where the CONTRACT is being performed (including but not limited to compensating and personal income taxes, and CONTRACTOR license or business privilege taxes if applicable) and agrees to indemnify AGL and hold COMPANY harmless against any and all claims or liabilities for or on account of any payment made to or earned by CONTRACTOR in respect of the WORK.
- 5.2 CONTRACTOR shall depute adequate and competent manpower (minimum as given in Annexure 2) at site for the execution of work. Based on the progress of the activity, CONTRACTOR shall keep readiness to increase the team size if required and ensure compliance of all statutory and legal requirements like salaries and wages, insurance, medical attention leave, overtime and weekly off etc.
- 5.3 AGL representative may at any time inspect any part of the work, but any such inspection does not relieve CONTRACTOR of its liabilities under this CONTRACT.
- 5.4 CONTRACTOR shall comply with and shall ensure that all CONTRACTOR personnel are aware of and comply with all LEGISLATION and AGL policy and procedures.
- 5.5 All permissions/clearances as required from various authorities having jurisdiction thereof to be obtained by OWNER principally, and handed over to CONTRACTOR for execution of work. CONTRACTOR shall liaise with the authorities having jurisdiction before the actual execution of the various phases of the works and all stipulations /conditions / recommendations of the said authorities shall be strictly complied and wherever require need to get it signed off by authorities of jurisdiction
- 5.6 AGL reserves the right to rearrange such deployment depending upon the progress and priority of work in various sections.
- 5.7 In case of contractor fails to complete the work within in stipulated timeline, AGL will get it done from other contractor and the amount will be recovered from Contractor's account/next bill.
- 5.8 CONTRACTOR shall be deemed to have inspected and examined the work area and its surroundings and to have satisfied himself so far as practicable as to the form and nature thereof, including subsurface conditions, the extent and nature of work and materials necessary for the completion of the work and the means of access to the work area.
- 5.9 During the execution of work, CONTRACTOR should ensure that it should not obstruct any or all other activities performed by other agencies.
- 5.10 CONTRACTOR shall be deemed to have obtained all necessary information on subject as above mentioned as to risks, contingencies and all other circumstances, which may influence the work.
- 5.11 CONTRACTOR shall submit information regarding work-in-progress and details about deployment of his working teams to the OWNER Engineer in-charge as per the frequency decided by the Engineer in-charge.
- 5.12 Drains, pipes, cables, overhead wires and similar services encountered in course of the work shall be guarded from damage by the CONTRACTOR, so that they may continue in full uninterrupted use. Damage to those utilities whether shown in the drawing the CONTRACTOR must make repair at his cost or bear the cost of making good the same without delay to the satisfaction of the Engineer-in-charge and authority having jurisdiction.
- 5.13 CONTRACTOR shall report on the day of working with Daily Site Plan in the morning for planning of work.
- 5.14 All the responsibility for the completion of job including HSE involved in operation and methods involved in works is in the CONTRACTOR's scope.
- 5.15 CONTRACTOR shall ensure that his supervisor is present at site, till completion of work as per planning given by OWNER Work in Charge.
- 5.16 The work site would be on case to case basis, but no additional transportation charges/miscellaneous charges would be paid.
- 5.17 CONTRACTOR shall accomplish the designated job within the specified time duration for fulfilment of the target.
- 5.18 All persons engaged by the CONTRACTOR shall be the CONTRACTOR's own employee and they will claim no privileges from OWNER. The CONTRACTOR will be directly responsible for the administration of his employee as regard general discipline and courteous behaviour.



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- 5.19 CONTRACTOR shall sort out the queries, if any during the inspection within time frame.
- 5.20 If the works are not done as per OWNER's satisfaction level, then CONTRACTOR shall do the necessary rework at his own cost.
- 5.21 The scope/specification covers the minimum specified requirement for the various activities to be carried out by the CONTRACTOR toward the work at the site situated within AGL Geographical Areas.
- 5.22 The CONTRACTOR shall, with due care & diligence, execute the work in compliance with all laws, by laws, ordinances, regulation etc. and provide all WORKS and labour inclusive of supervision thereof.
- 5.23 It is the responsibility of CONTRACTOR to submit all documents at regular interval to OWNER for review, approval and timely completion of job as per the schedule and co-ordinate with OWNER appointed Pipeline CONTRACTOR for smooth, parallel and timely completion of all works and provide all necessary/ required inputs and support
- 5.24 Compliance with these specifications and / or approval of any of the Contractor's documents shall in no case relieve the Contractor of his contractual obligations.
- 5.25 For any work covered under company's work permit system, as informed by the engineer in charge, the Contractor shall collect the work permit or extension of work permit from engineer in charge at Owner office on day to day basis.
- 5.26 Before Starting of Job, Contractor shall ensure that toolbox talk with Work In charge and identified based on site specific risk assessment done at the location.
- 5.27 Hot work shall be carried out only after permission of EIC and as per approved AGL procedures.
- 5.28 All such works which are not indicated here but are otherwise required to complete the work in all respects in accordance with specifications, drawings and other relevant shall also form part of Contractor's Scope of Work. All works described shall be performed in accordance with the design basis, specifications, drawings and other requirements and shall be subject to AGL approval.
- 5.29 CONTRACTOR shall provide means of communication to his staff to establish effective communication between AGL and Contractor's team. A designated residence/office telephone shall also be maintained to establish contact after office hours.
- 5.30 CONTRACTOR shall notify the AGL representative, about all the activities planned for the day through an email along with the previous day's Daily Progress Report (DPR).
- 5.31 The CONTRACTOR shall not commence any work on any given day without permission of the AGL representative. In case of planned activity to be carried out on off duty hours, prior approval to be obtained from AGL in charge.
- 5.32 Service Provider shall ensure thorough pre-employment checks on the conduct and ethics of all its employees and staff to avoid inappropriate hiring of contract employee / staff.
- 5.33 AGL reserves the right at all the time to audit and review the CONTRACTOR facilities, services, and / or performance of its activities in respect to the compliance of his HSE plan.
- 5.34 CONTRACTOR shall be responsible for the cleanliness / housekeeping of equipments/instruments installed by the AGL.
- 5.35 Every person working on the site must behave correctly and with the necessary courtesy towards his colleagues, employees of other contracting parties / sub-Contractor, representatives of the AGL and third parties. Any improper conduct may be restrained by the AGL by removing the persons involved from the site.
- 5.36 The work shall be executed strictly as per Time Schedule which shall be specified while issuing work orders during the validity period of the contract. Completion time for works shall be given in each work requests, which is to be mutually agreed by contractor & engineer-in-charge (EIC).
- 5.37 To do the urgent nature of works as per AGL time frame, for that contractor is bound to fulfil the time frame as specified by engineer-in-charge (EIC) of AGL.
- 5.38 In case of any class of work for which there is no SPECIFICATION specified by the OWNER in the Bid Document, such work shall be carried out in accordance with Cathodic Protection standards and as per the standard Engineering Practice subject to the approval of the OWNER.

6. SUBMITTALS BY CONTRACTOR

6.1 GENERAL

- 6.1.1 Within two weeks from the date of commissioning, CONTRACTOR shall submit four copies of the list of all as-built drawings, construction documents, design & detail engineering copy etc.
- 6.1.2 All drawings and documents shall be in English and shall follow metric system. 1 Original + 1 Xerox + 1 Pendrive of each submission shall be as follows unless otherwise specified. List of required documents shall include but not limited to the following:
- For review / approval design basis, procedures, Formats, data sheets
 - Drawings issued for execution/ construction
 - Final/ As built drawings execution/ construction
 - Operation/ Maintenance manual, vendor data, OEM Certificates
 - Supplied materials TC.

6.2 DRAWINGS AND DOCUMENTS

As a part of the contract, drawings and documents shall be furnished which shall include but not limited to the following:

- Report on corrosion survey
- Basis of system design and design calculations, equipment selection criteria and sizing calculations
- Synchronization of the new ICCP network with the existing ICCP network
- Bill of material, material requisitions, and purchase requisitions
- Quality assurance / Quality control procedures
- Detailed construction drawings (including as built status)
- Sacrificial anode fabrication drawings
- Typical layout drawing for anode ground bed installation and connection
- Equipment layout, cable layout and schedules.
- TLP & Junction Box Erection / Installation Details Drawing
- Permanent Cu-CuSO₄ reference electrode installation Drawing
- Fabrication, installation details of surge diverter, grounding cell and polarisation cell with its enclosure and housing
- Cable- to-pipe joint details for charged and non-charged pipelines
- Incorporation of anode beds, polarisation cell, Surge diverters, test stations, etc. and other relevant features of CP system-design in Pipeline alignment sheet and other related drawings

- o. Identification of section of pipeline affected by interference, source of interference and details of interference mitigation arrangements provided. Various measurement data at all relevant test stations with and without mitigation measures provided
- p. Detailed commissioning report including various measurement data at all test stations etc.
- q. Vendor drawings and catalogues, test certificates
- r. Operation and maintenance manuals
- s. Miscellaneous
 - Equipment inspection and testing procedure - construction, installation procedures
 - Field testing and commissioning procedures
 - Procedure for monitoring of cathodic protection after commissioning - Quality control procedures.
 - Post Commissioning Testing/Monitoring Periodicity and Methodology

7. HEALTH, SAFETY & ENVIRONMENT

7.1 BIDDER shall develop a health, safety and environment (HSE) plan that addresses the HSE risks specific to the work and the management of controls to eliminate, reduce or mitigate risks.

7.2 BIDDER shall ensure its personnel are:

- Medically, physically and mentally fit to carry out the duties to which they are assigned in respect of the work.
- Technically competent and experienced in the tasks assigned to them.
- Aged eighteen years or above.
- Specifically trained for hazardous material transportations.

7.3 BIDDER shall arrange related PPE (i.e. Hard hat, Safety Shoes, Uniform, Hand Gloves, Gumboots, Ladders, Safety Belts, safety goggles etc.) to his manpower and ensure to wear it during the operation job.

7.4 BIDDER personnel shall not smoke or resort to misuse of drugs, medicines or alcohol while on duty. BIDDER shall also ensure that in no case the ability of his employees to carry out their assigned duty is impaired using the substances mentioned herein.

7.5 BIDDER shall ensure the safety of Man and Machine all the times. The BIDDER shall always remain liable to OWNER for any loss or damage caused to building plant and machinery, due to carelessness, negligence, inexperienced act of default of the BIDDER, his agents, representative or employees.

7.6 BIDDER shall provide relevant training (Technical / Fire and Safety, etc.) to his personnel from time to time for better functioning of the station at his cost and risk, without affecting Operations. OWNER may provide special training, to be required; hence, BIDDER shall direct his personnel for such trainings.

7.7 Bidder shall apply and obtain work permit from OWNER for the work to be performed. After completion of work a joint inspection shall be done at work place.

7.8 Bidder shall submit documents required for the establishing competences a person deputed to execute job including medical fitness if job requirement.

7.9 Bidder's Representative should not be without Identity Card at OWNER sites / office as well as sites. The I Card shall be provided by Bidder.

7.10 Bidder shall keep First-Aid Kit available during the execution of work.

8. CONTRACTOR'S SCOPE OF SUPPLY

The CONTRACTOR scope of supply includes as a minimum, but not limited to the following resources:

8.1 MATERIALS, EQUIPMENT, INSTRUMENTS, TOOL, TACKLES:

- All the materials required for ICCP shall be as per Material Specification/Data sheets mentioned in Annexure – 1.
- CONTRACTOR shall obtain necessary approval from AGL, in case of any deviation from Material Specification/Data sheets mentioned in Annexure – 1.
- CONTRACTOR shall provide test certificates provided by OEM for all the materials to AGL before starting of work at site and shall produce the same on demand by EIC. If the material is of foreign make, contractor shall provide import documents. CONTRACTOR shall get it verified through third party inspectors / AGL as and when requested at his own expense and no extra cost to AGL.
- CONTRACTOR shall advise AGL promptly, if any correspondence / warranty claim may be taken up with the supplier of the equipment / spares installed in the Plant or a claim may be made under any insurance policy.
- CONTRACTOR shall provide calibration certificates of all measuring instruments to be used for the execution of work. CONTRACTOR shall rectify, repair or replace the instruments at his own cost
- Contractor shall provide all consumables required for completion of any CP related Job timely. In case any item is not covered in SOR, vendor shall notify AGL and take permission in written for purchase.
- Contractor shall provide all resources, instruments, equipment; tools tackles required for timely completion of any CP related Job as per Annexure-3
- CONTRACTOR shall raise invoices against consumed spares along with services report, test certificates and delivery acceptance

8.2 MANPOWER:

- The CONTRACTOR shall mobilize adequate number of Manpower (as given in Annexure-2) in accordance with the allocated job orders to complete each job within agreed timeline.
- The trained and competent manpower deputed at site should not move to other job without permission of AGL.
- Contractor shall provide organization chart with role and responsibility to AGL. In case of any change in manpower allocation, contractor shall seek prior approval from AGL

9. AGL SCOPE OF SUPPLY & WORK

- AGL will provide work job order for work to be carried out.

- AGL will provide principal permissions from authority wherever needed.
- AGL will issue necessary approval and Work Permits to carry out the job as required.
- AGL will provide as laid drawing of existing pipeline, SOPs and Guidelines for execution of activities, compliances of Quality and HSE required for completing the work.

10. WORK COMPLETION SCHEDULE:

CONTRACT PERIOD:

- **Contract Period is One (01) Year**
- **During Contract period Two (02) Sub-Orders (POs in SAP terminology) shall be issued, each having Completion Period of Six (06) months**

| Sr. | Job Description | Milestones |
|-----|--|---|
| 1 | Initial mobilization | Within 30 days from the date of work front awarded through separate PO/Sub Orders |
| 2 | Soil Survey, Attenuation calculation and submission of design & detail Engineering | Within 45 days from the work front awarded through separate PO/Sub Orders |
| 3 | Supply of Equipment's and Materials at Site, ready for Installation | Within 30 days from the date of Design Approval, including Workshop inspection |
| 4 | Installation Testing and Commissioning | Within 45 days from the date of Design Approval |
| 5 | Post Commissioning Surveys | Within 90 days from date of Commissioning of PCP System |

- **Commissioning of ICCP System:** 90 Days from date of issuance of separate PO/Sub Orders
- **Post Commissioning Surveys:** 90 Days from date of commissioning of ICCP System

11. PRS AND PENALTY

11.1 The following critical parameter describes the system performance and service level expectations and requirements during the Implementation phase of contract. The service level includes target performance measures, unacceptable measures and the related penalties for not meeting required service levels.

| Sr. No | Parameter | Description / Milestone | Penalty |
|--------|-------------------------------|--|---|
| 1 | Commissioning of ICCP System | 90 Days from date of issuance of Sub Orders (POs) against Contract <i>NOTE: In SAP terminology, Contract is issued followed by issuance of Purchase Orders.</i> | In case contractor fails to complete the work/ services within stipulated period then unless such failure is due to force majeure as defined in Bid document, there will be reduction in order price @ 0.5% respective of Purchase Order value for each week of delay or part thereof subject to maximum of 5% of individual Purchase Order value (excluding taxes and duties). Owner may without prejudice to any methods of recovery, deduct the amount of such PRS from any money due or which may at any time become due to contractor from its obligations or liabilities under the contract or by recovery against the performance bank guarantee. Both Owner and contractor agree that the above percentage of price reduction are genuine pre-estimates of the loss/damage which Owner would have suffered on account of delay/ breach on the part of contractor and the said amount will be payable on demand without there being any proof of the actual loss/damage caused by such delay/ breach. Owner decision in the matter of applicability of price reduction shall be final and binding |
| | Post Commissioning Surveys | 90 Days from date of commissioning of ICCP System. | Rs 200 per delayed day per site from the RA bills submitted subsequent to start of the work or outstanding from payment pending with AGL |
| | HR Compliances | Statutory/Legal requirement | Rs 1000 per instance |
| 2 | HSE Compliance | AGLs HSE requirement | Rs 500 per instance* during the execution of job |
| 3 | Use of Equipment /Instruments | Meeting Calibration requirement | Rs 500 equipment /Instruments observed without calibration |



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| | | | |
|---|--|---|--|
| 4 | Manpower Competency | Deployment of Man Power as per required Skill Set | Rs 500 against non-availability of skilled manpower per instance |
| 5 | Up-keeping of First Aid Kit & its availability | AGLs HSE requirement | Rs 200 per instance |

Note: Penalties specified at Sr. No. 2,3,4 & 5 related to HSE/Poor Workmanship shall be duly applicable to over and above the penalty specified at Sr. No. 1

12. ENCLOSURES

12.1 ANNEXURE 1 – TECHNICAL SPECIFICATION_CP SYSTEM, Data Sheets, DRAWINGS

12.1.1 CORROSION SURVEY DATA

Prior to design of cathodic protection system, Bidder shall carry out following surveys:

Soil Resistivity

Along ROW: Soil Resistivity [ρ] measurements at every 500 m along ROW and at additional locations wherever abrupt changes (more than 1:2 between preceding measured values) are measured. Measurements at each location shall be conducted using Wenner's 4-pin method at 1,2,3,4 and 5 meters depth respectively.

At proposed anode-bed locations:

Shallow type: Using Wenner's 4-pin method at 2, 3, 4, 5 and 6 meters depth respectively.

Deep well type: Using Wenner's 4-pin method at 15, 20, 30, 35, 40, 45, 50, 60,70,80,90,100 meters depth respectively.

Soil Analysis

Soil samples shall be collected from pipeline ROW for following analysis:

- Chloride, Sulphate, Sulphide, Carbonate, Bicarbonate, Sulphite, (all in ppm)
- Sulphate Reducing Bacteria [Presence/Absence of bacterial colonies]
- Oxygen Activity
- Moisture (%)
- pH value.

The collection of the soil samples shall be done on an average at one location every 5 km or otherwise depending upon the site conditions such as soil type, soil resistivity, etc. in consultation with OWNER or his representative. At each location the soil samples shall be collected at 1m, 2m depth and at scheduled/designed depth of pipeline if it is more than 2 m at the location.

Stray Current Survey

Survey for investigating possible sources of stray currents along ROW so that requisite mitigation measures can be included in the CP design shall be undertaken by the CP Contractor. The CP contractor carrying out CP Interference survey due to DC current will have to get the necessary permissions (with the help of AGL) from other utilities such as underground pipelines of foreign company/agency, above ground water pipeline running parallel on concrete pedestal, and DC rail traction etc. so that composite studies for interference detection are done and recommended mitigated measures are initiated. At the time of handing over the interference free system

to owners (AGL), the contractor will hand over these permissions of other utility owners, for further needful by AGL.

Where a site survey is not possible the CP contractor shall ensure that requisite data is available for him to fulfil requirements of the work order.

Additional Data Collection

The following data shall be collected to generate design data for evaluation of interaction/ interference possibilities due to presence of other services in ROW/ in close vicinity:

- Route and types of foreign service/pipeline in and around or crossing the right of way (including those existing and those which are likely to come up during contract execution or any abandoned pipelines).
- Diameter, wall thickness, pressure, pipeline coating against corrosion, soil cover used in case of pipelines.
- Details of the existing pipeline cathodic protection systems protecting the services i.e.
location, rating, type of protection, anode beds, test station locations and their connection schemes.
- Graphical representation of existing structure/pipe-to-soil potential [P-S-P] records, T/R unit current/ voltage input/output ratings, present current/Potential Input/ Output Data etc for the existing pipelines.
- Remedial measures existing on foreign pipeline/ services to prevent interaction.
- Possibility of integration/ isolation of existing CP systems, which may involve negotiations with owners of other existing pipeline services.
- Crossing and parallel running of electrified and non-electrified traction (along with information regarding operating voltage, type AC/DC etc.) as well as abandoned tracks near ROW having electrical continuity with the tracks in use.
- Crossing or parallel running of any HT AC/DC overhead line (existing/proposed) along with details of distance from pipeline, voltage, type AC/DC, distance from pipeline of earthing of towers etc.
- Voltage rating, number of cores and sheathing details of underground power cables, along ROW or in its vicinity.
- Information on existing and proposed DC/AC power sources and system having earth as return path, in the vicinity of the entire pipeline route such as HV DC sub stations, fabrication yards with electric welding etc.
- Any other relevant information that may be needed in designing and implementing proper protection scheme for the proposed pipeline.
- Unless otherwise mentioned, CP contractor shall conduct necessary potential gradient survey for any existing anode ground bed that may interfere with the CP system of the pipeline covered under this project.

CP Corrosion Survey Data Report

On completion of all field work a composite report incorporating all the results generated from site surveys for data generation and details of additional data collected and compiled with in the attached compliance report format clause wise as above shall be furnished to owner for Approval. The report shall also contain detailed interpretation of survey results and resistivity data enclosed, probable interference prone areas etc. to form design basis for the scheme of cathodic protection [TCP] & [PCP] system. This report shall also include various drawings prepared in connection with the above work. The soil resistivity values shall be plotted on semi-log graph sheets and in histograms. Log mean resistivity values to be calculated and used for the Design of CP system.

The Cathodic Protection design of [TCP] and [PCP] systems should be part of this composite report. The Bill of Materials [B.O.M.], Technical Specifications, Vendor list [from listed herein] etc. will be included in this Report for approval of Owner. The drawings for Owner's approval shall be part of this composite report.

12.1.2 CATHODIC PROTECTION DESIGN CRITERIA

Unless expressly varied and otherwise specified in the project specifications, following parameters shall be used for design of temporary cathodic protection [TCP] system and permanent cathodic protection [PCP] system.

Those parts of sacrificial anode cathodic protection [TCP] system which will be integrated with permanent cathodic protection system [PCP] such as Reference Cu-CuSO₄ electrodes, Test Lead Points, Junction Boxes, Pin Brazing, Epoxy Encapsulation, Markers, Polarization Coupons etc. shall be designed based on permanent CP parameters.

Synchronization of the new ICCP network with the existing ICCP network to avoid over/under-protection for Permanent Cathodic Protection system of proposed 4" to 10" Pipeline

- **Temporary Cathodic Protection System**

Pipe to soil potential (PSP) measurements shall be between (-) 0.85 V (ON) and (-) 1.5 V (ON) for 3 layer polyethylene/FBE coated pipe lines, with respect to a Cu/CuSO₄ reference electrode. At the locations of polarization coupons, the coupon to soil potential measurement shall be between (-) 0.85V (OFF) to (-) 1.2V (OFF) with respect to Cu/CuSO₄ reference electrode.

- **Permanent Cathodic Protection System**

Pipe to soil potential (PSP) measurements shall be between (-) 0.85 V (OFF) for aerobic soil environment, (-) 0.95 V (OFF) for anaerobic soil environment and (-) 1.2 V (OFF) for 3 LPE/FBE coated pipe lines, with respect to a Cu/CuSO₄ reference electrode.

In some cases, a minimum polarization shift of (-) 100 milli-volts may be accepted as an adequate level of cathodic protection for the pipeline.

- **PROTECTIVE CURRENT REQUIREMENTS**

The total current requirements for the pipeline requiring cathodic protection shall be calculated from the area of the pipeline, the current density requirements and the estimated coating breakdown factor.

Data for current density requirements at ambient temperature for design purpose of 3LPE coated pipeline is as per table -1 below:

Table-1

| Soil resistivity | Minimum Protection* Current Density ($\mu A/m^2$) | |
|--|---|--------------|
| | Temporary CP | Permanent CP |
| Soil resistivity < 10 ohm-m | 35 | 125 |
| Soil resistivity \geq 10 ohm-m and < 100 ohm-m | 15 | 50 |
| Soil resistivity \geq 100 ohm-m | 10 | 35 |

Data for current density requirements at ambient temperature for design purpose of FBE coated pipeline is as per table-2 below:

Table-2

| Soil resistivity | Minimum Protection* Current Density ($\mu A/m^2$) | |
|--|--|--------------|
| | Temporary CP | Permanent CP |
| Soil resistivity < 10 ohm-m | 125 | 500 |
| Soil resistivity \geq 10 ohm-m and < 100 ohm-m | 35 | 125 |
| Soil resistivity \geq 100 ohm-m | 25 | 90 |

*Note:

- The current densities given in Table-1 already include the current requirements due to the expected coating breakdown during the design life of the pipeline.
- The current density values stated above shall be applicable where the temperature of the medium transported by pipeline / the surface temperature of the buried pipeline do not exceed 30⁰ C. The conditions where the temperature exceeds 30⁰ C, the current density shall be increased by 25 % per 10⁰ C rise in temperature above 30⁰ C.
- Actual current density to be adopted shall be decided based upon soil & other environment condition, current drainage survey data, proximity of foreign pipeline and other interference areas affecting the installations. Where necessary for satisfactory protection of pipeline current density shall be suitably increased by contractor.

- **INTERFERENCE CRITERIA**

A positive potential swing of 50 milli-volts or more shall be considered sufficient to indicate the presence of an interaction / interference situation requiring investigation and incorporation of mitigation measures by the CP contractor.

- **OTHER PARAMETERS FOR DESIGN**

Other parameters to be considered for [TCP] and [PCP] design:

- Safety Factor for Current Density : 1.3
- Anode Utilization Factor : 0.85 for center connected Anode
- Pipeline natural potential (-) 0.45V [as measured from existing /upcoming structure in the same soil matrix].
- Unless otherwise specified in project specification the design life of [TCP] temporary CP shall be two (2) years or till commissioning of PCP whichever is earlier and that of [PCP] permanent CP shall be forty (40) years.
- Along the ROW where soil resistivity is higher than 100 Ω -m temporary CP for the pipeline may not be necessary subject to Owner's Approval.
- Steel Resistivity = $2.2 \times 10^{-7} \Omega$ M
- Maximum Loop Resistance = 1 Ω

12.1.3 SYSTEM DETAILS-PERMANENT CATHODIC PROTECTION SYSTEM

The system shall include the following major equipment/sub-systems unless otherwise specified in project specifications.

- Anode ground beds– with MMO anodes in carbonaceous back-fill
- Transformer rectifier units with maximum DC potential of 50V & minimum 10 V with built-in Current Interrupter and GPS based timer.
- Distribution Board [DB]
- Anode junction box with shunts and resistors
- Cathode junction box with shunts and resistors
- Permanent Reference Cu-CuSO₄ Electrodes [CSE]
- Test stations [TLP]
- Surge diverter/ Grounding cell across Insulation mono - blocks
- Grounding cell at Insulation mono - blocks
- Pin Brazing for pipe to cable connection [epoxy encapsulated]
- CP Cables
- Cable to pipe connections.
- Polarization ER Coupons for corrosion monitoring
- Earth pit at CP station
- Markers [for cable route, anode-beds etc.]

12.1.3.1 CP STATIONS

The number and exact locations of CP stations shall be worked out based on the corrosion survey data collected. As far as possible, the availability of nearby low resistivity areas for location of associated ground beds must be ensured while selecting the locations of CP stations.

Anode ground bed location should be decided through current drainage survey by installation of temporary anode ground bed & current attenuation test. It should be carried out by contractor without charging the additional cost to owner.

Note: Wherever deep well anode-beds are installed at CP stations it is to be ensured that total anode ground bed resistance is < 1 ohm.

12.1.3.2 ANODE GROUND BEDS & ANODES

Each CP station shall have an independent anode ground bed. Anode Ground bed shall be located electrically remote from the pipeline and foreign pipeline/ other buried metallic structures. Nearest part of the anode bed shall at least be 100 meters away from the pipeline and foreign pipeline/ other buried metallic structures. The anodes installed in the ground shall be located in perennially moist strata, wherever possible. Horizontal ground beds shall be at right angles to the pipeline and electrically remote. The location of ground bed shall be checked and ensured for remoteness from the pipeline and other buried foreign pipelines/ structures, building foundations, switchyards, electrical earthing systems, etc.

Anodes shall be of mixed metal oxide coated titanium type.

Shallow anode bed shall comprise of canister MMO anodes of required rating with anode tail cable to be installed and the trench shall be backfilled with petroleum coke breeze.

In case of deep well ground beds non-canister anodes with Calcined petroleum coke breeze in the well surrounding the anodes shall be provided.

Layout of anode installation in anode bed shall be detailed out in drawings showing anode installation details, anode grouping, anode wiring, anode cable routing, etc. The deep well anode ground bed details shall include the details of anodes, deep well casing, anode positioning, anode cable supporting, deep well gas venting, active, passive portions of the ground bed, etc.

Anodes shall be supplied complete with tail cables, which shall be long enough for termination on their associated anode lead junction boxes without intermediate joints. Exact lengths and termination details shall be indicated in construction drawings.

Potential gradient around the anode bed shall be within safety requirements with regard to interference on foreign structures and its effective boundary shall be defined. In case of two parallel pipelines running in the same ROW, the anode ground beds of the respective pipelines shall be located on the respective sides of the pipelines.

- **ANODE GROUNDBED BACKFILL**

Calcined Petroleum Coke Breeze with chemical composition of minimum 98% Carbon and (-)1mm mesh size shall be used. The consumption rate of coke breeze should be 1.1Kg / Amp – Yr and the Anode Ground bed Design life should not be less than 40 years at an operating load current of 50 Amperes.

- **WARRANTY**

The EMMO Anode Strings should be warranted for minimum 05 years from the date of installation. The New EMMO Anode String should be provided by its manufacturer if it stops functioning within 05 years when installed and operated per manufacturer's guidelines.

- **PETROLEUM COKE BREEZE**

Calcined petroleum coke breeze backfill material for use with mmo anodes in PCP system shall be conforming to is 8502, grade a type have the following characteristics;

Typical Physical Analysis

| | |
|--------------------|--|
| Particle size | : 1 mm (maximum) |
| Moisture, Volatile | : 1% (% by Mass) (On Dry Basis), Ash and Sulphur |
| Fixed Carbon | : 99% Minimum |
| Bulk Density | : 1040 kg / m ³ - For Deep well |
| Real Density | : 2.03 gm / cc |
| Porosity | : 40% |
| Resistivity | : 0.1 Ohm Cm at 150 PSI |
| Particle Size | : (-) 1.0 mm Max Dust Free |

The Petroleum Coke Breeze Material shall be tested for chemical composition, bulk density, real density, particle size and resistivity, sieve analysis.

Lubricated calcined petroleum coke breeze backfill material for use with anode beds in PCP system shall have a carbon content of 99 % minimum and a bulk density of minimum 1040 kg / cubic-m.

The CPC shall be tested by vendor before dispatch of material. The testing shall be conducted in accordance with codes and standards enclosed in this document, as per routine tests done by manufacturer.

Test Certificate shall be furnished by manufacturer and contain the following:

- a) Make :
- b) Batch No. :
- c) Chemical Composition :
- d) Bulk and Real Density :
- e) Particle Size Analysis :

f) Resistivity at 150 PSI :

The manufacturer shall take approval for third party test laboratory from Purchaser before conducting test.

12.1.3.3 CATHODIC PROTECTION TRANSFORMER RECTIFIER UNIT

The transformer rectifier unit (TRU) shall be single phase 230V, 50Hz AC input transformer rectifier unit with depending on the current requirement / loop resistance as per approved design.

The AC operated Rectifier Units' scheme for protection, monitoring, control, metering and indication shall be designed to meet requirements of this specifications. The control shall be achieved using thyristors and fully solid state logic only.

Transformer shall be of double wound, air cooled type with an electrostatic shield between the windings. The transformer insulation shall be Class F. The winding size shall be based on maximum current density of 1.6 Amps/sq. mm of copper conductor.

Rectifier shall be silicon type of approved make with adequate cooling arrangement and with moisture and humidity resistant finish. It shall be mounted on spindles or other suitable supports. It shall have configuration suitable for full wave rectification. Adequate filtering in the form of LC filtering circuit shall be provided on output side to smoothen out the D.C. output to limit ripple content to less than 5% at rated output.

The input and output of rectifier shall be protected by fast acting fuses of suitable ratings. Transient surge suppressers shall also be provided across D.C. output terminals and A.C. Input terminals to protect the rectifier against surges. Each diode and SCR shall be provided with suitable surge suppressers.

The T/R unit shall be provided with three modes of working as under. A mode selector switch shall be provided to select the desired mode of operation. All the modes shall be independent of each other and failure of the unit in one mode shall not affect working of the unit in other mode. A brief description of these modes is given below

- AUTOMATIC REFERENCE MODE (ARM)

The TRU for cathode protection of pipeline will be generally working in this mode. The operation of the unit in this mode shall be controlled by a reference signal generated by the TRU solid state logic by comparing the pre-set pipe to soil potential (PSP) in the TRU with the external lowest inputs from three nos. Cu/CuSO₄ reference electrodes installed close to the 3LPE/FBE coated pipeline. The output D.C. voltage of TRU in this mode shall vary right from 0V to rated voltage – 50V and from 0A to rated current to maintain the PSP of the lowest Cu/CuSO₄ reference electrode within ± 20 mV of the pre-set PSP in the TRU under all operating conditions. In the event of failure of all the three external reference signals, the TRU will provide alarm - "All Reference Fail" and the output of the TRU shall get adjusted to pre-set PSP.

Suitable metering arrangement shall be provided to monitor all the three external reference signals as well as the internal reference signals independently.

TRU shall also be provided for manual selection of any one out of the three external reference inputs for control.

Independent ultra-fast acting electronic current limit circuit shall be provided to limit the output current of the unit in Auto mode to any value from 0 A to rated value as desired by the operator. The current limit circuit will be capable of protecting the unit even under dead short circuit across output. The unit will be capable of sustaining dead short circuit across output indefinitely without degrading or damaging any internal components in this mode.

The typical reference regulation in this mode shall be within ± 20 mV under all conditions.

- Automatic VOLTAGE-CURRENT CONTROL MODE (AVCC MODE)

This will be the second mode of operation. The working of this mode shall be totally independent of the Auto mode and failure of the unit in Auto mode shall not affect operation in this mode.

The output voltage of the TRU shall be adjustable to any value from 0V to rated voltage by means of a step-less voltage setter. The set voltage shall be maintained within ± 0.25 V of the set value for change in DC input voltage within specified limits and change in load from 0 A to full load.

The output current of the unit shall also be adjustable to any value from 0A to rated current by means of a step-less current setter. The current shall be regulated within ± 0.5 A of the set value for change in DC input voltage within specified limits and change in load from zero to the rated value. The response of both current controller and voltage controller shall be ultra-fast, instantaneous type.

The current limit circuit will be capable of protecting the unit even under dead short circuit across output. The unit will be capable of sustaining dead short circuit across output indefinitely without degrading or damaging any internal components in this mode.

- LOCAL & REMOTE MONITORING & CONTROL

The unit will be capable of working in Local Mode of control as well as Remote mode of control. For this purpose a mode selector switch will be provided on the unit. With this switch in 'Local Mode' it will be possible to control the various parameters of the unit by means of local controls located in the unit. With this switch in 'Remote Mode' it will be possible to control the various parameters of the unit remotely thru the RTU/SCADA system.

Local Monitoring & Local Control

TRU will be provided for monitoring and control of various parameters by means of controls provided on the front panel of the unit. The parameters to be monitored and controlled locally are as under:

Metering on Panel

AC Input Voltage : Digital Voltmeter

AC Input Current : Digital Ammeter

| | |
|------------------------------|--|
| DC Output Voltage | : Digital Voltmeter |
| DC Output current | : Digital Ammeter |
| PSP (Set &Actual) | : Digital Voltmeter with 10 Mega Impedance |
| LED Indications on Panel | |
| AC Supply ON | : LED indication |
| Pipeline Under-protection | : LED indication |
| Pipeline Overprotection | : LED indication |
| Reference 1 Lowest | : LED indication |
| Reference 2 Lowest | : LED indication |
| Reference 3 Lowest | : LED indication |
| Reference 1 Fail | : LED indication |
| Reference 2 Fail | : LED indication |
| Reference 3 Fail | : LED indication |
| All Reference Fail | : LED indication |
| Over-current (Current Limit) | : LED indication |
| TRU working in Auto Mode | : LED indication |
| TRU working in AVCC Mode | : LED indication |
| TRU Working in Local Mode | : LED indication |
| TRU Working in Remote Mode | : LED indication |

- Built-in Microprocessor Based Programmable & GPS Current Interrupter

Current interruption facility will be provided by means of a built-in contactor & microprocessor based programmable & GPS synchronized digital timer with real time clock & ON/OFF time display. The timer will have facility for adjusting the ON time & OFF time from 1 to 999 sec. by means of digital setting facility. Timer will have START, STOP facility thru local keypad or thru remote potential free contacts. The timer will have facility for Synchronization to Master Timer or similar Timer in another unit.

The Timer will have GPS Sync facility.

- Built-in 4-20mA converters, barrier/isolators & Potential free contact for SCADA Monitoring Facility for SCADA Monitoring will be provided as under:

All monitoring parameters shall have MODBUS addresses, 4-20mA isolated converter modules and be available on RS 485 or TCP/IP for future SCADA connectivity for following parameters;

- PSP
- DC Output Voltage
- DC output Current

Potential free digital contacts for monitoring of the following alarms

- Pipeline under-protected / over-protected
- Reference fail
- TRU AC supply fail
- Built-in RMU Data Logger with GSM SMS Interface (OPTIONAL)

T/R unit will be provided with a built-in compact 5 Channel Data Logger RMU with GSM SMS Interface for central monitoring of T/R unit data. This logger will be programmed to record and transmit /control the following parameters Analog Parameters to be monitored:

- Reference Voltage (PSP)
- DC O/P Voltage
- DC O/P current
- 4..AC supply Voltage
- AC supply Time Totalizer

Alarm Signals to be remotely monitored:

- Under protection
- Overprotection

- Reference Fail
- AC supply Fail
- T/R unit door open

Parameters to be remotely controlled:

- T/R unit DC O/P shutdown
- T/R unit Pipe Ckt ON/OFF

• Technical Specifications and Data Sheet for CPTR Unit

| | | | |
|----|------------------------------------|---|--|
| a. | Item | : | AC operated Automatic CP Rectifier unit |
| b. | Make | : | Kristron Systems/PML/Hockway/Raychem RPG |
| c. | Input Voltage | : | 180V to 270V, 1Ph., A.C. |
| d. | Input Current | : | 50V/50A unit - 22A (max) 25V/25A unit - 6A (max) 10V/10A unit – 2 A (max) |
| e. | DC Power Output | : | 2500 / 625 / 100 W |
| f. | KVA rating of Transformer | : | 5.0 / 1.25 / 0.5 KVA |
| g. | DC Output Voltage | : | 0 to 10/25/50V |
| h. | DC Output Current | : | 0 to 10/25/50A |
| i. | Derating factor for diodes / SCRs | : | Voltage - At least 300% factor of Safety PIV - 1200V Minimum Current - 300% to 500% factor of safety |
| j. | Full load efficiency of T/R Unit | : | 50V/50A unit - More than 80% 25V/25A unit - More than 75% 10V/10A unit - More than 70% |
| k. | Full Load Power Factor | : | Not less than 0.8 lagging |
| l. | Insulation Level | : | 2 KV for 1 minute |
| m. | Peak Inverse Voltage for Diode/SCR | : | 1200V (Min) |
| n. | Cable entry | : | A.C. input, DC output and Reference Cell & Annunciation contacts. Through |

| | | | |
|----|----------------------------------|---|---|
| | | | bottom plate of the unit through suitable cable glands. |
| o. | Filtering circuit | : | L.C. Filter |
| p. | Ripple & Hum at rated output | : | Less than 5% RMS |
| q. | Surge Diverters for diodes /SCRs | : | Metal oxide varistors/capacitors/R-C Networks. |
| r. | Lightning Arrestor | : | At Input & output side of the T/R unit RMS voltage rating 500V Impulses discharge current 5.0 KA. |
| s. | Protection/Isolation | : | <input type="checkbox"/> 2 pole MCB in AC Input for overload protection & isolation. <input type="checkbox"/> 2 pole MCB in DC Output. <input type="checkbox"/> HRC fuses in input & output. <input type="checkbox"/> Glass cartridge fuses in the live line of all lamps, auxiliary power lines to control circuit and AC voltmeter. <input type="checkbox"/> All Ref. Fail indication and automatic setting of DC voltage to the pre-set value. <input type="checkbox"/> Built in over current& short ckt. protection feature. <input type="checkbox"/> Current limit adjustable from 0 to rated value. |
| t. | Reference Electrode | : | 3 Nos. Cu/CuSO4 <input type="checkbox"/> Automatic Reference Selector Logic shall be provided to automatically select the lowest (least protected) reference signal out of three reference signals fed to the unit simultaneously. <input type="checkbox"/> Facility shall also be provided to select one out of three ref. Electrodes by means of a manually operated Reference Selector switch. <input type="checkbox"/> In case of failure of all three Ref. Electrodes, the DC output voltage will automatically get adjusted to a <input type="checkbox"/> programmable preset value. |

| | | | |
|----|--------------------|---|--|
| u. | Control element | : | <input type="checkbox"/> The DC output will be controlled using latest solid state thyristors (SCRs). <input type="checkbox"/> These SCRs will be controlled by the commands from the electronic circuits. <input type="checkbox"/> All the electronic circuits will be assembled on plug- in type, glass epoxy control cards. |
| v. | Modes of operation | | <p>Following modes of control shall be provided.</p> <p>a) Auto Ref. Mode:</p> <input type="checkbox"/> Fully automatic operation with reference electrode feedback. The output voltage and current of the unit will vary over the entire range to maintain the pipe soil potential constant at within +15mV of the set value. Automatic reference selector logic will be used to sense voltage from three electrodes simultaneously and select the least protective electrode for feedback control. <p>b) AVCC Mode:</p> <input type="checkbox"/> This will be the second mode of operation. In this mode the unit can be operated in either constant voltage mode or constant current mode. <input type="checkbox"/> The DC voltage will be adjustable from 0 to rated value by means of a step less voltage setter potentiometer. <input type="checkbox"/> The DC current will be adjustable from 0 to rated value by means of a step less current setter potentiometer. <p>c) Manual Mode :</p> <input type="checkbox"/> This will be the third mode of operation. The control of DC output in this mode shall be without any electronic component. <input type="checkbox"/> A separate Autotransformer with 24-step tap switch controller will be provided to control the DC output |

| | | | |
|-----|--|---|--|
| | | | voltage from 0 to rated voltage in 24 symmetrical steps. |
| w. | Ref. (P.S.P.) Voltage setting in Auto ref. Mode | : | -0.80V to -2.50V <input type="checkbox"/> (For Cu/CuSO4 Electrode) |
| x. | Ref. (P.S.P.) Voltage Regulation in Auto Ref. Mode | : | <input type="checkbox"/> Better than $\pm 15\text{mV}$ |
| y. | DC Voltage Setting Range in AVCC Mode | : | <input type="checkbox"/> 0 to 50V, 0 to 25V, 0 to 10V |
| z. | DC Voltage Regulation in AVCC Mode | : | <input type="checkbox"/> $\pm 0.25\text{V}$ |
| aa | DC Current Setting Range in Auto Mode & AVCC Mode | : | <input type="checkbox"/> 0 to 50A, 0 to 25A, 0 to 10A |
| bb | DC Current Regulation in Auto Mode & AVCC Mode | : | For 50V/50A Unit : Better than <input type="checkbox"/> 1.0A For 25V/25A Unit : Better than <input type="checkbox"/> 0.5A <input type="checkbox"/> For 10V/10A Unit : Better than <input type="checkbox"/> 0.25A |
| cc. | Indications/Annunciations | : | <input type="checkbox"/> Mains ON <input type="checkbox"/> Operation on AC Supply <input type="checkbox"/> Unit in Auto Ref. Mode <input type="checkbox"/> Unit in AVCC Mode <input type="checkbox"/> Under protection <input type="checkbox"/> Overprotection <input type="checkbox"/> Reference 1 fail <input type="checkbox"/> Reference 2 fail <input type="checkbox"/> Reference 3 fail <input type="checkbox"/> All Reference fail <input type="checkbox"/> Reference 1 lowest <input type="checkbox"/> Reference 2 lowest <input type="checkbox"/> Reference 3 lowest <input type="checkbox"/> Unit in current limit |
| dd | Meters/instruments | : | 48 X 96 mm digital meters with RS485 communication port for following <input type="checkbox"/> AC Voltage : 0 to 300 V AC <input type="checkbox"/> AC Current : 0 to 30AAC with C. T. |

| | | | |
|-----|--|---|--|
| | | | <input type="checkbox"/> DC O/P Voltage : 0 to 60V DC <input type="checkbox"/> DC O/P Current : 0 to 60A DC with shunt <input type="checkbox"/> P.S.P. : 0 to \pm 19.99V DC <input type="checkbox"/> 6 Digit Digital Time totalizer |
| Ee | Current Interruption Facility | : | <p>Current interruption facility will be provided by means of a built-in contactor & microprocessor based synchronized digital timer with real time clock & ON/OFF time display. The timer will have facility for adjusting the ON time & OFF time from 0.1 to 999.9 sec. by means of digital setting facility. Timer will have START, STOP facility thru local keypad or thru remote potential free contacts. The timer will have facility for Synchronisation to Master Timer or similar Timer in another unit.</p> <p>The Interrupter Timer will be provided with GPS Sync Facility.</p> <p>Facility for interconnection of an external timer shall also be provided.</p> <input type="checkbox"/> A removable bypass link will be provided for bypassing the interrupter contactor contacts. |
| ff. | T/R Unit Pipe Ckt ON/OFF | : | <input type="checkbox"/> Facility will be provided for automatic opening of pipe ckt of T/R unit as and when desired. |
| gg | Remote Monitoring Facility by means of a Built-in GSM Based Data Logger- OPTIONAL, If mentioned in SOR. (As per the detailed specifications provided at the end) | : | <p>Facility will be provided for remote monitoring of the following signals by means of a GSM SMS based Data Logger RMU</p> <p>a) Analog Parameters:</p> <input type="checkbox"/> P.S.P. <input type="checkbox"/> DC O/P Voltage <input type="checkbox"/> DC O/P Current <input type="checkbox"/> AC supply voltage <input type="checkbox"/> AC supply Time Totalizer <p>b) Alarm parameters:</p> <input type="checkbox"/> Under protection <input type="checkbox"/> Overprotection <input type="checkbox"/> Reference fail <input type="checkbox"/> TR unit Door open <input type="checkbox"/> AC supply Fail <p>c) Control parameters :</p> <input type="checkbox"/> T/R unit DC O/P shutdown T/R unit Pipe Ckt ON/OFF |

| | | | |
|-----|--|---|---|
| | SCADA Interface Facility (Output Parameters shall have MODBUS addresses and be available on RS 485 or TCP/IP for future SCADA connectivity) | | <p>a) Isolated 4-20mA Signals for:</p> <ul style="list-style-type: none"> <input type="checkbox"/> DC Output Voltage <input type="checkbox"/> DC Output Current <input type="checkbox"/> PSP <p>b) Potential Free Contacts for:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Under protection <input type="checkbox"/> Overprotection <input type="checkbox"/> All Ref. Fail <input type="checkbox"/> Unit in Auto Ref. Mode <input type="checkbox"/> Unit in AVCC Mode <input type="checkbox"/> Unit in Manual mode <input type="checkbox"/> CP unit input DC supply fail (DI) <p>c) DO signals for current interrupter START / STOP / REST</p> |
| Hh | Enclosure/Construction | : | <ul style="list-style-type: none"> <input type="checkbox"/> Floor mounted Outdoor type. <input type="checkbox"/> Confirming to IP55 degree of protection. <input type="checkbox"/> To be fabricated from 2.5 mm sheet steel. <input type="checkbox"/> Lockable doors shall be provided in the front & back. |
| ii. | Cooling | : | <ul style="list-style-type: none"> <input type="checkbox"/> Natural air cooled |
| jj. | Painting | : | <ul style="list-style-type: none"> <input type="checkbox"/> Baked epoxy powder coating of shade Light Grey with proper pre-treatment as per standard industrial practice. |
| kk. | Earthing | : | <ul style="list-style-type: none"> <input type="checkbox"/> 2 Nos. suitably sized earthing bolts and 1 No. nickel plated copper earthing bus bar shall be provided. |
| ll. | Environments | : | <ul style="list-style-type: none"> <input type="checkbox"/> Max Ambient Temp : 50 degree C <input type="checkbox"/> Relative Humidity : Up to 99% |

Notes:

1. All Analogue signals shall be isolated 4-20 mA. All necessary transducers for 4~20 mA outputs, A/D converters etc. shall be provided in the system for the same.
2. All digital input signals shall be potential free type.
3. Digital output signal for control from SCADA shall be available for 500 ms.
4. All digital input and output contacts shall be rated for 24V, 1.5A DC.

12.1.3.4 Anode Junction Box

Anode junction box (AJB) shall have provision of termination of cable tails from individual anodes in case of horizontal shallow ground bed or main anode cable in case of deep well ground bed and provision of connection of anode header cable coming from TRU.

AJB shall have sheet steel enclosure of minimum 3 mm thickness and hinged lockable shutters. AJB shall be weatherproof with degree of protection IP-55. The enclosure shall be hot dip galvanized to a thickness of 125 microns followed with grey shade of epoxy painting inside and outside to a thickness of 300 microns surface. AJB shall have anode bus of copper with nickel/ silver plated or tinned. Provision shall be made for measurement and control of individual outgoing circuit/anode current by providing suitable shunt and resistors of grid coil type. Disconnecting links shall be provided for each out-going/anode circuit. 30% spare out-going circuits shall be provided in each anode junction box. Terminals shall be of anti-loosening type and provided with identification labels. Each outgoing circuit shall be labeled clearly to indicate the circuit/sub anode junction box to which it is connected.

A nameplate of anodized aluminum with background and white letters shall be fixed to the inner side of the junction box. The nameplate shall carry the following minimum information:

- Ground bed current rating
- Ground bed resistance
- Connection scheme
- Distance form pipeline in meters
- Distance form CP station in meters.

DATASHEET FOR ANODE JUNCTION BOX

| | |
|---|--|
| Input cable size | 1C x 35 sq mm (Anode header cable from TR Unit) |
| No. of output circuits | 1C x 10/16 sq mm for Anode header cable |
| Output circuit configuration | Anode Bus output distributed into 10 circuits + 4 spare circuit in line Configuration with Current Measuring Shunt & Resistor. |
| Shunt type | Magnesium Alloy |
| Shunt Rating | A10A = 100mV |
| Resistor Rating | 01 Ohm – 10Amps |
| Variable Resistors | In case variable resistors are installed, the rating should be suitable to control current in each anode and the wattage of the resistor should be determined to prevent heating of the AJB. |
| Terminal board material | 6 mm Bakelite |
| Insulation level in between terminal and body | 2 KV for 1 minute at 50Hz |

| | |
|------------------------|---|
| Busbar | Tinned copper bus bar 25x5 mm |
| Terminals | Stainless steel stud with double nut, spring and plain washer. |
| Enclosure | Completely enclosed, Outdoor type, Post Mounted, Natural Air Cooled IP55 construction Sheet steel, 3 mm thick, suitable for mild steel post mounting. The enclosure will be hot dip galvanized to a thickness of 125 microns followed with grey shade epoxy paint inside and outside to a thickness of 300 microns. The cabinet has hinged front doors with neoprene gasket and is Pad lockable |
| Painting | Surface Preparation SA 2 ½ One Coat of Zinc Primer Two Coat of Epoxy Paint – Light Grey Outside & White inside |
| Cable entries | The cables entering in the AJB from the post mounting should be sealed with silicone compound or visco-elastic gel to prevent moisture ingress in the AJB. |
| Name plates and labels | All internal component identification labeling is done using permanent screening / marker External Name Plate shall be SS engraved. |
| Foundation | Pre-cast Reinforced Cement Concrete Base with Base Plate with Pipe for cable entry from bottom 600mm x 600mm x 800mm |

12.1.3.5 Cathode Junction Box

Where output of TRU is connected to multiple pipelines, a cathode junction box (CJB) shall be installed for connecting the cathode cables from each pipeline to the negative header cable to the TRU unit. CJB shall have a bus bar with an incoming circuit for connecting to negative of the TRU and separate out-going circuits for collection of negative drainage current from each of the pipelines. The incoming circuit shall have a current measurement shunt. Each out-going circuit shall have isolation link, variable resistance of grid coil type and a current measurement shunt. One number spare outgoing circuit shall be provided.

CJB shall have sheet steel enclosure of minimum 3 mm thickness and hinged lockable shutters. AJB shall be weatherproof with degree of protection IP-55. The enclosure shall be hot dip galvanized to a thickness of 125 microns followed with grey shade of epoxy painting inside and outside to a thickness of 300 microns surface CJB shall have cathode bus of copper with nickel/ silver plated or tinned The terminals shall be of anti-loosening type. Proper identification labelling shall be provided for each terminal. Each outgoing circuit label shall clearly indicate the size and identification of the pipeline to which it is connected. A nameplate of anodized aluminum with black background and white letters shall be fixed to the inner side of the junction box. The nameplate shall carry the following minimum information:

- Chainage in km
- Connection scheme

- Distance from the nearest pipeline in meters.

DATASHEET FOR CATHODE JUNCTION BOX

| | |
|---|---|
| Input cable size | 1C x 35 sq mm |
| No. of output circuits | One Negative incoming cable connected to Cathode Configuration Busbar distributed into 04 outgoing circuits in line with shunt & links for measurement and Reference cell |
| Insulation Level in Between Terminals & body Busbar | 2 kV for 1 minute at 50Hz |
| Busbar | Tinned copper bus bar 25x5 mm |
| Terminals | Stainless steel stud with double nut, spring and plain washer. |
| Enclosure | Completely enclosed, Outdoor type, Post Mounted, Natural Air Cooled IP55 construction. The cabinet is made from 10 SWG mild steel. The cabinet has hinged front doors with neoprene gasket and is Pad lockable. Sheet steel, 3 mm thick, suitable for mild steel post mounting. The enclosure will be hot dip galvanized to a thickness of 125 microns followed with grey shade epoxy paint inside and outside to a thickness of 300 microns. Dimensions : 400 mm (H) x500mm (W) x200 mm (D) |
| Painting | Surface Preparation SA 2 ½ One Coat of Zinc Primer Two Coat of Epoxy Paint – Light Grey Outside & White inside |
| Cable entries | The cables entering in the AJB from the post mounting should be sealed with silicone compound or visco-elastic gel to prevent moisture ingress in the AJB. |
| Name plates and labels | All internal component identification labeling is done using permanent screening / marker External Name Plate shall be SS engraved . |
| Foundation | Pre cast Reinforced Cement Concrete Base with Base Plate with Pipe for cable entry from bottom 600mm x 600mm x 800mm |

12.1.3.6 PACKING AND TRANSPORT

All equipment/ material shall be protected for inland/ marine transport, carriage at site and outdoor storage during transit and at site. All packages shall be clearly, legibly and durably marked with uniform block letters giving the relevant equipment/ material details. Each package shall contain a packing list in a waterproof envelope. Copies of the packing list, in triplicate, shall be forwarded to owner prior to dispatch. All items of material shall be clearly marked for easy identification against the packing list.

12.1.4 INSTALLATION-PERMANENT CATHODIC PROTECTION

12.1.4.1 Deep Ground Anode Bed

The deep ground anode bed shall be installed minimum 100 meters away from the pipeline. The site will be selected ensuring that there is water available in the bore hole where the deep ground is being installed to prevent drying out of the anode bed. The deep ground bed shall have MMO tubular dual feed anodes (as per design) arranged in a string form. The center to center spacing of the MMO tubular anode shall be 3 meter or as per design. The depth of the deep well shall be as per design with inactive length of 15 to 20 meters. Whole of the active length should be in the low resistivity ground beneath the water table.

The deep well shall be lined with 8" steel casing pipe right up to the top. A 12" or 10" PVC casing will be installed to make column inactive for a depth of 15 to 20 meters.

PROCEDURE

- a) Mark the boundary of land required for installation of deep well anode bed. This shall be in line with approved layout drawing and permission granted by AGL.
- b) Ensure the necessary work permit issued by AGL.
- c) Make the SSRA and ensure mitigation action prior to go for execution.
- d) Conduct the Tool Box talk and share the necessary information and hazard involved.
- e) Identify the underground utilities by cable locator/trial hole/information from other agency.
- f) Fix the drilling rig at approved deep well ground bed location.
- g) Arrange/ensure the disposal of drilling mud at safe & authorized location.
- h) Start the drilling of bore hole with suitable diameter drilling bit and drill borehole of suitable depth as per approved document.
- i) Once the required depth is achieved and drill-stem resistance measured using an appropriate method, the casing string installation shall follow. The casing installation to be done in the following order:
 - Install the 8" dia Mild steel – IS/API casing complete with end cap at bottom.
 - Install the intermediate 12" or 10" dia. PVC casing (inserted over the steel casing).
- j) Ensure the lifting plan is approved by AGL prior to going for pipe lifting for welding & lowering.
- k) Lower the casing pipe (Thick 3mm min) one length at a time and join various lengths with coupler/by welding one after another.

- l) All MS pipe weld joint shall be done as per pipeline welding procedure.
- m) After lowering MS casing pipe, a PVC shrouding pipe equal to inactive length of the deep well anode ground bed shall be lowered along the casing pipe from the top.
- n) Continuity and insulation of the anode string for any damage prior to installation shall be physically checked.
- o) Mark length equal to the required depth on the tail cable of anode to avoid excessive lowering.
- p) Anode string shall be laid out near the drilled hole with the anode lead cable uncoiled in an orderly fashion. Attach a centralizer to the center of each anode. Select the first anode and securely tie the anode to the nylon suspension rope using plastic tie. Tie MMO anode string with vent pipe and cable together. The 1" perforated vent pipe shall be tied to the anode centralizer ensuring that the anode and the vent pipe are not touching each other so as to facilitate Calcined petroleum coke breeze backfill compacting around the anode string. The bottom of the vent pipe shall be installed with threaded end cap.
- q) Lower the anode string by Nylon rope in steel casing pipe with the vent pipe in a careful manner so as not to damage any component and ensure that anode cables do not take any weight during lowering.. The distance of the first anode from the bottom of the hole/vent pipe shall be strictly as per approved design. Perforated vent pipe shall be installed for the entire length of the active column and non-perforated for the in-active column. The vent pipe, complete with end cap shall be installed to the full depth of the hole and a 1 m length shall be left protruding from the concrete pit for later completion.
- r) Prior to filing of the Calcined petroleum coke breeze backfill in the annulus of the casing pipe, it must be ensured that the anode cable leads have been routed through the appropriate casing exit fitting and must be protected from any damage during the backfilling procedure.
- s) Mix the coke breeze with water to form slurry. Lower the slurry coke breeze inside the bore well up to the active length by suitable pumping facility so that coke breeze can be settled properly in entire depth of the casing pipe and rest backfill with metal gravel, lowering to be started from bottom of well by inserting the PVC conduit till bottom and pulling slowly With filling the hole with back fill material, this is to ensure proper backfilling. Once the desired level of coke breeze column is achieved allow the back fill to settle for 12 hours.
- t) After complete installation of the deep well anode ground-bed, a concrete plinth shall be cast around the ground bed as per approved drawing. The plinth shall include provision for conduits required for cable routing (Anode & Positive Header cables) and installation of anode junction box. Anode well head with following details:
 - Bottom slab: 1:2:4 PCC, Size L – 1250 mm x W – 1250 mm
 - Well head chamber: 600 mm L x 600 mm W x 800 mm H
 - Support pipe: 50 mm dia. GI conduit

- Well head cover: 6 mm thick MS painted sheet with 6 mm dia. vent hole fixed on MS angle.
 - Drain conduit: 50 mm dia. GI conduit
- u) Anode tail cable is brought in AJB and from AJB to TR unit for termination as per cable laying procedure.
- v) Install the standard cable route marker at specified interval.
- w) Take the reference from cable for as built drawing.
- x) After completion of the deep well anode ground bed work, site restoration work shall be completed as per satisfaction of AGL representative.

SPECIAL PRECAUTIONS

- a) Ensure that all the anodes required / as per design done for a particular CP station are available with tail cables connected.
- b) While lowering the anode should not be suspended or lowered by its lead wire. The backfill shall be well compacted to avoid voids later on.
- c) The anode tail cable shall be terminated with sufficient slack to avoid mechanical strain on the cable inside the anode junction box without any joints.
- d) The backfilling operation shall be completed to finished grade level, using excavated material. One set of drawing/documents should be kept by site supervisor at work place.
- e) All cables are to be appropriately tagged & cable core ferrules are to be provided before final termination. All the cable connections should be checked for proper tightening.

12.1.4.2 Cable Laying

- a) Cables shall be laid in accordance with approved layout drawings. No joint shall be permitted in a single run. Cable route shall be carefully measured and cables shall be cut to required lengths including required loops. Minimum ½ meter cable loop shall be provided near anodes, pipeline & test station for any adjustment.
- b) All cable will be required to be laid at a depth of 0.75 m inside station / plant area and 1.5 m depth outside plant / station area in sand under brick cover backfilled with normal soil. The route shall be marked with polythene cable warning mats placed at the depth of 0.5/0.8 m. From finished ground level for inside station and outside plant area respectively. All dimensions shall be as per approved cable laying drawing.
- c) In case of above ground cables installation, all unarmored cables forming part of permanent C.P. System shall be laid in G.I. conduit of sufficient size, with all fittings, fixtures and accessories.

- d) Cables shall be neatly arranged in trenches in such a manner that crisscrossing is avoided and final take off to equipment is facilitated.
- e) All underground unarmored cables forming part of TCP/PCP system shall run through PE / PVC sleeves.
- f) All underground cables shall be enclosed by RCC or G.I. conduit of proper size while passing through road/rail crossings.
- g) Cable termination shall be by means of correctly sized crimped lugs & appropriate ferrule.
- h) Crimping shall be by means of proper Crimping tools only.
- i) The cables for reference cells and pipeline potential measurement shall be routed in a separate trench other than the trench provided for the rest of the CP system cables, AC cables for CP TRU etc.

12.1.4.3 Cable to Pipe Connections

- a) Mark the location required for making pit for pipe to cable connection.
- b) Ensure the necessary work permit issued by AGL if required.
- c) Make the Site Safety Risk Assessment (SSRA) and ensure mitigation action prior to going for execution.
- d) Conduct the Tool Box talk and share the necessary information and hazard involved.
- e) Identify the underground utilities by cable locator/trial hole/information from other agency if required.
- f) Pipe to cable connection shall be laid in accordance with approved drawing.
- g) Qualification of pin brazing procedure to be carried out before taking up field work / field joint.
- h) The cable to pipe connection will be made by using pin brazing method. The following procedure to be followed:
 - Excavate a pit over the pipeline to expose the pipeline top surface at pin brazing location where cable to pipe connection is to be carried out as per design document (or) opposite to the test station /CP station location. Care should be taken not to damage the coating of buried pipeline during excavation. Only manual excavation shall be carried out over the pipeline.
 - Make a trench of dimension as per site requirement and distance between two pipes to cable joints.
 - Ensure pit with V shape/shoring/ shuttering as per HSE requirement.
 - Make marking on to the pipeline for making the cable to pipe connection. The number of marking for connection will be as per the connection scheme type at that particular location. The location for pin Brazing of cable shall be selected such a way that the pipe joints and field- coated areas are avoided.
 - Care shall be taken that cable to pipe joint is not made upon the seam on circumferential weld of pipe.
 - Distance between 2nos of cable to pipe connection shall be minimum 300mm.

- Cut and remove the coating on the pipe line with care without damaging the pipe of approximate size (50 mm*50 mm) gently, to suit the size for pin brazing using a sharp chisel.
- Use a flat rough file (or) emery paper to remove coating residue.
- Clean the surface of the pipeline materials to white metal finish. All the cables shall be tested before installation to ascertain the healthiness of the cable.
- Remove the protective sheathing and insulation from the cable to expose the bare copper conductor minimum 5 mm (or) as required for crimping lug on wire stands, properly. Care should be taken that cable cutters used do not cause deformation of conductor or damage to sheathing and insulation.
- Ensure that the bare conductor is clean, bright and dry.
- If the conductor is corroded, then cut it back until bright, clean conductor is to be found.
- If the conductor is wet then dry it with a clean dry cloth, ensuring that the cable insulation and sheathing are not damaged.
- Take proper pin for brazing gun and secure it properly inside the gun.
- Place the gun on bright metal surface and pull the trigger so that current passes through the pin and pin melts and gets connected to the surface. During the entire operation keep the gun pressed on the surface for proper bonding.
- Wait for approx. 10 seconds and then lift the gun.
- Ensure that the stud bullet is firmly connected to the pipe. Check the connection by striking hand.
- Connect a suitable lug to the cable with suitable nut & washers and crimp it properly.
- Connect the cable to the stud bullet connected to the pipe and tighten it properly as per given in drawing.
- Remove the debris if any, using brush.
- Visually examine the cable to pipe connection that the entire conductors are incorporated in the lug.
- Place a required size of plastic funnel around the exposed area such that about 5 mm wide coating remains inside the plastic funnel. Place M- seal around the plastic funnel to prevent leakage of encapsulation materials.
- Fill up the plastic funnel from the top by pouring epoxy & hardener in the proportion of 1:10 to achieve electrical insulation.
- The resulting surface shall be clean, bright and slightly rough.

12.1.4.4 Permanent Reference Cell-Cu/CuSO₄

- Measure 300 mm distance from pipe line from pipe skin side / top and mark the Reference Cell location.
- The Reference Cell shall be soaked in clean Water for 24 hours before installation.
- Excavate the pit up to 1.5 m or pipeline center depth whichever is higher.
- Install the pre-packaged reference cell in horizontally or vertically configuration excavated pit near to pipe 300 mm distance.

- Lay the cable up to test station box as per approved procedure of cable laying
- Connect all tail cables to one terminal or more terminal of test station by using lugs /ferrule and brass nut bolt and tight it.
- Backfill the excavated soil.
- Measure pipe to soil and anode potential after installation.
- Compare the installed potential with portable reference cell.
- If difference is there, corrective measures shall be taken for re-installation.

12.1.4.5 Copper Earth Electrode

For earthing of above ground TR unit copper earth electrode shall be supplied. Copper bonded, 3 m long maintenance free earthing electrode, 63 mm dia.-dual pipe technology, adequately filled composition of highly conductive metallic compound as per approved specifications shall be supplied. CONTRACTOR shall maintain earth grid resistance of up to 1 ohm with sufficient number of electrodes. Earth connection with TR unit shall be of 25 mm width copper strip, 5 mm thick and of required length conforming to IS3043: Code of Practice for Earthing.

12.1.4.6 Installation /Erection Procedure for Transformer Rectifier Unit

- **TR platform/foundation work**
 - a) Mark the boundary of land required for platform/foundation. This shall be in line with approved layout drawing and permission granted.
 - b) Identify the underground utilities by cable locator/trial hole/information from other agency.
 - c) Mark the location and numbers of pilling.
 - d) Arrange/ensure the disposal of drilling mud at safe & authorized location.
 - e) Start the pilling work and ensure the dimension as per given drawing.
 - f) Ensure all civil work (Pile, RCC, PCC, brick, plaster, foundation bolt, frame etc.) is as per AGL approved drawing.
 - g) Appropriate curing shall be done at proper interval.
 - h) Restoration work shall be done as per satisfaction of AGL representatives.
- **TR erection/installation & cable termination work**
 - a) Carefully unpack the TR unit after taking it is from the wooden case. Inspect the unit & check for transit damages.
 - b) Ensure the appropriate lifting plan for TRU lift.
 - c) Ensure the availability of appropriate Hydraulic mobile crane with necessary safety passport and necessary lifting gears.
 - d) Lift the TRU and lower it on TR platform at suitable place for bolting with foundation bolt & ensure the alignment.

- e) Take the cable entry into the unit through suitably sized gland, which are fixed on the bottom gland plate of the unit.
- f) Open the front and back doors of the unit and visually inspect the inside carefully. Check all the components inside to insure that there is no damage in transit Tighten all connection.
- g) Check the insulation between the AC input terminal and panel body by means of a Megger.
- h) The unit should be earthed by copper cable to be connected between the station earth system and the ear thing bolt.
- i) Pull up various cable such as AC input, Anode header, Cathode header, Reference cell and negative cable Transducer cable and connect them to appropriate terminals in the unit as per wiring and cable termination diagram. The cable entry to the unit shall be through cable gland.
- j) All the cables shall be tagged appropriately and ferruled before lugging with appropriate size lug.
- k) Ensure all the work for PDB, CJB, and earth pit as per standard procedure or AGL instruction.
- o) **TR platform fencing work**
 - a) Ensure the steel materials as per AGL/site requirement.
 - b) Ensure appropriate fabricator, welder etc. as per requirement for fencing work.
 - c) Ensure the size of the gate, roof and necessary locking arrangement.
 - d) Use the galvanized sheet for roof as per AGL requirement.
 - e) Ensure the red oxide primer for entire fencing and gate.
 - f) Apply the black paint /silver paint for entire fencing and gate.
 - g) Put the identification plat / tag for TRU/CP station as per AGL requirement/instruction.

PRECAUTION

- a) All the civil work shall be as per AGL drawings/instruction/site requirements.
- b) All the materials to be used shall be as per appropriate grade or spec. given by AGL.
- c) All cables are to be appropriate tagged.
- d) All the connections should be checked for proper tightening.
- e) Cable core ferrules are to be provided at end before final termination.

12.1.4.7 Civil Works

All civil works associated with the complete cathodic protection work shall be included in the scope of CP contractor. This shall include providing cable trenches, foundation for equipment and all junction boxes etc.

For Deep anode ground bed following civil work to be done

- Bottom slab: 1:2:4 PCC, Size L – 1250 mm x W –1250 mm

- Well head chamber: 600 mm L x 600 mm W x 800 mm H
- Support pipe: 50 mm dia. GI conduit
- Well head cover: 6 mm thick MS painted sheet with 6 mm dia vent hole fixed on MS angle.
- Drain conduit: 50 mm dia GI conduit

12.1.5 SYSTEM TESTING AT SITE-PERMANENT CATHODIC PROTECTION

CP Contractor shall furnish the detailed field testing and commissioning procedure for approval. Field tests as per the approved procedures shall be carried out on the equipment/ systems before being put into service. The acceptance of the complete installation shall be contingent upon inspection and field test results being satisfactory.

Before the CP facilities are placed in operation all necessary tests shall be carried out to establish that all equipment, devices, wiring and connection, etc. have been correctly installed, connected and are in good working condition as required for intended operation.

AGL representative may witness all the tests. At least one week's notice shall be given before commencing the tests.

All tools, equipment and instruments required for testing shall be provided by CP CONTRACTOR. Generally following tests shall be carried out and recorded.

- Checking : Visual inspection, comparison with drawings and specifications
- Inspection : Detailed physical inspection & dimensions measurement
- Testing : Simulation tests of equipment to determine its operational fitness.

Cables

- Cable no.
- Voltage grade
- Conductor cross section
- Continuity check
- Insulation resistance values between core and earth.
- All cables shall be tested by 500 V Megger. Isolation Joints / Isolation Spool Pieces

Checking of insulating joint for leakage, before and after energization of CP by means of insulating joint tester.

Structure-to-electrolyte potential of both protected and non-protected sides of insulating joint shall be checked before and after energization of CP system. Spark Gap Arrestor / Surge Diverter and grounding cell shall be connected thereafter. Grounding Cell

- Location
- Type (no. of anodes)

- Rating Surge diverter
- Location/ identification number
- Rating
- Check for healthiness Anode ground beds
- Location
- Current output of each anode / anode string
- Current output of the ground bed
- Resistivity of the anode Ground bed

Transformer Rectifier Unit

- Location
- Checking of DC voltage / DC current using resistors
- Checking operation of the TRU in AUTO reference mode
- Checking operation of the TRU in AVCC mode
- Checking the PSP of the three external reference electrodes at the TRU
- Checking the GPS current interrupter
- Checking 4-20mA convertors / potential free contacts. Pipe to Ground Resistance
- Pipe to ground resistance shall be measured using 3 point Wenner method and recorded.

12.1.6 CATHODIC PROTECTION-COMMISSIONING PROCEDURE

The CP contractor shall submit detailed commissioning procedure as per the guideline below:

On completion of installation of anode beds and other systems as per the specification, they shall be individually checked, tested and compared against agreed specifications and procedure. Electrical continuity of the entire pipeline shall be verified in conformity with design.

Input resistance of the pipeline at all drain points shall be checked and recorded.

All current measuring test stations shall be calibrated and recorded using portable battery, variable resistances, voltmeters, ammeters, etc. as required.

TCP facilities provided (if any) which do-not form a part of the PCP system shall be disconnected from the system & removed unless agreed otherwise.

Sacrificial anodes where provided for casing pipe at cased crossings /MOVs/IJs shall be disconnected.

The pipeline shall be allowed to depolarize for at least 72 hrs after switching "OFF" the protection (if any) on all the other pipelines on common ROW.

Before pipelines are put on charge by switching ON the TRU at CP stations , natural PSP, casing pipe PSP and Coupon to soil potential values at all test stations of the system shall be measured w.r.t. Cu/CuSO₄half cell.

Commissioning procedure for pipeline having two CP stations is given below; CP contractor shall develop detailed commissioning procedure accordingly:

CP station no. 1 shall be energized with output potential adjusted to achieve a maximum pipe to soil potential as specified at test station nearest to the drainage point. Observations on either spread of protected portion of pipeline and coupons under this CP station shall be taken for PSP values at each of the installed test stations. The pipeline current values across the cross section of the pipeline shall also be determined at all the intended test stations influenced by the TRU.

CP station no. 1 shall now be switched OFF; CP station no. 2 shall be switched 'ON' and measurement procedure as specified above shall be repeated.

Both CP stations of the system shall be switched OFF and pipeline shall be allowed to depolarize. All two CP stations shall then be simultaneously switched on and the PSP values at drainage points of the pipeline shall be brought to a value of maximum PSP as specified and a complete set of observations shall be taken.

Another complete set of pipe to soil and coupon to soil observations shall be taken after the lines have been charged for 48 hours. If there are appreciable differences in the observations then the same activity to be repeated after 72 hours. Maximum drainage point potentials shall not be allowed to go beyond maximum OFF PSP values.

Coupon to soil OFF potential shall be measured at all locations of coupon installations by operation of magnetic reed switch in test station.

The output of TRU then should be adjusted that the potential at all locations remain in the range of -0.85V to -1.2V OFF. A full set of observations should again be recorded after 72 hours after the adjustment of potentials and the system should be left in the same state of operation.

Make sure that the power supply remains un-interrupted during the period of commissioning, in case of interruption the test in progress should be repeated after allowing suitable time for polarization.

At cased crossings the sacrificial anodes for casing pipes can be reconnected and casing to soil potential and anode output current to be recorded.

Current readings at the current measuring test stations shall be measured and recorded.

In case of remote monitoring of CP system the system should be initiated to store the data of potentials.

Final records of testing and commissioning including graphical representation of final pipe to soil potential readings shall be compiled with interpretation in consultation AGL team.

If any deficiencies are found in the system the same shall be rectified. Such deficiencies shall include mitigation of stray current electrolysis and interference problems that may exist in the course of testing and commissioning. A set of observations should also be taken in the peak of first dry season after

commissioning the system into regular operation. Any deficiencies found in the protection of pipeline should be rectified by contractor at his own cost.

The current dissipated by individual anodes shall be measured from anode lead junction box and corrected for equal dissipation to the extent possible keeping the total ground bed current same.

12.1.7 TESTING FOR INTERFERENCE

Wherever foreign pipelines which may or may not be protected by an independent CP system and run in parallel or cross the protected pipeline, either in the same trench or very near and are not bonded, testing shall be performed to identify any interference.

PSP values at each of the test stations of the existing pipelines shall be measured.

Interference situations shall be identified by comparing different sets of readings taken at same test stations at different intervals of time under identical conditions where positive potential swing exceed 50 mV.

Current discharge /pickup points on both the pipelines shall be located.

In case of fluctuating stray currents, investigations shall be made continuously over a period of time and if required simultaneously at different locations to find out the stray current source (s). Recorders shall be preferably be used for long time measurements.

If interference is detected mitigation measures like installation of bond with variable resistor and diodes, installation of galvanic anodes for auxiliary drainage of current, adjustment/ relocation (if possible) of offending interference source, provision of electrical shield etc., whichever is best suited for the particular location shall be recommended.

AC induction voltage on pipeline due to overhead high voltage power lines (66KV and above) shall be measured for safe operation.

12.1.8 DRAWINGS

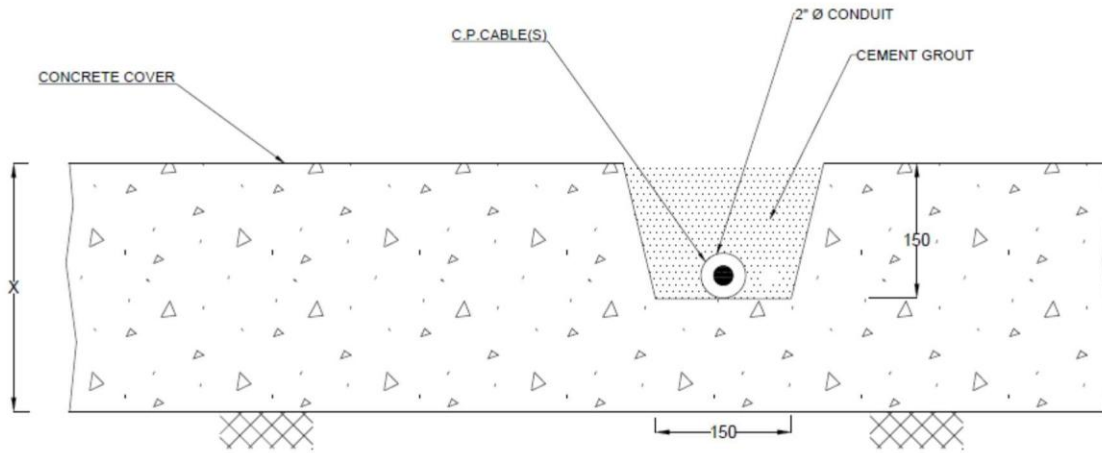
| Drg. No. | Description |
|----------|---|
| a) | REFERENCE DRAWING FOR CABLE LAYING |
| b) | REFERENCE DRAWING FOR PIN BRAZING |
| c) | REFERENCE DRAWING FOR SPARK GAP ARRESTER |
| d) | REFERENCE DRAWING FOR POLARIZATION/CORROSION COUPON |
| e) | REFERENCE DRAWING FOR TEST STATION CONNECTION SCHEME |
| f) | REFERENCE DRAWING FOR TEST STATION FABRICATION AND INSTALLATION |



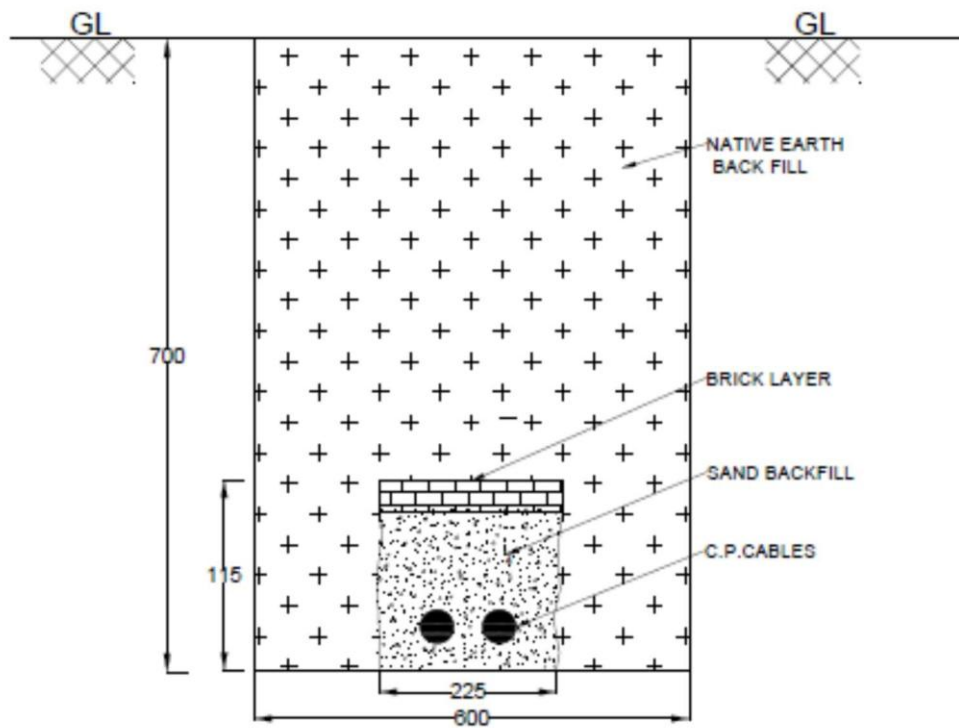
E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF ICCP SYSTEM



| | |
|----|--|
| g) | REFERENCE DRAWING FOR ZINC GROUNDING CELL |
| h) | REFERENCE DRAWING FOR FABRICATION AND INSTALLATION OF ANODE JUNCTION BOX |
| i) | REFERENCE DRAWING FOR FABRICATION AND INSTALLATION OF CATHODE JUNCTION BOX |
| j) | REFERENCE DRAWING FOR PERMANENT REFERENCE CELL |
| k) | REFERENCE DRAWING FOR DEEP ANODE BED |
| m) | REFERENCE DRAWING FOR CHAINLINK FENCING |

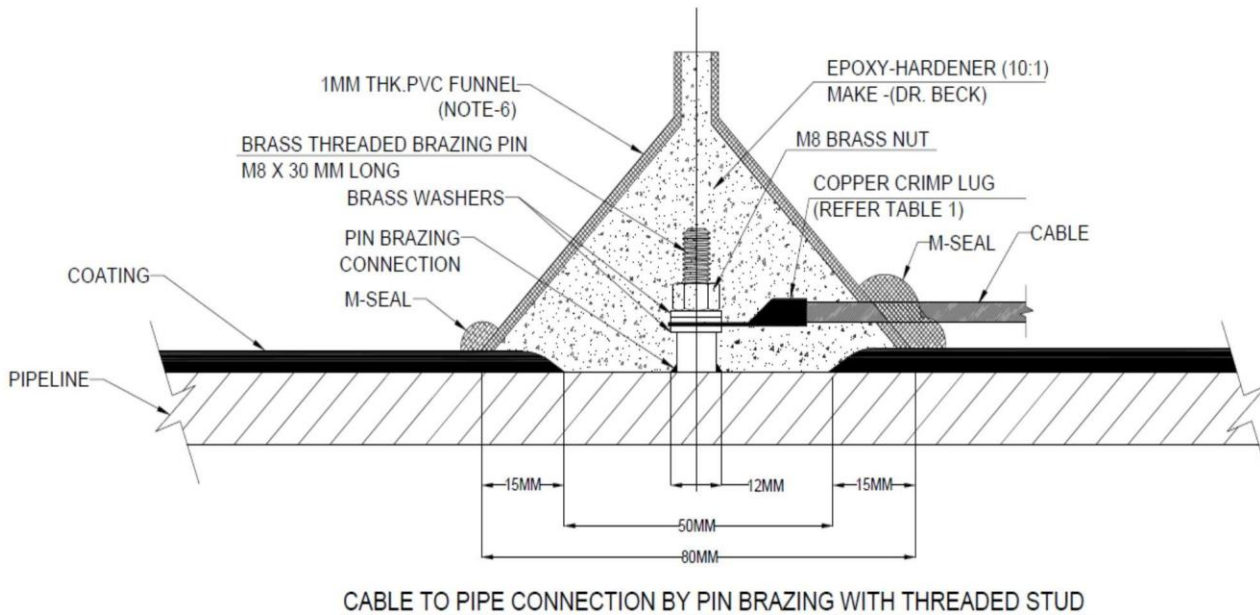
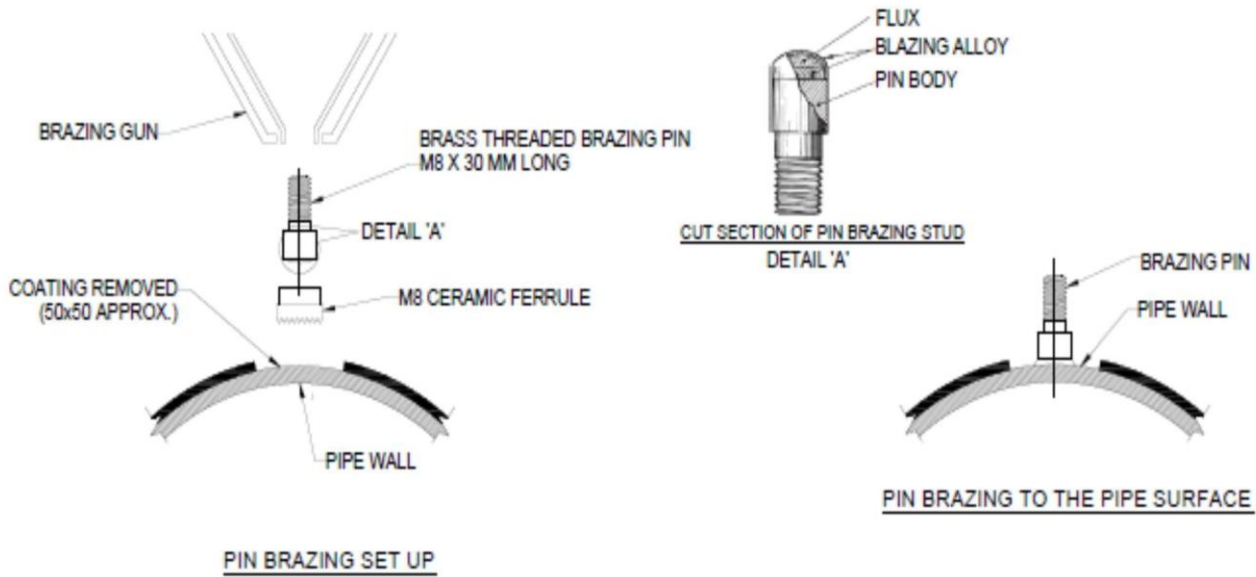


CABLE INSTALLATION IN CONCRETE

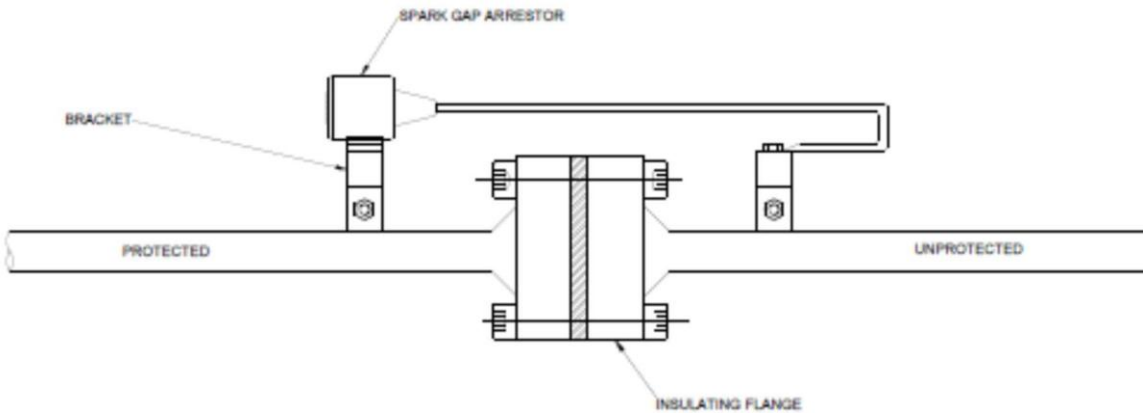
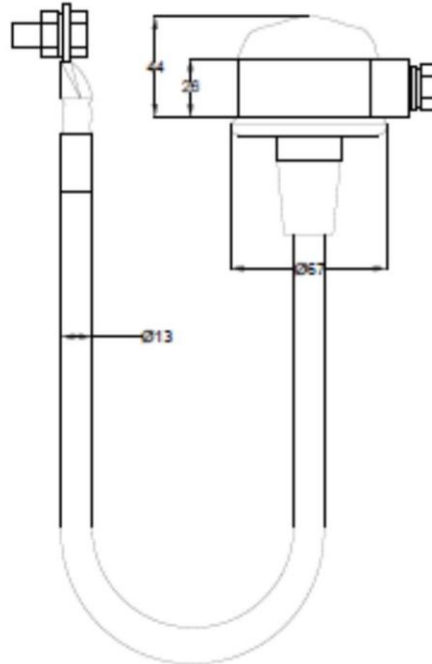


CABLE INSTALLATION IN SOIL

Drawing a: REFERENCE DRAWING FOR CABLE LAYING

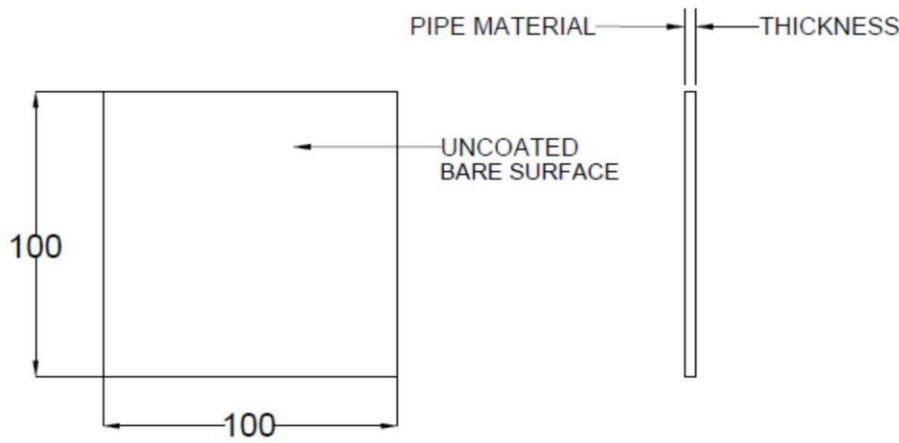


Drawing b: REFERENCE DRAWING FOR PIN BRAZING



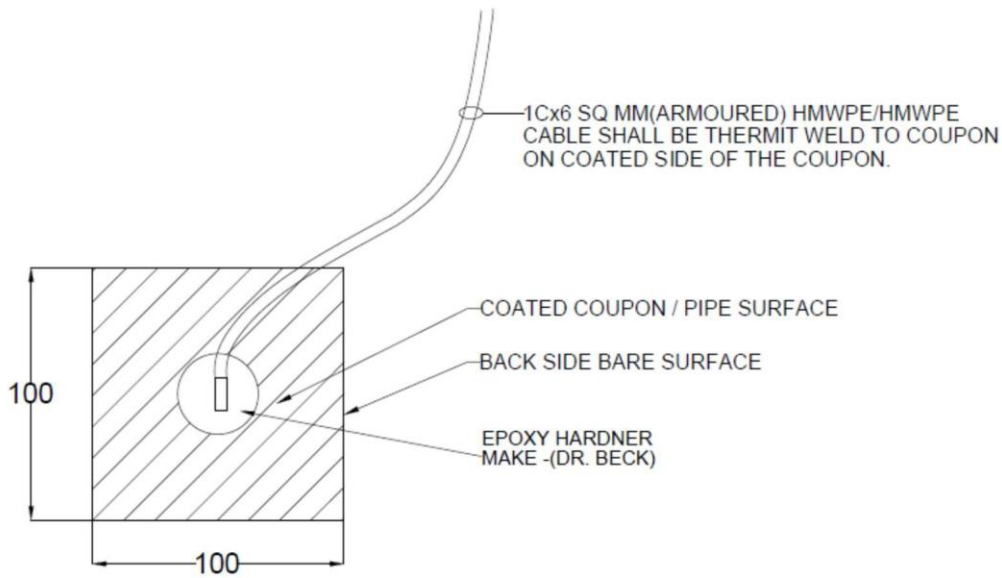
TYPICAL MITIGATION PLAN AT INSULATING FLANGE

Drawing c: REFERENCE DRAWING FOR SPARK GAP ARRESTER



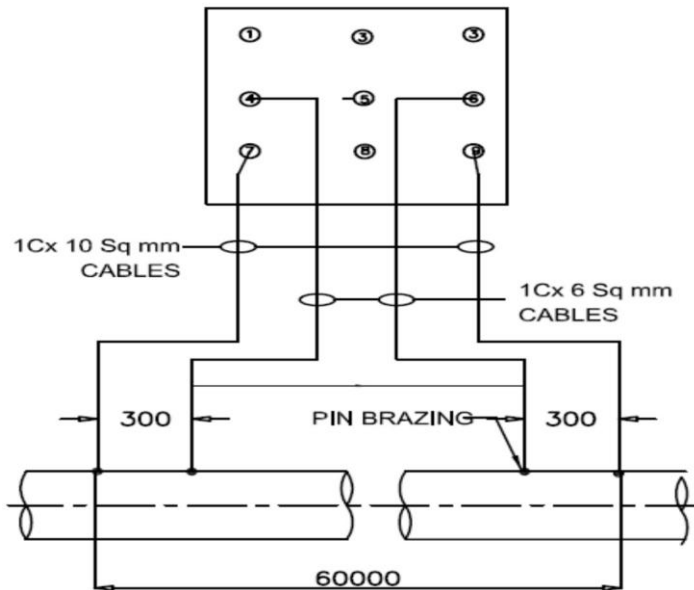
COUPON

Drawing d: REFERENCE DRAWING FOR POLARIZATION/CORROSION COUPON

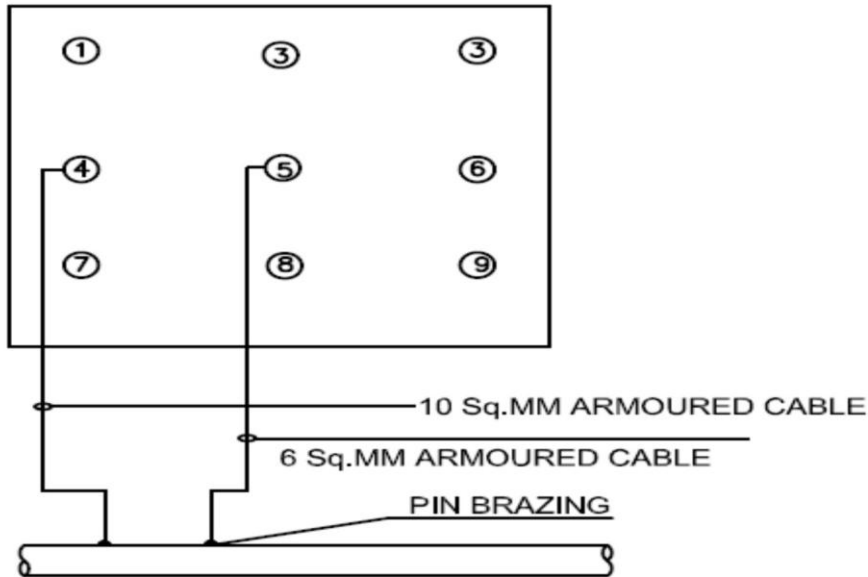


CONNECTION DETAIL POLARIZATION COUPON

Drawing e: REFERENCE DRAWING FOR TEST STATION CONNECTION SCHEME

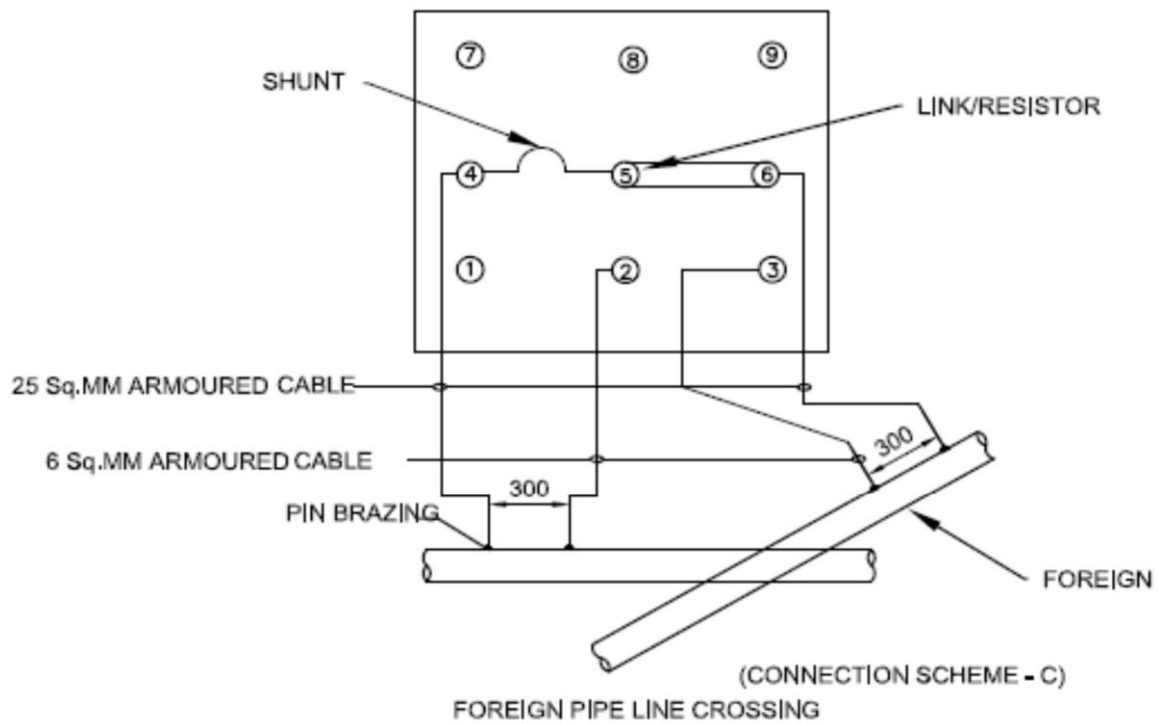
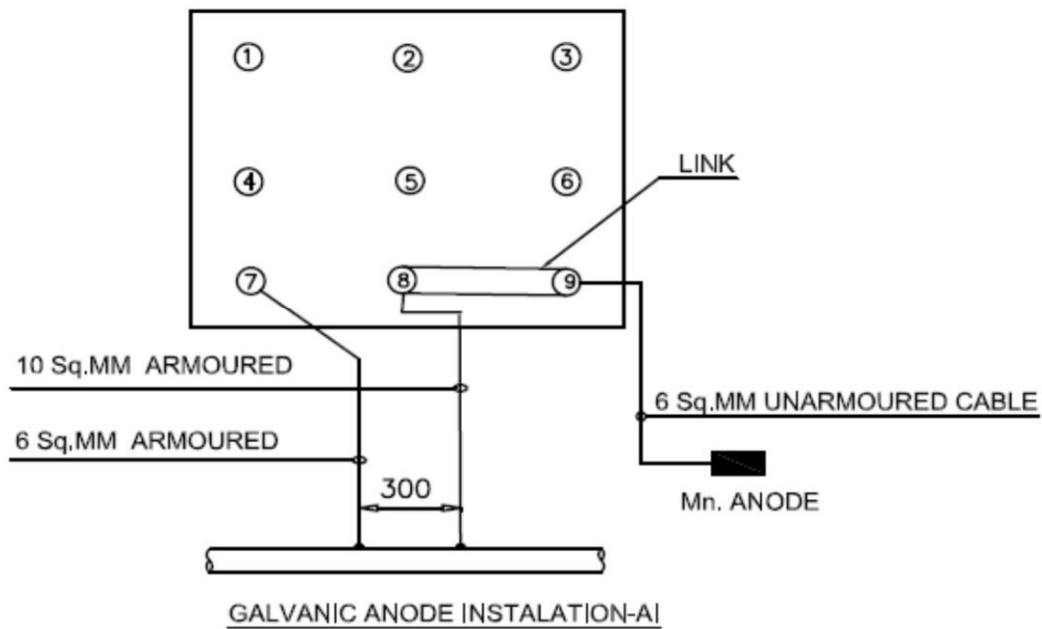


**CURRENT MEASUREMENT
 (CONNECTION SCHEME-B)**

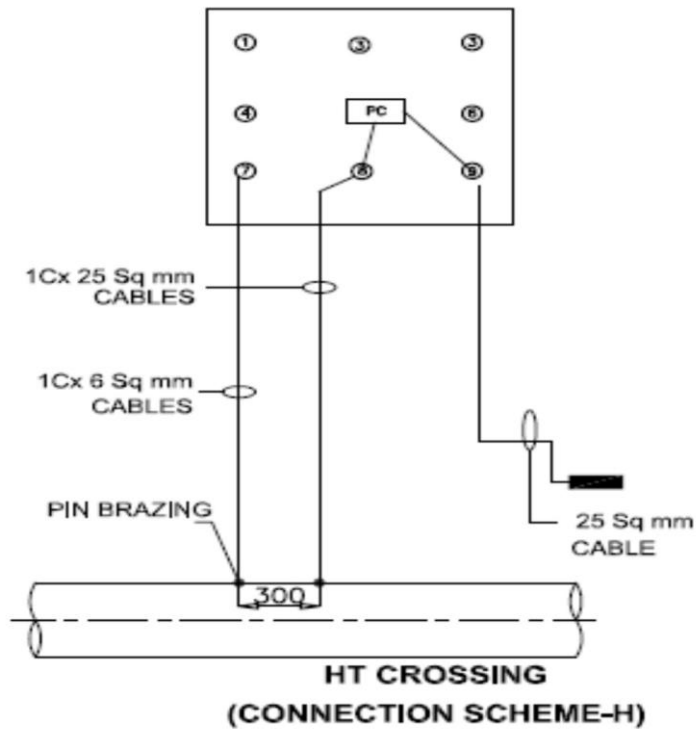
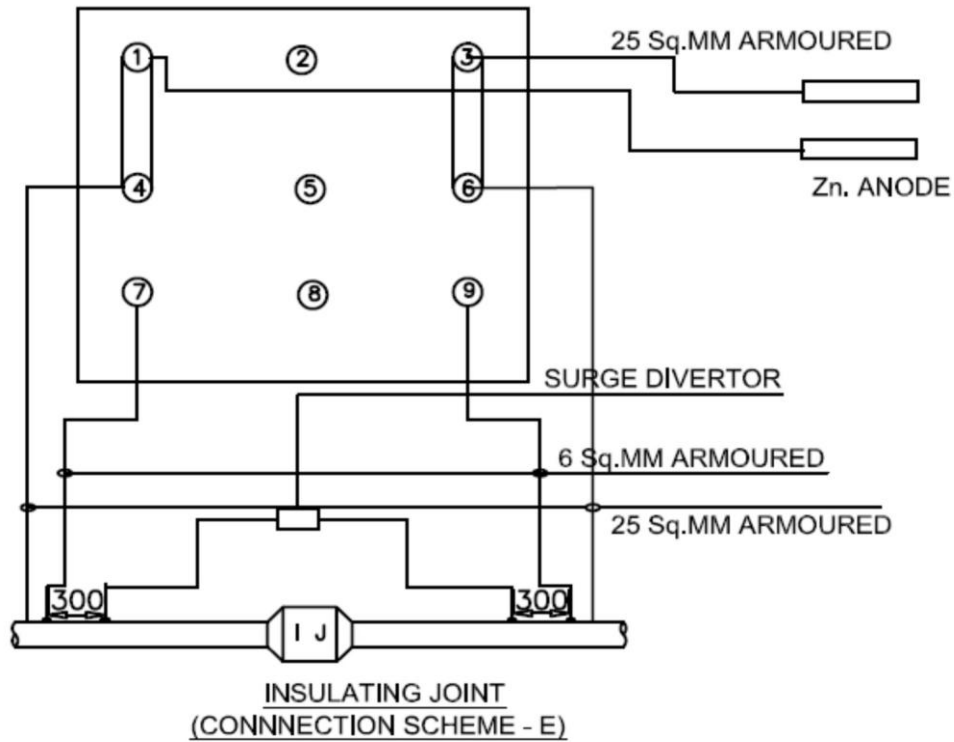


**POTENTIAL MEASUREMENT
 (CONNECTION SCHEME - A)**

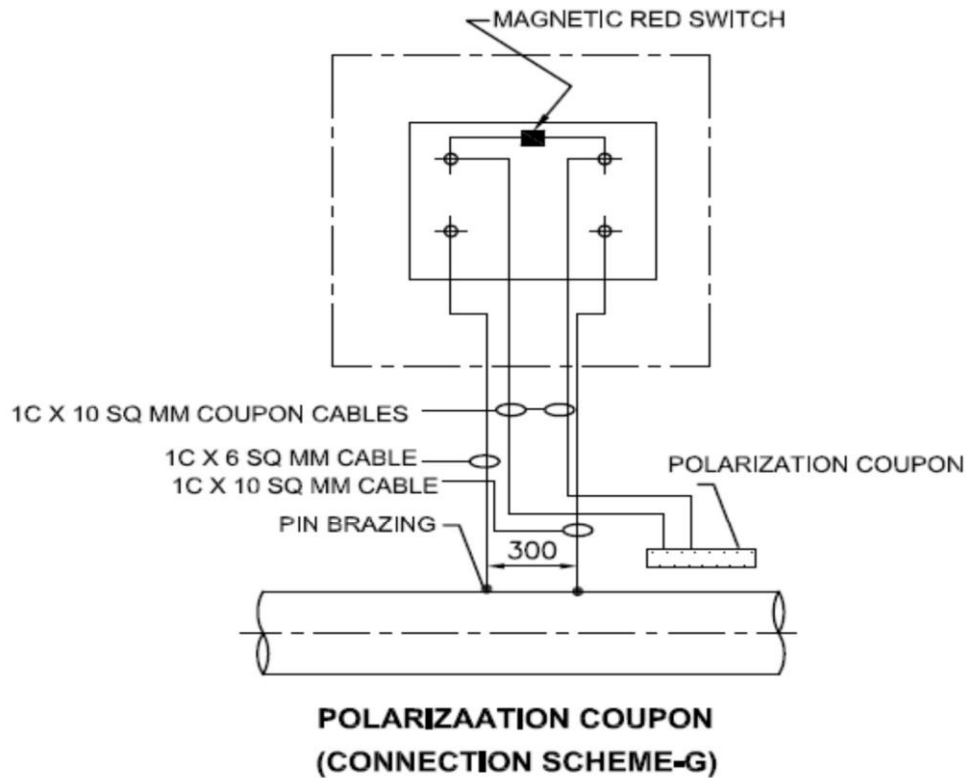
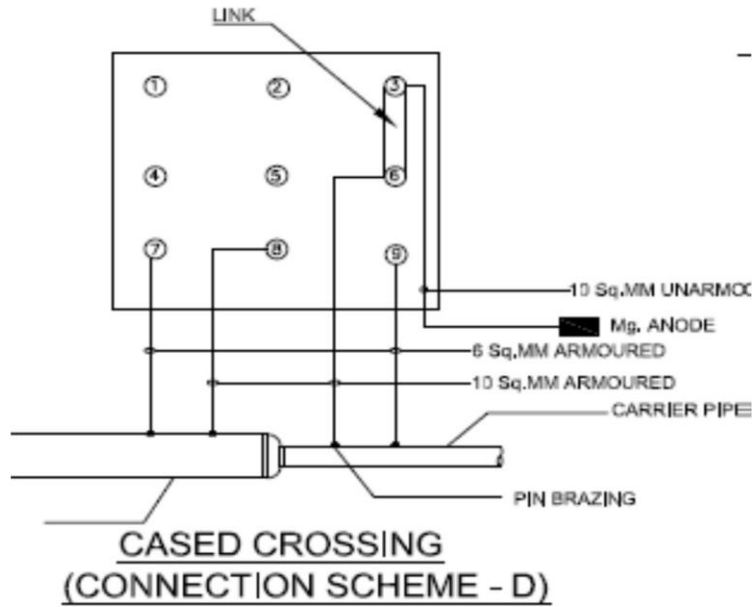
1Drawing e: REFERENCE DRAWING FOR TEST STATION CONNECTION SCHEME



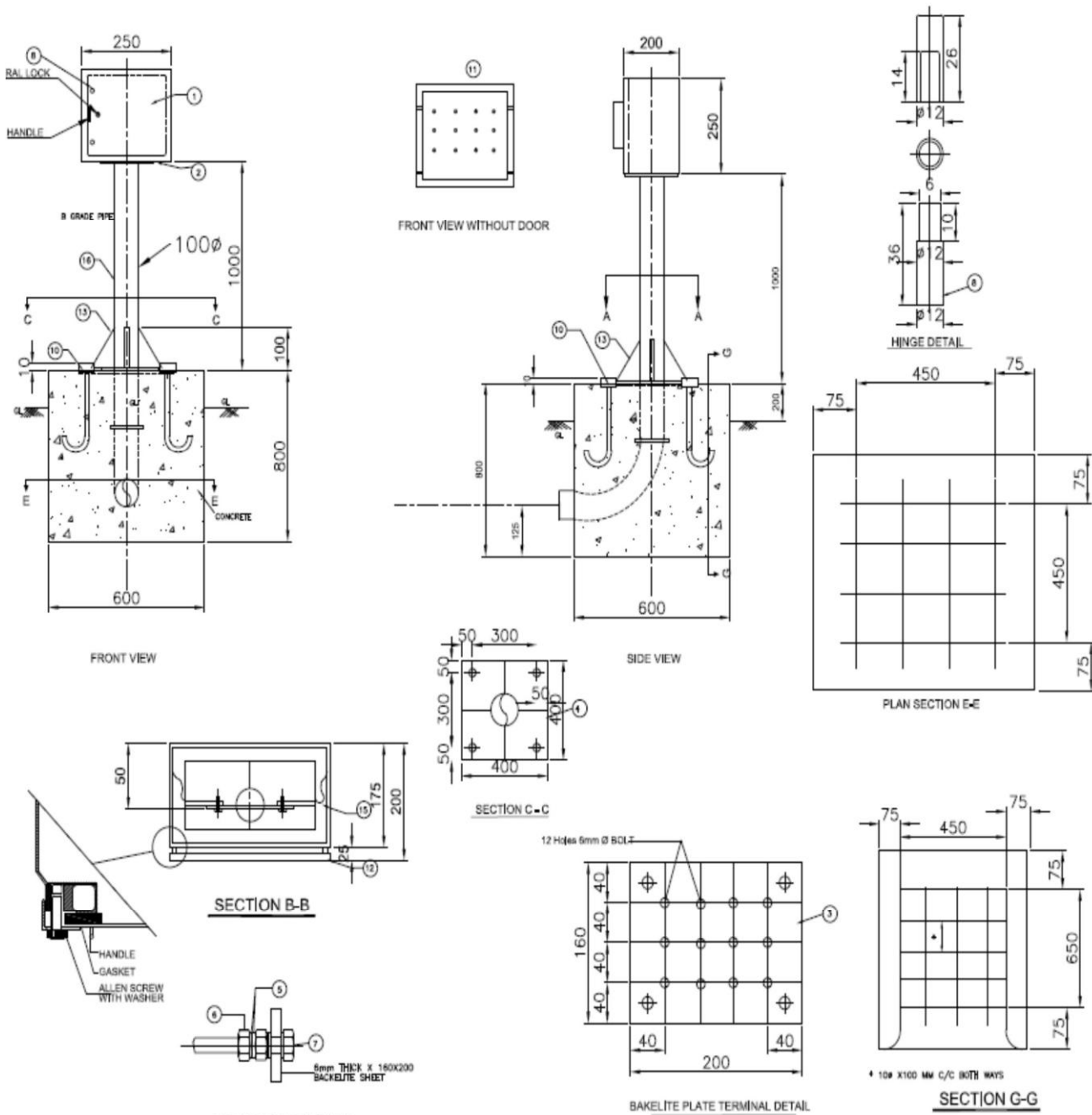
2Drawing e: REFERENCE DRAWING FOR TEST STATION CONNECTION SCHEME



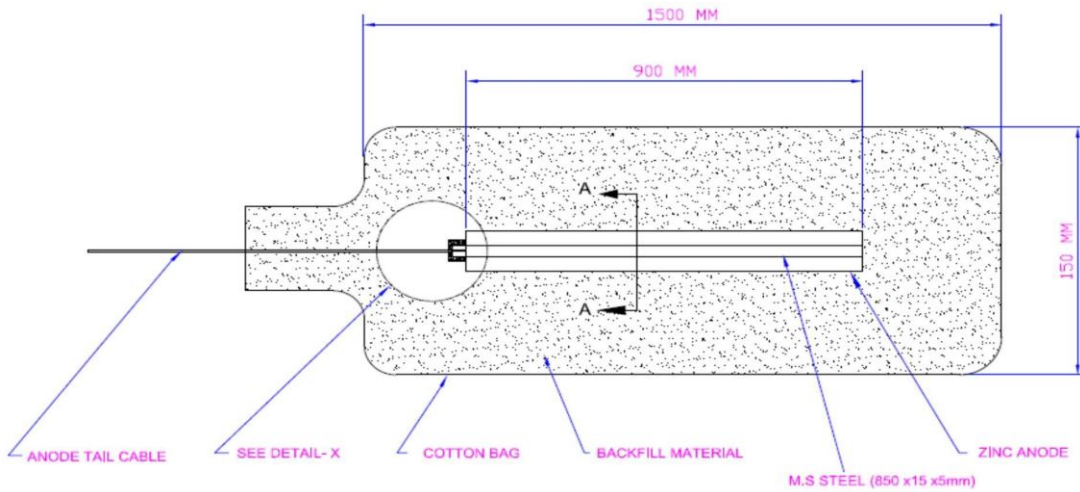
3Drawing e: REFERENCE DRAWING FOR TEST STATION CONNECTION SCHEME



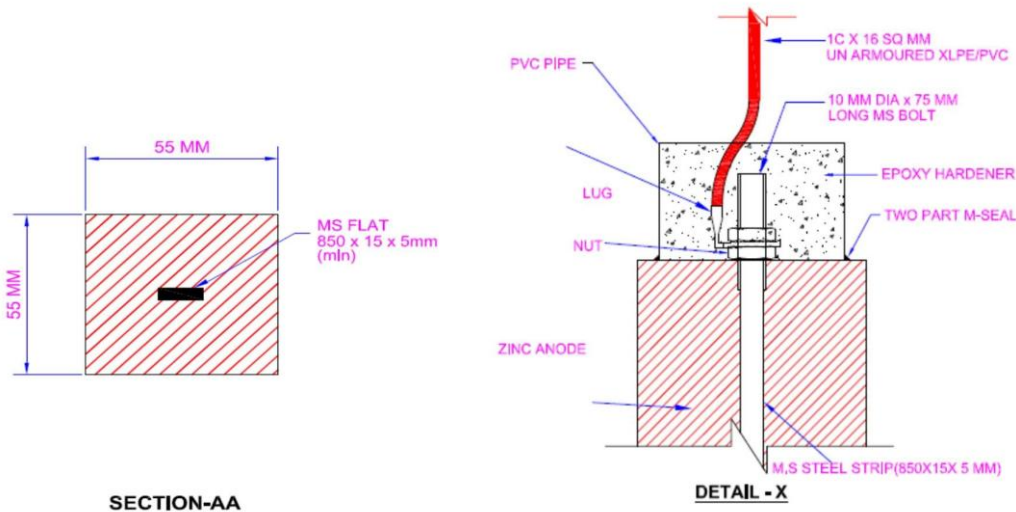
4Drawing e: REFERENCE DRAWING FOR TEST STATION CONNECTION SCHEME



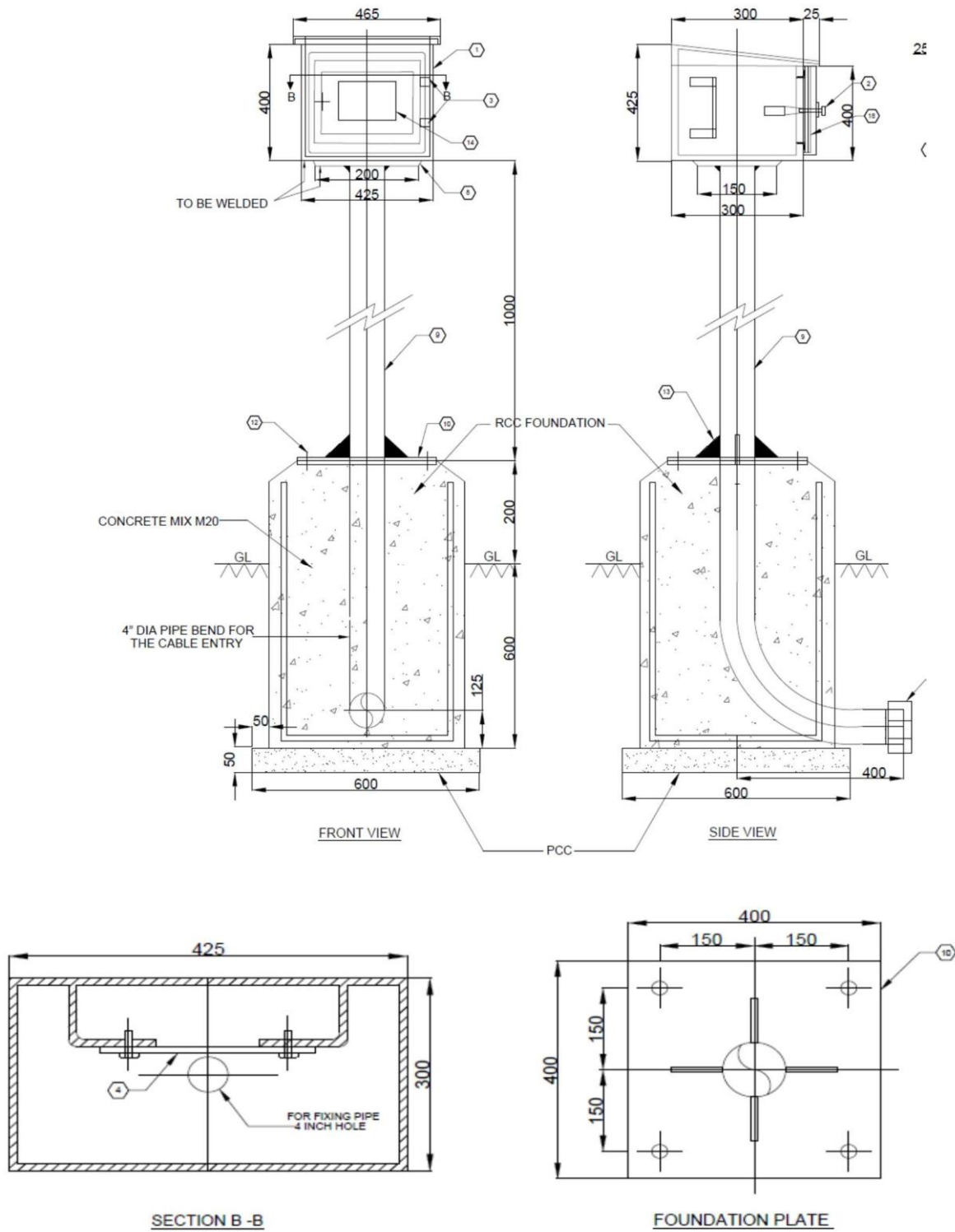
Drawing f: REFERENCE DRAWING FOR TEST STATION FABRICATION AND INSTALLATION



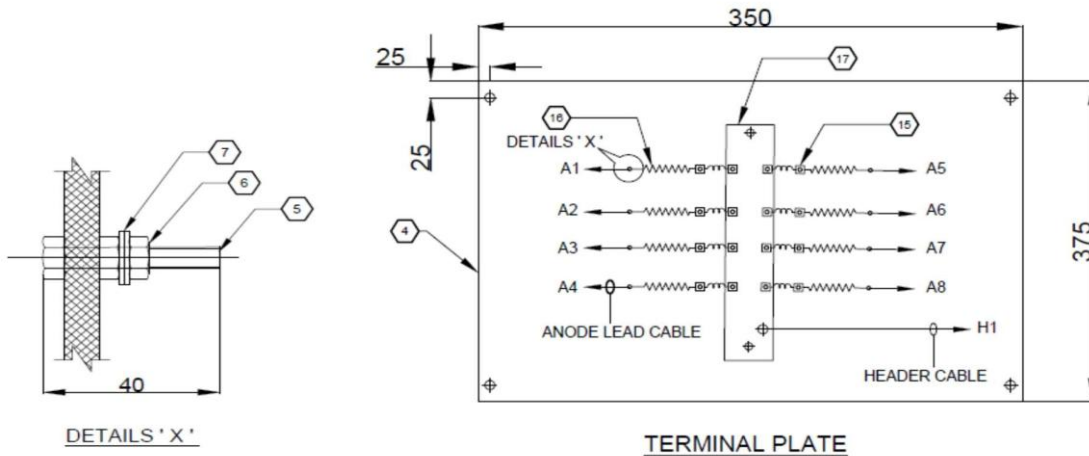
DIMENSIONS FOR 20.0 Kg. BARE ZINC ANODE
 900mm x 55 mm X 55 mm Dia (Cross section : Rectangular)



Drawing g: REFERENCE DRAWING FOR ZINC GROUNDING CELL

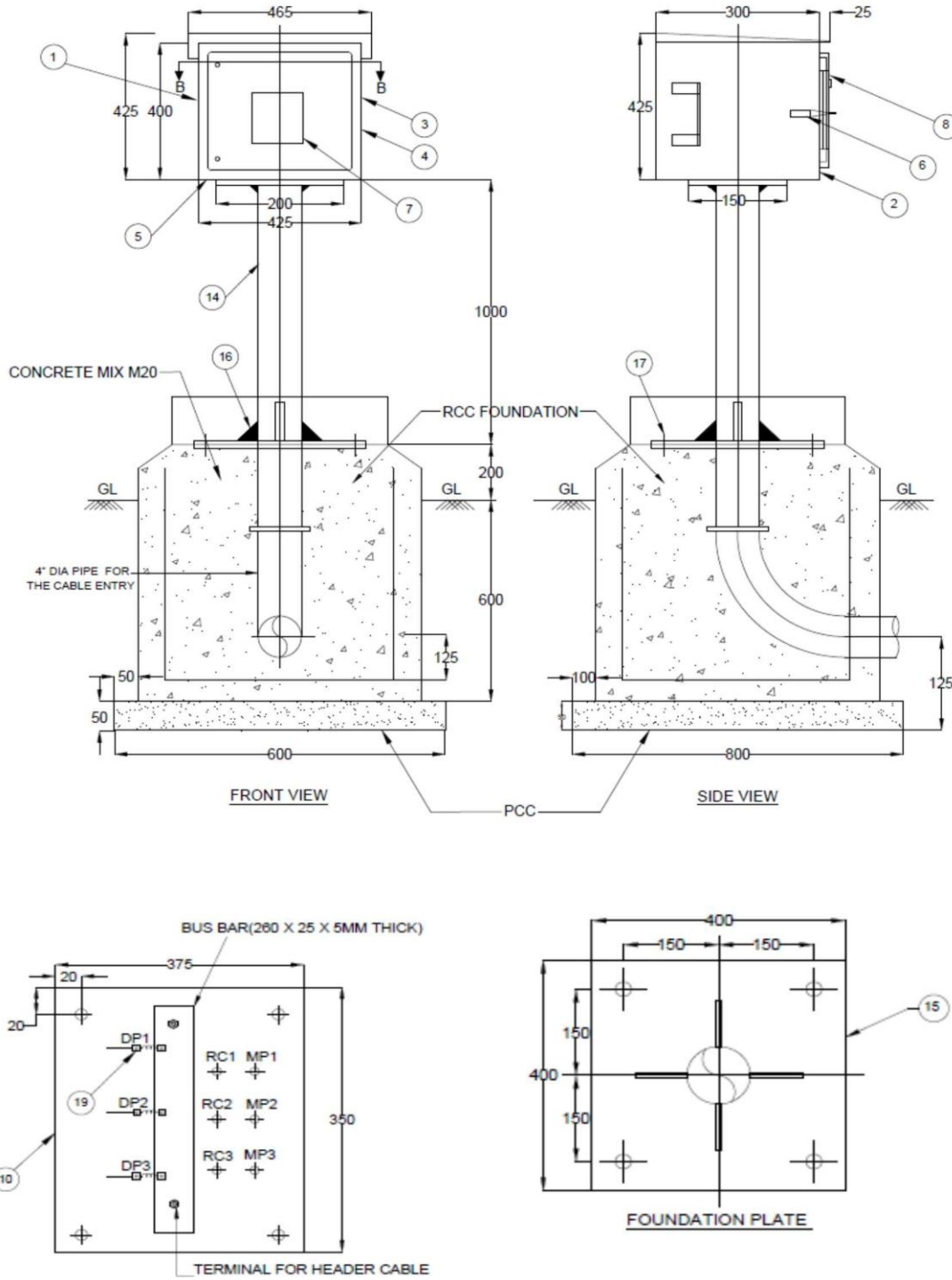


Drawing h: REFERENCE DRAWING FOR FABRICATION AND INSTALLATION OF ANODE JUNCTION BOX

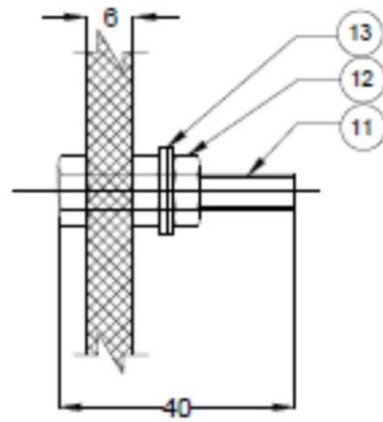


| BILL OF MATERIAL | | |
|------------------|---|-------------|
| SL. NO. | DESCRIPTION | QTY. |
| 1 | BOX SIZE (425 X 400 X 300 X 3mm thick) | 1 NO. |
| 2 | CASTLE LOCK WITH MASTER KEY (1 NOS. KEY) | 1 NO. |
| 3 | HINGE FOR SHUTTER | 2 NOS. |
| 4 | TERMINAL PLATE(350 X 375 X 6mm thick) | 1 NO. |
| 5 | BOLT ($\frac{1}{2}$ " DIA X $\frac{1}{2}$ " LENGTH FOR ONE TERMINAL) | AS REQUIRED |
| 6 | BRASS NUT ($\frac{1}{2}$ " DIA) | AS REQUIRED |
| 7 | BRASS WASHER ($\frac{1}{2}$ " X 16 SWG) | AS REQUIRED |
| 8 | MS BASE PLATE (200 X 150 X 5mm thick MS PLATE) | 1 NO. |
| 9 | MS PIPE, 4 INCH X 3 TK X 1000 MM | 1 NO. |
| 10 | FOUNDATION PLATE(400 X 400 X 5 mm thick) | 1 NO. |
| 11 | RUBBER BUSH | 1 NO. |
| 12 | FOUNDATION BOLT M14 X 50 LG WITH SPRING WASHER AND NUT | 4 NOS. |
| 13 | STIFFENER PLATE 6TK X 100 X 100 | 2 NOS. |
| 14 | NAME PLATE ANODIZED AL 150 X 150 X 1 MM THICK | 1 NO. |
| 15 | SHUNT (5A-50mV) | 08 NOS. |
| 16 | RESISTOR (0 TO 4 OHM) 25 WATT | 08 NOS. |
| 17 | BUSBAR (300 X 25 X 5mm THICK) | 1 NO. |
| 18 | HANDLE 100MM LONGX20 MM DEPTX 20 MM WIDTHX 5MM THICK | 1 NO. |

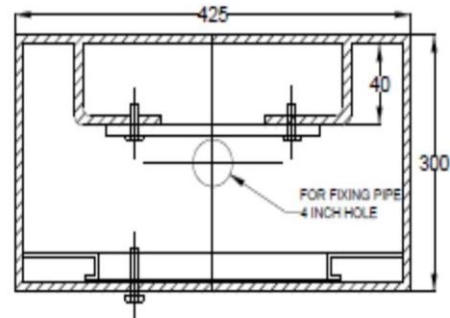
5Drawing h: REFERENCE DRAWING FOR FABRICATION AND INSTALLATION OF ANODE JUNCTION BOX



Drawing i: REFERENCE DRAWING FOR FABRICATION AND INSTALLATION OF CATHODE JUNCTION BOX



DETAILS OF TERMINALS

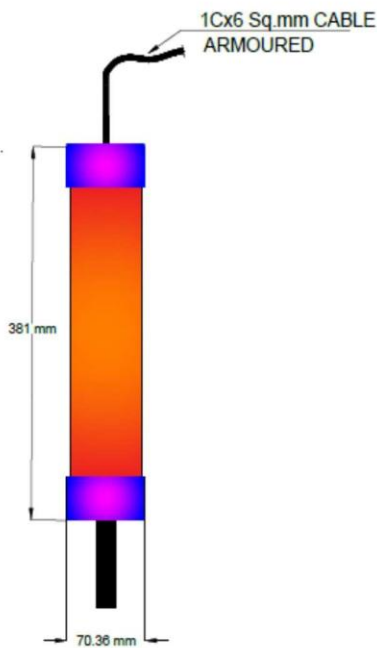


SECTION B-B

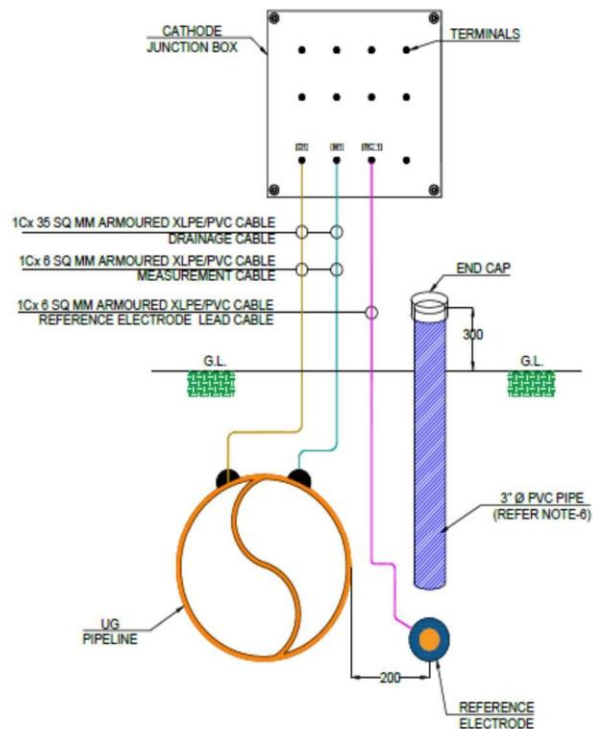
| BILL OF MATERIAL | | |
|------------------|---|-------------|
| SL. NO. | DESCRIPTION | QTY. |
| 1 | BOX SIZE (425 X 400 X 300 X 3 MM THICK MS) | 1 NO. |
| 2 | SIDE PLATE (425 X 300 X 3 MM THICK MS) | 1 NO. |
| 3 | REAR PLATE (425 X 400 X 3 MM THICK MS) | 1 NO. |
| 4 | FRONT SHUTTER 3 MM THICK MS | 1 NO. |
| 5 | BOTTOM PLATE (425 X 300 X 3 MM THICK MS) | 1 NO. |
| 6 | CASTLE LOCK WITH MASTER KEY (1 NOS. KEY) | 1 NO. |
| 7 | ANODIZED ALUMINIUM NAME PLATE (150X150 X 1MM THICK) | 1 NO. |
| 8 | HANDLE 100MM LONGX20 MM DEPTX 20 MM WIDTHX 5MM THICK | 1 NO. |
| 9 | HINGE FOR SHUTTER | 2 NOS. |
| 10 | BACKLITE TERMINAL PLATE (375 X 350 X 6 MM THICK) | 1 NO. |
| 11 | BOLT($\frac{1}{2}$ " DIA X $1\frac{1}{2}$ " LONG FOR ONE TERMINAL) | AS REQUIRED |
| 12 | BRASS NUT ($\frac{1}{2}$ " DIA FOR ONE TERMINAL) | AS REQUIRED |
| 13 | BRASS WASHER($\frac{1}{2}$ " X 16 SWG THICK) | AS REQUIRED |
| 14 | MS PIPE, 4 INCH X 3 TK X 1000 MM | 1 NO. |
| 15 | M.S FOUNDATION PLATE (400 X 400 X 6 MM THICK) | 1 NO. |
| 16 | M.S STIFFENER PLATE (100 X 100 X 6 MM THICK) | 2 NOS. |
| 17 | FOUNDATION BOLT M14 X 50 LG WITH SPRING WASHER AND NUT | 4 NOS. |
| 18 | NEOPRENE RUBBER GASKET FOR SHUTTER 5 MM THICK | 1 SET |
| 19 | SHUNT (25 AMPS/50 MV) | 3 NOS. |

6Drawing i: REFERENCE DRAWING FOR FABRICATION AND INSTALLATION OF CATHODE JUNCTION BOX

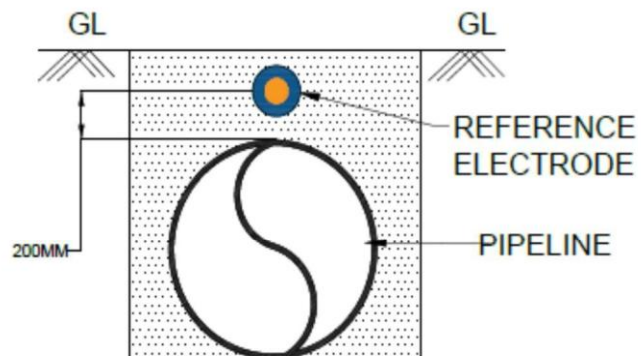
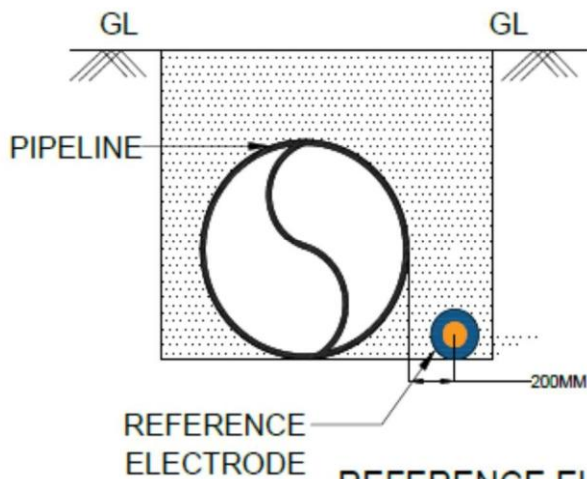
Drawing j: REFERENCE DRAWING FOR PERMANENT REFERENCE CELL



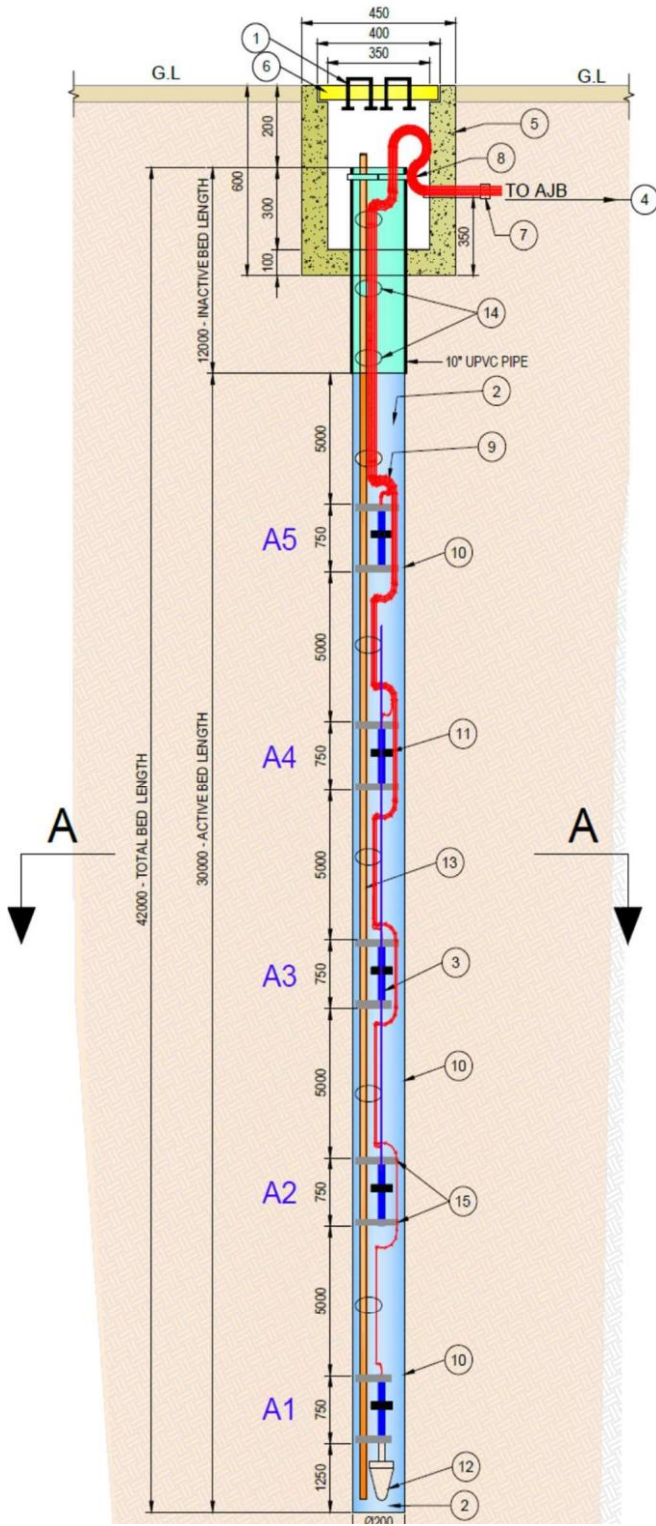
REFERENCE ELECTRODE GA
 (Cu-CuSO₄)



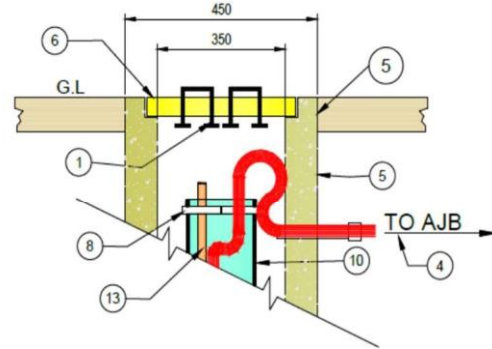
REFERENCE ELECTRODE INSTALLATION LAYOUT



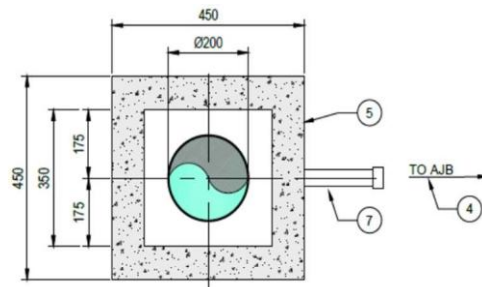
REFERENCE ELECTRODE INSTALLATION



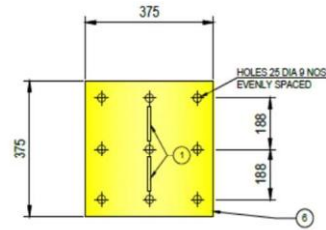
Drawing k: REFERENCE DRAWING FOR DEEP ANODE BED



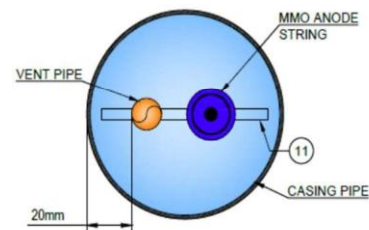
CONDUIT PIPE ARRANGEMENT FOR CABLE OUTLET IN PAVED AREA



PLAN OF PIT

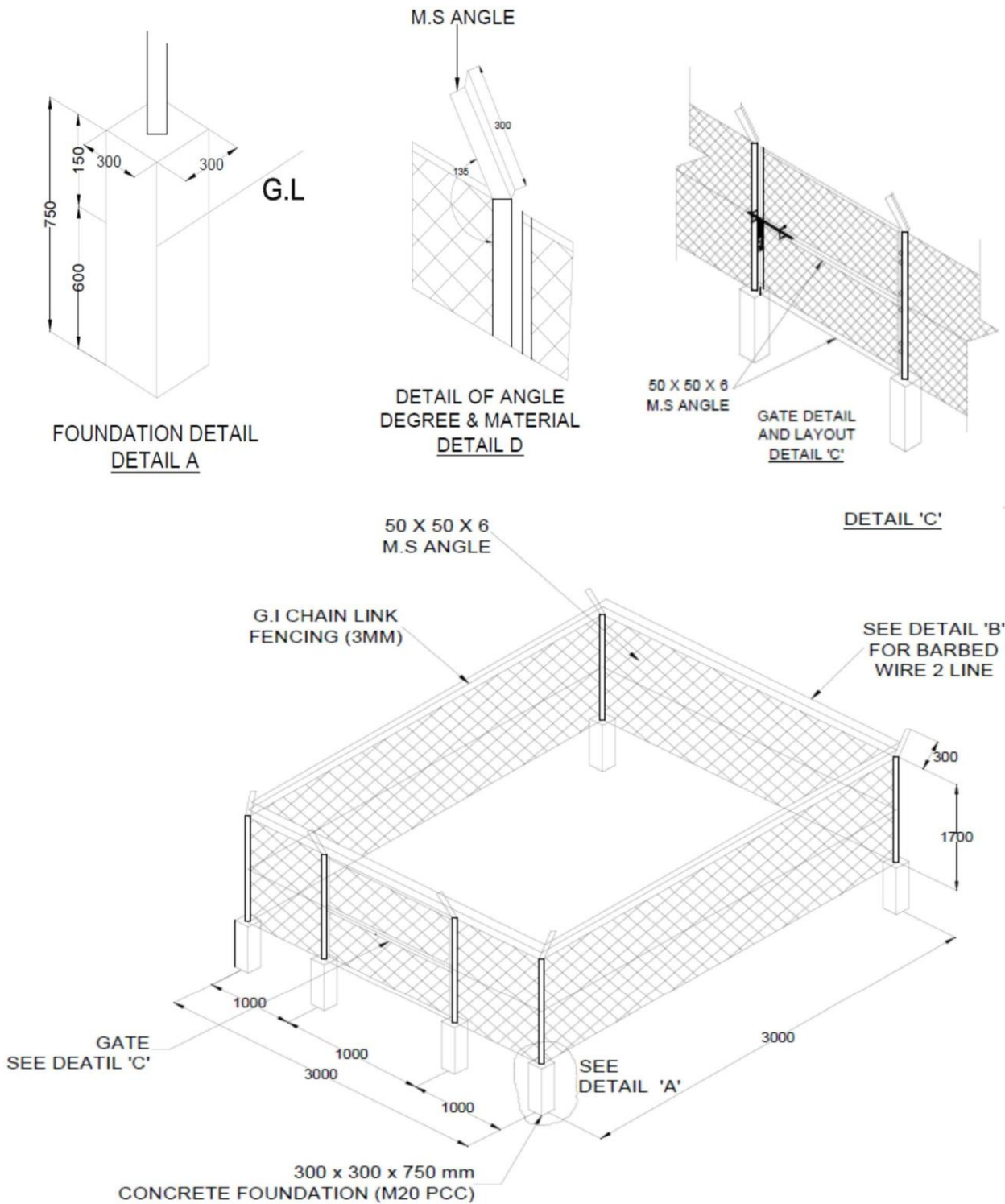


PLAN OF PIT COVER



SECTION 'A-A'

| BILL OF MATERIAL | |
|------------------|--|
| ITEM NO. | DESCRIPTION |
| 1 | FLUSH TYPE 100 MM LONG HANDLE OF RCC PIT COVER USING 10 MM DIA . MS ROD |
| 2 | TOTAL WEIGHT OF COKE BREEZE REQUIRED (KG.) |
| 3 | MMO TUBULAR ANODE(750 x 25 MM) STRING |
| 4 | ANODE JUNCTION BOX |
| 5 | RCC PIT (M-4GRADE FOR ANODE BED HAVING 100 C/C REINFORCEMENT WITH 10 MM DIA. STEEL BAR |
| 6 | MS PIT COVER OF SIZE 375 x 375 x 2.5 MM WITH 25 MM DIA. VENT HOLES |
| 7 | 2" Ø CONDUIT PIPE & FITTING FOR ANODE CABLE |
| 8 | MS CLAMP FOR CLAMPING ANODE CABLE WITH MS CASING PIPE |
| 9 | ANODE TAIL CABLES (1C x 10 SQ MM ,UNARMoured CABLE) |
| 10 | Ø200 MS CASING PIPE |
| 11 | NON METAL SPACER BETWEEN VENT PIPE & ANODE |
| 12 | END WEIGHT FOR TENSIONING OF CABLE STRING |
| 13 | 1" DIA PVC SLOTTED VENT PIPE |
| 14 | CABLE TYE FOR BINDING CABLE & VENT PIPE |
| 15 | NON METAL CENTALIZER |



Drawing I: REFERENCE DRAWING FOR CHAINLINK FENCING

12.2 ANNEXURE-2 -DETAILS OF MANPOWER REQUIREMENT

DETAILS OF MANPOWER REQUIREMENT

| Category | Qualification | Experience | Knowledge, Skills |
|---|--|--|--|
| CP engineer | Engineer / Diploma + NACE CP Certified | For Graduate engineer –2 years Work experience in Design, installation, commissioning & Maintenance of ICCP system. For Diploma engineer – 5 years work experience in Design, installation, commissioning & Maintenance of ICCP system. | <ol style="list-style-type: none"> Understanding of overall knowledge of CP system like basic of CP system, equipment & Instruments required for monitoring the performance of CP system, various surveys, data analysis and corrective actions requirements and implementations. Skills – Resource management, Analytical & Communication |
| Supervisor | Engineer / Diploma / ITI / Graduate | Minimum 5 years work experience in installation, commissioning & Maintenance of ICCP system. | <ol style="list-style-type: none"> Basic of CP system & procedures of Monitoring & Maintenance |
| Field Technician | Engineer / Diploma / ITI / Graduate | 2 years of work experience in installation, commissioning & maintenance of ICCP system. | <ol style="list-style-type: none"> Understanding of Quality &HSE Requirements in job / activity including use of any Personal Protective Equipment & relevant Work Procedure / Work Permit System. Knowledge of Half-cell, TR Units, various TLP's, Instrument like Multimeter, ammeter, Min. Criteria of CP readings, Surge Diverters etc. Various surveys like CIPL, DCVG, ON-Off & CAT and calibration of all kinds of meters |
| <p>Note: NACE CP certified Engineer for following jobs but not limited to:</p> <ul style="list-style-type: none"> Design, installation and commissioning of ICCP system. Review and certification of monitoring report. Review of ICCP system for adequacy against the commissioned network. CP survey Data analysis, recommendation along with mitigation action to provide adequate protection of pipeline through CP system. | | | |

Bidder shall nominate a dedicated person for co-ordination with the EIC/AGL Representative who is as qualified as the CP Engineer.

12.3 ANNEXURE-3 -LIST OF MEASURING INSTRUMENTS, TOOLS & TACKLES

LIST OF MEASURING INSTRUMENTS, TOOLS & TACKLES

| Sr. No. | Name of Equipment's |
|---------|--|
| 1. | Pipeline Current Mapper |
| 2. | Pipe and Cable Locator |
| 3. | Soil Resistivity Meters (Wenner's 4-Pin rugged null band indicator type and Direct Reading digital type) |
| 4. | Fully Automatic, Programmable Current Interrupters |
| 5. | Holiday Detector |
| 6. | Micro Ohm Meter |
| 7. | Multi-combination Meters / Multimeter/Analog meter (Imported and Indigenous make, portable type \pm For C.P. applications) |
| 8. | Meggers (Imported and Indigenous makes, 500 V and 1000 V \pm For measurement of insulation resistance.) |
| 9. | Portable Cu/CuSO ₄ Reference Electrode |
| 10. | DC Clamp on Ammeter |
| 11. | Coating Thickness Gauge Meter |
| 12. | GPS Navigator |
| 13. | Data Logger |
| 14. | Pin Brazing Instruments |
| 15. | Insulator tester model number CE-IT, RF-IT- 1 No. |
| 16. | LC-4 Corrosion Voltmeter for PSP measurement-2 Nos. |
| 17. | Clamp meter of various diameter size for pipe current measurement - 1 no. |
| 18. | Crimping Device |

NOTE: Vendor shall provide the duly calibrated equipment, instruments, and tools/tackles at the start of project and calibration shall be carried out as per approved frequency. Contractor shall provide calibration certificate on demand by AGL.

12.4 ANNEXURE 4 – APPROVED VENDOR LIST-CP SYSTEM

| APPROVED VENDOR LIST - CP SYSTEM | | |
|----------------------------------|--|--|
| Sr. No. | Item | Name of the Vendor |
| 1 | AC OPERATED AUTOMATIC TR UNIT WITH RMU | Kristron Systems |
| 2 | | AC Techno, Thane |
| 3 | | Pipeline Maintenance Ltd. UK |
| 4 | | Hockway, UK |
| 5 | | Raychem RPG Pvt.Ltd |
| 6 | | CIMCON Software Inc. |
| 7 | GPS BASED CURRENT INTERRUPTER TIMER | Kristron Systems Mumbai |
| 8 | | Raychem RPG Pvt. Ltd |
| 9 | MIXED METAL OXIDE (MMO) COATED TITANIUM ANODE STRING FOR DEEP ANODE GROUND BED | De Nora India ltd. |
| 10 | | Eltech Paneelbouw |
| 11 | | Oronzio De Nora International B.V. |
| 12 | | Corrpro Asia Pte Ltd |
| 13 | | Loresco Inc. |
| 14 | CALCINED PETROLEUM COKE BREEZE | Goa Carbon Ltd. |
| 15 | | Loresco Inc. |
| 16 | | Graphite Minerals |
| 17 | | Petro Carbon & Chemicals Pvt. Ltd, Kolkata |
| 18 | ANODE JUNCTION BOX/ CATHODE JUNCTION BOX/ TEST STATIONS (Non-Flame proof) | Advance Electronic Systems |
| 19 | | Kriston systems, Mumbai, |
| 20 | | Shakti Enterprises Ahmedabad |
| 21 | | Corrpro Asia PVt Ltd |

| | | |
|----|--|--|
| 22 | | Raychem RPG Pvt.Ltd |
| 23 | | Corrosion Control Services Mumbai |
| 24 | | Control Plus Oil & Gas solutions Pvt. Ltd. |
| 25 | | Approved vendor for ICCP system |
| 26 | TEST STATIONS (Flame proof) | Flameproof Equipments Private Limited |
| 27 | | FCG Flameproof Control Gears Pvt. Ltd. |
| 28 | | Baliga Lighting Equipments Private Limited |
| 29 | CABLES | Netco Cable Industries Private Limited |
| 30 | | Ravin Cable |
| 31 | | KEI, Silvassa |
| 32 | | Gloster Cables Limited |
| 33 | | Suyog |
| 34 | | Cables Corporation of India Ltd. |
| 35 | REFERENCE ELECTRODE – Cu/CuSO4 | M.C. Miller Co., Inc., USA |
| 36 | | Electrochemical Device Inc. USA |
| 37 | | Harco, USA |
| 38 | | BORIN Manufacturing, USA |
| 39 | SURGE DIVERTER | DEHN GmbH + Co. KG |
| 40 | | Dairy land Electrical Industries |
| 41 | | M.C. Miller Co., Inc. |
| 42 | | International Corrosion Control Co. |
| 43 | SOLID STATE DC DECOUPLER/POLARIZATION CELL | Dairy land Electrical Industries |
| 44 | | Kirk Engineering Co |
| 45 | | Caltech engineering |
| 46 | | Kriston System Mumbai |
| 47 | | International Corrosion Control Co. |
| 48 | | ELK Engineering Associates Inc |
| 49 | ZINC GROUNDING CELL/ MAGNESIUM ANODE/ZINC ANODE | Electro Protection Service India Private Limited |
| 50 | | Metal founders,Mumbai, |

| | | |
|----|---|--|
| 51 | | Shakti Enterprises Ahmedabad |
| 52 | | Protech Anodes & Alloy Engineers |
| 53 | | Scientific Metal Engineers (P)Ltd. |
| 54 | | Control Plus Oil & Gas solutions Pvt. Ltd. |
| 55 | PIN BRAZING | Safe Track |
| 56 | | Back Seal |
| 57 | Computerized Test Station / Data Logger | Kriston systems, Mumbai, |
| 58 | | iTech Innovations, Ahmedabad |
| 59 | ANODE BACKFILL MATERIALS | Loresco,USA, |
| 60 | | Goa Carbon,GOA, |
| 61 | | Indian carbon,Calcutta, |
| 62 | | Petrochemical & chemical company, Haldia |

Note: In addition to above approved vendor list, if material is to be procured from some other party, then approval is to be taken from EIC on submission of requisite documents such as, previous track record of supply of subject material to reputed Hydrocarbon company (GAIL/HPCL/BPCL/IOCL/PSU-JV/CGD etc)

SECTION IV

PAYMENT TERMS & OTHER CONDITIONS

PAYMENT TERMS:

- 1) SOR Item No. 10 : For Design, Engineering, Attenuation calculation, Soil Resistivity Survey Preparation of Bill of materials, drawings & data sheets:
 - 90% against Approval of design documents by Aavantika Gas Ltd. (AGL)
 - 10% on completion of work in all respect.
- 2) SOR Item No. 20, 30, 40, 50, 60, 70, 80, 90, 100 & 110 : For Installation, Testing and Commissioning:
 - 90% against Material receipt at site, MRR (Material Receipt & Inspection Report) to be submitted along with the Invoice, Installation & Commissioning
 - 10% on completion of work in all respect.
- 3) SOR Item No. 120 : For Post Commissioning surveys as per PTS Permanent Cathodic protection system & Scope of work:
 - 100% of post commissioning surveys against completion of entire job successfully.
- 4) Payment shall be released with 15 days after submission of certified invoice and after deduction of PRS.

No Idle charges will be paid to contractor in any case

MODE OF PAYMENT

- Payment will be made by way of normal banking channels.
- Deduction at source

Purchaser will release the payment after off-setting all dues to the Purchaser payable by the seller under the contract. Deduction will be affected at source as per the law in force.

PAYING AUTHORITY:

DGM - F & A Aavantika Gas Limited

202 – B, 2nd Floor, NRK Business Park, Vijay Nagar Square, A.B. Road, Indore (M.P), Pin – 452010

SECTION V

GENERAL CONDITIONS OF CONTRACT (GCC)

| Article | INDEX Title |
|---------|---|
| 1. | Definitions |
| 2. | Seller To Inform |
| 3. | Application |
| 4. | Country of Origin |
| 5. | Scope of Contract |
| 6. | Standards |
| 7. | Instructions, Direction & Correspondence |
| 8. | Contract Obligations |
| 9. | Modification In Contract |
| 10. | Use of Contract Documents & Information |
| 11. | Patent Rights, Liability & Compliance of Regulations |
| 12. | Performance Guarantee |
| 13. | Inspection, Testing & Expediting |
| 14. | Time Schedule & Progress Reporting |
| 15. | Delivery & Documents |
| 16. | Transit Risk Insurance |
| 17. | Transportation |
| 18. | Incidental Services |
| 19. | Spare Parts, Maintenance Tools, Lubricants |
| 20. | Guarantee |
| 21. | Terms of Payment |
| 22. | Prices |
| 23. | Subletting & Assignment |
| 24. | Time As Essence of Contract |
| 25. | Delays in The Seller's Performance |
| 26. | Price Reduction Schedule For Delayed Delivery |
| 27. | Rejections, Removal of Rejected Equipment & Replacement |
| 28. | Termination of Contract |
| 29. | Force Majeure |
| 30. | Resolution of Disputes / Arbitration |
| 31. | Governing Language |
| 32. | Notices |
| 33. | Taxes & Duties |
| 34. | Books & Records |
| 35. | Permits & Certificates |
| 36. | General |
| 37. | Import License |
| 38. | Fall Clause |
| 39. | Publicity & Advertising |
| 40. | Repeat Order |
| 41. | Limitation of Liability |

1.0 Definitions

In this document, General Conditions of Contract (GCC-Goods), the following terms shall have the following respective meanings:

- 1.0 BIDDER: Designates the individual or legal entity, which has made a proposal, a tender, or a bid with the aim of concluding a Contract with the PURCHASER.
- 1.1 CONTRACT shall mean Purchase Order/Contract and all attached exhibits and documents referred to therein and all terms and conditions there of together with any subsequent modifications there to.
- 1.2 CONTRACT PRICE shall mean the price payable to the Seller under the Contract for the full and proper performance of his contractual obligations.
- 1.3 COMPLETION DATE shall mean the date on which the goods are successfully commissioned by the Seller and handed over to the PURCHASER.
- 1.4 COMMERCIAL OPERATION shall mean the condition of the operation in which the complete equipment covered under the Contract is officially declared by the PURCHASER to be available for continuous operation at different loads upto and including rated capacity.
- 1.5 DELIVERY terms shall be interpreted as per INCO TERMS 2000 in case of Contract with a foreign Bidder and as the date of LR/GR in the case of a contract with an Indian Bidder.
- 1.6 DRAWINGS shall mean and include Engineering drawings, sketches showing plans, sections and elevations in relation to the Contract together with modifications and/or revisions there to.
- 1.7 ENGINEER or Engineer-in-Charge of the Project SITE shall mean the person designated from time to time by PURCHASER at SITE and shall include those who are expressly authorized by him to act for and on his behalf for operation of this CONTRACT.
- 1.8 FINAL ACCEPTANCE shall mean the PURCHASER's written acceptance of the Works performed under the Contract after successful completion of performance and guarantee test.
- 1.9 GOODS shall mean articles, materials, equipment, design and drawings, data and other property to be supplied by Seller to complete the contract.
- 1.10 INSPECTOR shall mean any person or outside Agency nominated by PURCHASER to inspect equipment, stage-wise as well as final, before dispatch, at Seller's works and on receipt at SITE as per terms of the CONTRACT.

- 1.11 INITIAL OPERATION shall mean the first integral operation of the complete equipment covered under the Contract with subsystems and supporting equipment in service or available for service.
- 1.12 PURCHASER / OWNER shall mean AAVANTIKA GAS LIMITED (AGL) having its registered office at NRK Business Park, 2nd Floor, 202-B, Vijay Nagar Square, A.B. Road, Indore (M.P), Pin – 452010. The term PURCHASER includes successors, assigns of AGL.
- 1.13 PERFORMANCE AND GUARANTEE TESTS shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency and operating characteristics as specified in the Contract documents.

PROJECT designates the aggregate of the Goods and/or Services to be provided by one or more Contractors.
Quantities – Bills of quantities Bills of quantities

Designate the quantity calculations to be taken into account when these calculations are made from detailed or construction drawings, or from work actually performed, and presented according to a jointly agreed breakdown of the Goods and/or Services.

- 1.14 SELLER shall mean the person, firm or company with whom PURCHASE ORDER/CONTRACT is placed/entered into by PURCHASER for supply of equipment, materials and services. The term Seller includes its successors and assigns.
- 1.15 SERVICE shall mean erection, installation, and testing, commissioning, provision of technical assistance, training and other such obligations of the Seller covered under the Contract.
- 1.16 SITE designates the land and/or any other premises on, under, in or across which the Goods and/or Services have to be supplied, erected, assembled, adjusted, arranged and/or commissioned.
- 1.17 SPECIFICATIONS shall mean and include schedules, details, description, statement of technical data, performance characteristics, standards (Indian as well as International) as applicable and specified in the Contract.
- 1.18 SUB-CONTRACT shall mean order placed by the Seller, for any portion of the contracted work, after necessary consent and approval of PURCHASER.
- 1.19 SUB-CONTRACTOR shall mean the person named in the CONTRACT for any part of the work or any person to whom any

part of the CONTRACT has been sub-let by the SELLER with the consent in writing of the PURCHASER and will include the legal representatives, successors, and permitted assigns of such person.

1.20 START-UP shall mean the time period required to bring the equipment's covered under the Contract from an inactive condition, when construction is essentially complete to the state of readiness for trial operation. The start-up period shall include preliminary inspection and check out of equipment and supporting subsystems, initial operation of the complete equipments covered under the Contract to obtain necessary pre-trial operation data, perform flow calibration and corrective shutdown inspection and adjustment prior to the trial operation period.

1.21 TESTS shall mean such process or processes to be carried out by the Seller as are prescribed in the Contract or considered necessary by PURCHASER or his representative in order to ascertain quality, workmanship, performance and efficiency of equipment or part thereof.

1.22 TESTS ON COMPLETION shall mean such tests as prescribed in the Contract to be performed by the Seller before the Works are taken over by the PURCHASER.

2.0 Seller To Inform 2.1 The Seller shall be deemed to have carefully examined all Contract documents to his entire satisfaction. Any lack of information shall not in any way relieve the Seller of his responsibility to fulfill his obligation under the Contract.

3.0 Application 3.1 These General Conditions of Contract (GCC-Goods) shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

4.0 Country of Origin 4.1 For purposes of this Clause "origin" means the place where the Goods were mined, grown or produced, or from which the services are supplied.

Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

5.0 Scope of Contract 5.1 Scope of the CONTRACT shall be as defined in the PURCHASE ORDER/CONTRACT specifications, drawings and Annexure there to.

5.2 Completeness of the EQUIPMENT shall be the responsibility of the SELLER. Any equipment, fittings and accessories which may not be specifically mentioned in the specifications or drawings, but which are usual or necessary for the satisfactory functioning of the equipment (successful operation and functioning of the EQUIPMENT being Seller's responsibility) shall be provided by SELLER without any extra cost.

- 5.3 The SELLER shall follow the best modern practices in the manufacture of high grade EQUIPMENT notwithstanding any omission in the specifications. The true intent and meaning of these documents is that SELLER shall in all respects, design, engineer, manufacture and supply the equipment in a thorough workman like manner and supply the same in prescribed time to the entire satisfaction of PURCHASER.
- 5.4 The SELLER shall furnish twelve (12) copies in English language of Technical documents, final drawings, preservation instructions, operation and maintenance manuals, test certificates, spare parts catalogues for all equipments to the PURCHASER.
- 5.5 The documents once submitted by the SELLER shall be firm and final and not subject to subsequent changes. The SELLER shall be responsible for any loss to the PURCHASER consequent to furnishing of incorrect data/drawings.
- 5.6 All dimensions and weight should be in metric system .
- 5.7 All equipment to be supplied and work to be carried out under the CONTRACT shall conform to and comply with the provisions of relevant regulations/Acts (State Government or Central Government) as may be applicable to the type of equipment/work carried out and necessary certificates shall be furnished.
- 5.8 The Seller shall provide cross sectional drawings, wherever applicable, to identify the spare part numbers and their location. The size of bearings, their make and number shall be furnished.
- 5.9 Specifications, design and drawings issued to the SELLER along with RFQ and CONTRACT are not sold or given but loaned. These remain property of PURCHASER or its assigns and are subject to recall by PURCHASER. The SELLER and his employees shall not make use of the drawings, specifications and technical information for any purpose at any time except for manufacture against the CONTRACT and shall not disclose the same to any person, firm or corporate body, without written permission of PURCHASER. All such details shall be kept confidential.
- 5.10 SELLER shall pack, protect, mark and arrange for dispatch of EQUIPMENT as per instructions given in the CONTRACT .

6.0 Standards

- 6.1 The GOODS supplied under the CONTRACT shall conform to the standards mentioned in the Technical Specifications, or such other standards which ensure equal or higher quality, and when no applicable standard is mentioned, to the authoritative



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standard appropriate to the GOODS' country of origin and such standards shall be the latest issued by the concerned institution.

7.0 Instructions, Direction & Correspondence

- 7.1 The materials described in the CONTRACT are to be supplied according to the standards, data sheets, tables, specifications And drawings attached there to and / or enclosed with the CONTRACT, itself and according to all conditions, both general and specific enclosed with the contract, unless any or all of them have been modified or cancelled in writing as a whole or in part.
- a. All instructions and orders to SELLER shall, excepting what is here in provided, be given by PURCHASER.
 - b. All the work shall be carried out under the direction of and to the satisfaction of PURCHASER.
 - c. All communications including technical/commercial clarifications and/or comments shall be addressed to the PURCHASER on the address mentioned in ITB.
 - d. Invoices for payment against CONTRACT shall be addressed to PURCHASER.
 - e. The CONTRACT number shall be shown on all invoices, communications, packing lists, containers and bills of lading, etc.

8.0 Contract Obligations

- 8.1 If after award of the contract, the Seller does not acknowledge the receipt of award or fails to furnish the performance guarantee Within the prescribed time limit, the PURCHASER reserves the right to cancel the contract and apply all remedies available to him under the terms and conditions of this contract.
- 8.2 Once a contract is confirmed and signed, the terms and conditions contained there in shall take precedence over the Seller's bid and all previous correspondence.

9.0 Modification In Contract

- 9.1 All modifications leading to changes in the CONTRACT with respect to technical and/or commercial aspects including terms of delivery shall be considered valid only when accepted in writing by PURCHASER by issuing amendment to the CONTRACT. Issuance of acceptance or otherwise in such cases shall not be any ground for extension of agreed delivery date and also shall not affect the performance of contract in any manner except to the extent mutually agreed through a modification of contract.
- 9.2 PURCHASER shall not be bound by any printed conditions or provisions in the Seller's Bid Forms or acknowledgment of CONTRACT, invoices, packing list and other documents which purport to impose any conditions at variance with or supplemental to CONTRACT.

10.0 Use of Contract Documents &

- 10.1 The Seller shall not, without the PURCHASER's prior written consent, disclose the CONTRACT or any provision thereof, or

Information

any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the PURCHASER in connection therewith, to any person other than a person employed by the SELLER in the performance of the CONTRACT. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purpose of such performance.

10.2 The SELLER shall not, without the PURCHASER's prior written consent, make use of any document or information enumerated in Article 10.1. Except for purpose of performing the CONTRACT.

11.0 Patent Rights, Liability & Compliance of Regulations

11.1 SELLER hereby warrants that the use or sale of the materials delivered hereunder will not infringe claims of any patent covering such material and SELLER agrees to be responsible for and to defend at his sole expense all suits and proceedings against PURCHASER based on any such alleged patent infringement and to pay all costs, expenses and damages which PURCHASER may have to pay or incur by reason of any such suit or proceedings.

11.2 The SELLER shall indemnify the PURCHASER against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the GOODS or any part thereof in the PURCHASER's country.

11.3 SELLER shall also protect and fully indemnify the PURCHASER from any claims from SELLER'S workmen/employees or their heirs, dependants, representatives, etc. or from any other person/persons or bodies/companies etc. for any acts of commissions or omission while executing the CONTRACT.

11.4 SELLER shall be responsible for compliance with all requirements under the laws and shall protect and indemnify completely the PURCHASER from any claims/penalties arising out of any infringements.

12.0 Performance Guarantee

12.1 Within 15 days from of award of the Purchase Order, the SELLER shall furnish Performance Guarantee in the form of Bank Guarantee of Credit to the PURCHASER, in the form provided in the Bidding Documents, for an amount equivalent to 10% of the Order value (Excluding taxes & duties).

12.2 The proceeds of Performance Guarantee shall be appropriated by the PURCHASER as compensation for any loss resulting from the Seller's failure to complete his obligations under the CONTRACT without prejudice to any of the rights or remedies the PURCHASER may be entitled to as per terms and conditions of CONTRACT. The proceeds of this Performance Guarantee shall also govern the successful performance of Goods and Services during the entire period of Contractual Warrantee/Guarantee.

12.3 The performance guarantee shall be denominated in the currency of the CONTRACT.

**13 Inspection,
Testing & Expediting**

- 12.4 The Performance Guarantee shall be valid for the duration of 90 days beyond the expiry of warrantee/Guarantee PURCHASER will discharge the Bank Guarantee not later than 6 months from the date of expiration of the Seller's entire obligations, including any warrantee obligations, under the CONTRACT.
- 13.1 The PURCHASER or its representative shall have the right to inspect and/or to test the GOODS to confirm their conformity to the CONTRACT specifications. The special conditions of CONTRACT and/or the Technical Specifications shall specify what inspections and tests the PURCHASER requires and where they are to be conducted. The PURCHASER shall notify the SELLER in writing the identity of any representative(s) retained for these purposes.
- 13.2 The inspections and tests may be conducted on the premises of the SELLER or his sub-contractor(s), at point of DELIVERY and/or at the GOODS' final destination, When conducted on the premises of the SELLER or his sub-contractor (s), all reasonable facilities and assistance including access to the drawings and production data shall be furnished to the inspectors at no charge to the PURCHASER.
- 13.3 Should any inspected or tested GOODS fail to conform to the specifications, the PURCHASER may reject them and the SELLER shall either replace the rejected GOODS or make all alterations necessary to meet Specifications' requirements, free of cost to the PURCHASER.
- 13.4 The PURCHASER's right to inspect, test and where necessary reject the GOODS after the GOODS' arrival in the PURCHASER's country shall in no way be limited or waived by reason of the GOODS having previously been inspected, tested and passed by the PURCHASER, or their representative prior to the GOODS shipment from the country of origin.
- 13.5 The INSPECTOR shall follow the progress of the manufacture of the GOODS under the CONTRACT to ensure that the requirements outlined in the CONTRACT are not being deviated with respect to schedule and quality.
- 13.6 SELLER shall allow the INSPECTOR to visit, during working hours, the workshops relevant for execution of the CONTRACT during the entire period of CONTRACT validity.
- 13.7 In order to enable PURCHASER's representatives to obtain entry visas in time, SELLER shall notify PURCHASER two months before assembly, testing and packing of main EQUIPMENT. If requested, SELLER shall assist PURCHASER's representatives in getting visas in the shortest possible time (applicable only in case of foreign order).
- 13.8 SELLER shall place at the disposal of the INSPECTOR, free of charge, all tools, instruments, and other apparatus necessary for the inspection and/or testing of the GOODS. The INSPECTOR is entitled to prohibit the use and dispatch of GOODS and/or materials, which have failed to comply with the characteristics required for the GOODS during tests and inspections.
- 13.9 SELLER shall advise in writing of any delay in the inspection program at the earliest, describing in detail the reasons for delay and the proposed corrective action.

- 13.10 ALL TESTS and trials in general, including those to be carried out for materials not manufactured by SELLER shall be witnessed by the INSPECTOR. Therefore, SELLER shall confirm to PURCHASER by fax or e-mail about the exact date of inspection with at least 30 days notice. SELLER shall specify the GOODS and quantities ready for testing and indicate whether a preliminary or final test is to be carried out.
- 13.11 If on receipt of this notice, PURCHASER should waive the right to witness the test; timely information will be given accordingly.
- 13.12 Any and all expenses incurred in connection with tests, preparation of reports and analysis made by qualified laboratories, necessary technical documents, testing documents and drawings shall be at SELLER's cost. The technical documents shall include the reference and numbers of the standards used in the construction and, wherever deemed practical by the INSPECTOR, copy of such standards.
- 13.13 Nothing in Article-13 shall in any way release the SELLER from any warrantee or other obligations under this CONTRACT.
- 13.14 Arrangements for all inspections required by Indian Statutory Authorities and as specified in technical specifications shall be made by SELLER
- 13.15 **Inspection & Rejection of Materials by consignees**
When materials are rejected by the consignee, the supplier shall be intimated with the details of such rejected materials, as well as the reasons for their rejection, also giving location where such materials are lying at the risk and cost of the contractor/supplier. The supplier will be called upon either to remove the materials or to give instructions as to their disposal within 14 days and in the case of dangerous, infected and perishable materials within 48 hours, failing which the consignee will either return the materials to the contractor freight to pay or otherwise dispose them off at the contractor's risk and cost. The PURCHASER shall also be entitled to recover handling and storage charges for the period, during which the rejected materials are not removed @ 5% of the value of materials for each month or part of a month till the rejected materials are finally disposed off.

14 Time Schedule & Progress Reporting

- 14.1 Time Schedule Network/Bar Chart
- 14.1.1 Together with the Contract confirmation, SELLER shall submit to PURCHASER, his time schedule regarding the documentation, manufacture, testing, supply, and erection and commissioning of the GOODS.
- 14.1.2 The time schedule will be in the form of a network or a bar chart clearly indicating all main or key events regarding documentation, supply of raw materials, manufacturing, testing, delivery, erection and commissioning.
- 14.1.3 The original issue and subsequent revisions of SELLER's time schedule shall be sent to PURCHASER.
- 14.1.4 The time schedule network/bar chart shall be updated at least every second month.
- 14.2 **Progress Trend Chart / Monthly Report**
- 14.2.1 SELLER shall report monthly to PURCHASER, on the progress of the execution of CONTRACT and achievement of targets set out in time bar chart.
- 14.2.2 The progress will be expressed in percentages as shown in the progress trend chart attached to the Time Schedule specification.

- 14.2.3 The first issue of the Progress Trend Chart will be forwarded together with the time bar chart along with CONTRACT confirmation.
- 14.3.1 PURCHASER's representatives shall have the right to inspect SELLER's premises with a view to evaluating the actual progress of work on the basis of SELLER's time schedule documentation.
- 14.3.2 Irrespective of such inspection, SELLER shall advise PURCHASER, at the earliest possible date of any anticipated delay in the progress.
- 14.4 Notwithstanding the above, in case progress on the execution of contract at various stages is not as per phased time schedule and is not satisfactory in the opinion of the PURCHASER which shall be conclusive or SELLER shall neglect to execute the CONTRACT with due diligence and expedition or shall contravene the provisions of the CONTRACT, PURCHASER may give notice of the same in writing to the SELLER calling upon him to make good the failure, neglect or contravention complained of. Should SELLER fail to comply with such notice within the period considered reasonable by PURCHASER, the PURCHASER shall have the option and be at liberty to take the CONTRACT wholly or in part out of the SELLER's hand and make alternative arrangements to obtain the requirements and completion of CONTRACT at the SELLER's risk and cost and recover from the SELLER, all extra cost incurred by the PURCHASER on this account. In such event PURCHASER shall not be responsible for any loss that the SELLER may incur and SELLER shall not be entitled to any gain. PURCHASER shall, in addition, have the right to encase Performance Guarantee in full or part.

15 Delivery & Documents

- 15.1 The SELLER in accordance with terms specified in the contract shall make delivery of the GOODS, and the goods shall remain at the risk of the SELLER until delivery has been completed.
- 15.2 Delivery shall be deemed to have been made:
 - a) In the case of FOB, CFR & CIF Contracts, when the Goods have been put on board the ship, at the specified port of loading and a clean Bill of Lading is obtained. The date of Bill of Lading shall be considered as the delivery date.
 - b) In case of FOT dispatch point contract (For Indian bidder), on evidence that the goods have been loaded on the carrier and a negotiable copy of the GOODS receipt obtained. The date of LR/GR shall be considered as the date of delivery.
 - c) In case of FOT site (for Indian bidders) on receipt of goods by PURCHASER at the designated site(s).
- 15.3 The delivery terms are binding and essential and consequently, no delay is allowed without the written approval of PURCHASER. Any request concerning delay will be void unless accepted by PURCHASER through a modification to the CONTRACT.
- 15.4 Delivery time shall include time for submission of drawings for approval, incorporation of comments, if any, and final approval of drawings by PURCHASER.



- 15.5 In the event of delay in delivery, Price Reduction Schedule as stipulated in Article – 26 shall apply.
- 15.6 The documentation, in English Language, shall be delivered in due time, in proper form and in the required number of copies as specified in the contract.
- 15.7 The additional copies of final drawings and instructions will be included in the package of goods, properly enveloped and protected.
- 15.8 The SELLER should comply with the Packing, Marking and Shipping Documentation Specifications enclosed.

16 Transit Risk Insurance

- 16.1 All goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.
- 16.2 Where delivery is on FOB or CFR basis, marine insurance shall be the responsibility of the SELLER.

Insurance Requirements:

Indigenous Bidders: Transit risk insurance from F.O.T. dispatch point onwards shall be arranged and borne by SELLER.

Foreign Bidders: Marine insurance as well as transit insurance in PURCHASER's country shall be arranged and borne by SELLER. The SELLER shall ensure that in effecting dispatch of materials, the primary responsibility of the carriers for safe movement is always retained so that the PURCHASER's interests are fully safeguarded and are in no way jeopardized.

The Seller shall furnish the cost of materials against each equipment.

17 Transportation

- 17.1 Where the SELLER is required under the CONTRACT to deliver the GOODS FOB, transport of the GOODS until delivery, that is, up to and including the point of putting the GOODS on board the export conveyance at the specified port of loading, shall be arranged and paid for by the SELLER and the cost thereof shall be included in the Contract price.
- 17.2 Where the SELLER is required under the CONTRACT to deliver the GOODS CFR or CIF, transport of the Goods to the port of discharge or such other point in the country of destination as shall be specified in the CONTRACT shall be arranged and paid for by the SELLER and the cost thereof shall be included in the Contract price.

18 Incidental Services

- 18.1 The Seller may be required to provide any or all of the following services:
 - 18.3.1 Performance or supervision of onsite assembly and/or start-up of the supplied Goods:



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- 18.3.2 Furnishing tools required for assembly and/or maintenance of the supplied Goods:
- 18.3.3 Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the SELLER of any warrantee/guarantee obligations under the Contract.
- 18.3.4 Training of the PURCHASER's personnel at the SELLER's plant and/or at Site, in assembly, start-up operation, maintenance and/or repair of the supplied Goods at no extra cost. However, PURCHASER will bear boarding, lodging & personal expenses of Trainees.

**19 Spare Parts,
Maintenance Tools,
Lubricants**

- 18.4 Prices charged by the SELLER for the preceding incidental services, shall not exceed the prevailing rates charged to other parties by the SELLER for similar services.
- 18.5 When required, SELLER shall depute necessary personnel for supervision and/or erection of the Equipment at site for duration to be specified by PURCHASER on mutually agreed terms. SELLER's personnel shall be available at Site within seven days for emergency action and twenty-one days for medium and long-term assistance, from the date of notice given by PURCHASER.
- 18.6 The cost of incidental services shall not be included in the quoted prices. The cost of applicable incidental services should be shown separately in the price schedules.
- 19.1 SELLER may be required to provide any or all of the following materials and notification pertaining to spare parts manufactured or distributed by the SELLER.
- 19.1.1 Such spare parts as the PURCHASER may opt to purchase from the SELLER, provided that his option shall not relieve the SELLER of any warranty obligations under the Contract, and
- 19.1.2 In the event of termination of production of the spare parts:
- i) Advance notification to the PURCHASER of the pending termination, in sufficient time to permit the PURCHASER to procure needed requirements, and
 - ii) Following such termination, furnishing at no cost to the PURCHASER, the blue prints, drawings and specifications of the spare parts, if any when requested.
- 19.2 Seller shall supply item wise list with value of each item of spare parts and maintenance tools requirements, along with full details of manufacturers / vendors for such spares / maintenance tools for:
- 19.2.1 The construction, execution and commissioning.
- 19.3 Spare parts shall be new and of first class quality as per engineering standards/ codes, free of any defects (even concealed), deficiency in design, materials and workmanship and also shall be completely interchangeable with the corresponding parts.
- 19.4 Type and sizes of bearings shall be clearly indicated.
- 19.5 Spare parts shall be packed for long storage under tropical climatic conditions in suitable cases, clearly marked as to intended purpose.

- 19.6 A list of special tools and gauges required for normal maintenance and special handling and lifting appliances, if any, for the Goods shall be submitted to Purchaser.
- 19.7 Bidders should note that if they do not comply with Clause 19.2 above, their quotation may be rejected.
- 19.8 Lubricants (not applicable)
- 19.8.1 whenever lubricants are required, SELLER shall indicate the quantity of lubricants required for the first filling, the frequency of changing, the quantity of lubricants required for the one-year's continuous operation and the types of recommended lubricants indicating the commercial name (trademark), quality and grade.
- 19.8.2 If Seller is unable to recommend specific oil, basic recommended characteristics of the lubricants shall be given.
- 19.8.3 Seller shall indicate various equivalent lubricants available in India.

20 Guarantee

- 20.1 All Goods or Materials shall be supplied strictly in accordance with the specifications, drawings, data sheets, other attachments and conditions stated in the Contract.

No deviation from such specifications or alterations or of these conditions shall be made without PURCHASER'S agreement in writing which must be obtained before any work against the order is commenced. All materials supplied by the SELLER pursuant to the Contract (irrespective of whether engineering, design data or other information has been furnished, reviewed or approved by PURCHASER) are guaranteed to be of the best quality of their respective kinds (unless otherwise specifically authorized in writing by PURCHASER) and shall be free from faulty design, workmanship and materials, and to be of sufficient size and capacity and of proper materials so as to fulfill in all respects all operating conditions, if any, specified in the Contract.

If any trouble or defect, originating with the design, material, workmanship or operating characteristics of any materials, arises at any time prior to twelve(12) months from the date of the first commercial operation of the Plant for which the materials supplied under the Contract form a part thereof, or twenty four (24) months from the date of last shipment whichever period shall first expire, and the SELLER is notified thereof, SELLER shall, at his own expense and as promptly as possible, make such alterations, repairs and replacements as may necessary to permit the materials to function in accordance with the specifications and to fulfill the foregoing guarantees.

PURCHASER may, at his option, remove such defective materials, at SELLER'S expense in which event SELLER shall,



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without cost to PURCHASER and as promptly as possible, furnish and install proper materials. The SELLER shall similarly guarantee repaired or replaced materials for a period of no less than twelve (12) months from the date of replacement/repair.

In the event that the materials supplied do not meet the specifications and/or not in accordance with the drawings data sheets or the terms of the Contract and rectification is required at site, PURCHASER shall notify the SELLER giving full details of differences. The SELLER shall attend the site within seven (7) days of receipt of such notice to meet and agree with representatives of PURCHASER, the action required to correct the deficiency. Should the SELLER fail to attend meeting at Site within the time specified above,

PURCHASER shall immediately rectify the work/materials and SELLER shall reimburse PURCHASER all costs and expenses incurred in connection with such trouble or defect.

20.2 PERFORMANCE GUARANTEE OF EQUIPMENT

20.2.1 SELLER shall guarantee that the performance of the EQUIPMENT supplied under the CONTRACT shall be strictly in conformity with the specifications and shall perform the duties specified under the CONTRACT.

20.2.2 If the SELLER fails to prove the guaranteed performance of the EQUIPMENT set forth in the specification; the SELLER shall investigate the causes and carry out necessary rectifications/modifications to achieve the guaranteed performance. In case the SELLER fails to do so within a reasonable period, the SELLER shall replace the EQUIPMENT and prove guaranteed performance of the new equipment without any extra cost to PURCHASER.

20.2.3 If the SELLER fails to prove the guarantee within a reasonable period, PURCHASER shall have the option to take over the EQUIPMENT and rectify, if possible, the EQUIPMENT to fulfill the guarantees and/or to make necessary additions to make up the deficiency at Seller's risk and cost. All expenditure incurred by the PURCHASER in this regard shall be to SELLER's account.

21 Terms of Payment 21.1 The Payment terms are specified in the Section V of this BID Document.

22 Prices 22.1 Prices charged by the SELLER for Goods delivered and services performed under the CONTRACT shall not, with the exception of any price adjustments authorized by the Contract vary from the prices quoted by the SELLER in his bid.

23 Subletting & Assignment 23.1 The contractor shall not without previous consent in writing of the PURCHASER authority, sublet, transfer or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that

- 24 Time As Essence of Contract**
- any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.
- 24.1 The time and date of delivery/completion of the GOODS / SERVICES as stipulated in the Contract shall be deemed to be the essence of the Contract.
- 25 Delays in The SELLER's Performance**
- 25.1 If the specified delivery schedule is not adhered to or the progress of manufacture or supply of the items is not satisfactory or is not in accordance with the progress schedule the PURCHASER has the right to:
- i) Hire for period of delay from elsewhere goods which in PURCHASER's opinion will meet the same purpose as the goods which are delayed and SELLER shall be liable without limitation for the hire charges; or
 - ii) Cancel the CONTRACT in whole or in part without liability for cancellation charges. In that event, PURCHASER may procure from elsewhere goods which PURCHASER's opinion would meet the same purpose as the goods for which CONTRACT is cancelled and SELLER shall be liable without limitations for the difference between the cost of such substitution and the price set forth in the CONTRACT for the goods involved; or iii) Hire the substitute goods vide (i) above and if the ordered goods continue to remain undelivered thereafter, cancel the order in part or in full vide (ii) above.
- 25.2 Any inexcusable delay by the SELLER or his sub-contractor shall render the SELLER liable, without prejudice to any other terms of the Contract, to any or all of the following sanctions: forfeiture of Contract performance guarantee, imposition of price reduction for delay in delivery and termination of the contract for default.
- 26 Price Reduction Schedule For Delayed Delivery**
- 26.1 Subject to Article -29, if the SELLER fails to deliver any or all of the GOODS or performance the services within the time period (s) specified in the CONTRACT, the PURCHASER shall, without prejudice to his other remedies under the CONTRACT, deduct from the CONTRACT PRICE, a sum calculated on the basis of the CONTRACT PRICE, including subsequent modifications.
- 26.1.1 Deductions shall apply as per following formulae:
- In supply contract, the portion of supply completed in all respects which can be used for commercial operation shall not be considered for applying PRS, if delivered within contractual delivery period. The remaining supplies which are completed beyond the contractual delivery shall attract the price reduction schedule @0.5% per week or part thereof of the delayed delivery value maximum up to 5% of total Delivery Order value. The PRS shall be applicable in the same way where individual release order against Annual Rate Contract shall be taken as independent order. The total value of DO considered for applying PRS shall be excluding of all Taxes and Duties.
- 26.2 In case of delay in delivery on the part of Seller, the invoice/document value shall be reduced proportionately for the delay and payment shall be released accordingly.

26.3 In the event the invoice value is not reduced proportionately for the delay, the PURCHASER may deduct the amount so payable to SELLER, from any amount falling due to the SELLER or by recovery against the Performance Guarantee.

Both SELLER and PURCHASER agree that the above percentages of price reduction are genuine pre estimates of the loss/damage which the PURCHASER would have suffered on account of delay/breach on the part of the SELLER and the said amount will be payable on demand without there being any proof of the actual loss/or damage caused by such breach/delay. A decision of the PURCHASER in the matter of applicability of price reduction shall be final and binding.

27 Rejections, Removal of Rejected Equipment & Replacement

- 27.1 Preliminary inspection at SELLER's works by INSPECTOR shall not prejudice PURCHASER's claim for rejection of the EQUIPMENT on final inspection at SITE or claims under warranty provisions.
- 27.2 If the EQUIPMENTS are not of specification or fail to perform specified duties or are otherwise not satisfactory the PURCHASER shall be entitled to reject the EQUIPMENT/MATERIAL or part thereof and ask free replacement within reasonable time failing which obtain his requirements from elsewhere at SELLER's cost and risk.
- 27.3 Nothing in this clause shall be deemed to deprive the PURCHASER AND/OR AFFECT ANY rights under the Contract which it may otherwise have in respect of such defects or deficiencies or in any way relieve the SELLER of his obligations under the Contract.
- 27.4 EQUIPMENT rejected by the PURCHASER shall be removed by the SELLER at his cost within 14 days of notice after repaying the amounts received against the SUPPLY. The PURCHASER shall in no way be responsible for any deterioration or damage to the EQUIPMENT under any circumstances whatsoever.
- 27.5 In case of rejection of EQUIPMENT, PURCHASER shall have the right to recover the amounts, if any, from any of CONTRACTOR'S invoices pending with PURCHASER or by alternative method(s).

28 Termination of Contract

- 28.1 Termination for Default
- 28.1.1 The PURCHASER may, without prejudice to any other remedy for breach of CONTRACT, by written notice of default sent to the SELLER, terminate the CONTRACT in whole or in part:
- A) If the SELLER fails to deliver any or all of the GOODS within the time period(s) specified in the CONTRACT; or
- B) If the SELLER fails to perform any other obligation(s) under the CONTRACT, and

- C) If the SELLER, in either of the above circumstances, does not cure his failure within a period of 30 days (or such longer period as the PURCHASER may authorize in writing) after receipt of the default notice from the PURCHASER.
- 28.1.2 In the event the PURCHASER terminates the CONTRACT in whole or in part, pursuant to Article 28.1.1, the PURCHASER may procure, upon such terms and in such manner, as it deems appropriate, goods similar to those undelivered and the SELLER shall be liable to the PURCHASER for any excess costs for such similar GOODS. However, the SELLER shall continue performance of the CONTRACT to the extent not terminated.
- 28.1.3 In case of termination of CONTRACT herein set forth (under clause 28) except under conditions of Force Majeure and termination after expiry of contract, the VENDOR shall be put under holiday [i.e. neither any enquiry will be issued to the party by AGL against any type of tender nor their offer will be considered by AGL against any ongoing tender (s) where contract between AGL and that particular VENDOR (as a bidder) has not been finalized] for three years from the date of termination by AGL to such VENDOR.
- 28.2 Termination for Insolvency
- 28.2.1 The PURCHASER, may at any time, terminate the CONTRACT by giving written notice to the SELLER, without compensation to the SELLER, if the SELLER becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the PURCHASER.
- 28.3 Termination for Convenience
- 28.3.1 The PURCHASER may, by written notice sent to the SELLER, terminate the CONTRACT, in whole or part, at any time for his convenience. The notice of termination shall specify that termination is for the PURCHASER's convenience, the extent to which performance of work under the CONTRACT is terminated and the date upon which such termination becomes effective.
- 28.3.2 The GOODS those are complete and ready for shipment within 30 days after the SELLER's receipt of notice of termination at the CONTRACT terms and prices. For the remaining GOODS, the PURCHASER may opt:
- a) To have any portion completed and delivered at the CONTRACT terms and prices, and /or
- b) To cancel the remainder and pay to the SELLER an agreed amount for partially completed GOODS and for materials and parts previously procured by the SELLER.

29 Force Majeure

- 29.1 Shall mean and be limited to the following:

Bidder Seal & Sign

NATURAL GAS- CLEAN ENERGY, GREEN ENERGY

- a) War/hostilities
- b) Riot or Civil commotion
- c) Earthquake, flood, tempest, lightening or other natural physical disaster.
- d) Restrictions imposed by the Government or other Statutory bodies, which prevents or delays the execution of the Contract by the SELLER. The SELLER shall advise PURCHASER by a registered letter duly certified by the local Chamber of Commerce or statutory authorities, the beginning and end of the above causes of delay within seven (7) days of the occurrence and cessation of such Force Majeure Conditions. In the event of delay lasting over one month, if arising out of causes of Force Majeure, PURCHASER reserves the right to cancel the Contract and the provisions governing termination stated under Article 28.0 shall apply.

For delays arising out of Force Majeure, the SELLER shall not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither PURCHASER nor SELLER shall be liable to pay extra costs provided it is mutually established that Force Majeure Conditions did actually exist.

SELLER shall categorically specify the extent of Force Majeure Conditions prevalent in their works at the time of submitting their bid and whether the same have been taken into consideration or not in their quotations. In the event of any force majored cause, the SELLER or the PURCHASER shall not be liable for delays in performing their obligations under this order and the delivery dates will be extended to the SELLER without being subject to price reduction for delayed deliveries, as stated elsewhere.

30 Resolution of Disputes / Arbitration

- 30.1 The PURCHASER and the SELLER shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract.
- 30.2 If, after thirty days from the commencement of such informal negotiations, the PURCHASER and the SELLER have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanism as specified hereunder.
- 30.3 Legal Construction

The Contract shall be, in all respects be construed and operated as an Indian Contract and in accordance with Indian Laws as in force for the time being and is subject to and referred to the Indore Court of Law.

30.4 Arbitration

All disputes, controversies, or claims between the parties (except in matters where the decision of the Engineer-in-Charge is deemed to be final and binding), which cannot be mutually resolved within a reasonable time, shall be referred to Arbitration by a sole arbitrator.

The PURCHASER shall suggest a panel of three independent and distinguished persons to the SELLER to select any one among them to act as the sole Arbitrator.

In the event of failure of the SELLER to select the Sole Arbitrator within 30 days from the receipt of the communication suggesting the panel of arbitrators, the right of selection of Sole Arbitrator by the other party shall stand forfeited and the PURCHASER shall have discretion to proceed with the appointment of the Sole Arbitrator. The decision of the PURCHASER on the appointment of Sole Arbitrator shall be final and binding on the parties.

The award of the Sole Arbitrator shall be final and binding on the parties and unless directed/awarded otherwise by the Sole Arbitrator, the cost of arbitration proceedings shall be shared equally by the parties. The arbitration proceeding shall be in English language and the venue shall be at Indore, India.

Subject to the above, the provisions of (Indian) Arbitration & Conciliation Act, 1996 and the rules framed thereunder shall be applicable. All matters relating to this contract are subject to the exclusive jurisdiction of the Courts situated in Indore.

Seller may please note that the Arbitration & Conciliation Act 1996 was enacted by the Indian Parliament and is based on United Nations Commission on International Trade Law (UNCITRAL model law), which were prepared after extensive consultation with Arbitral Institutions and centres of International Commercial Arbitration. The United Nations General Assembly vide resolution 31/98 adopted the UNCITRAL Arbitration rules on 15 December 1996.

The WORK under the CONTRACT shall, however, continue during the Arbitration proceedings and no payment due or payable to the Seller shall be withheld on account of such proceedings.

31 Governing Language

31.1 The Contract shall be written in English language as specified by the PURCHASER in the Instruction to Bidders. All literature, correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in English language. Printed literature in other language shall only be considered, if it is accompanied by an English translation. For the purposes of interpretation, English translation shall govern and be binding on all parties.

32 Notices

32.1 Any notice given by one party to the other pursuant to the Contract

shall be sent in writing or by telegram or fax, telex/cable confirmed in writing.

- 32.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 33 Taxes & Duties**
- 33.1 A foreign SELLER shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the PURCHASER's country.
- 33.2 A domestic SELLER shall be entirely responsible for all taxes, duties, licence fees etc. incurred until the delivery of the contracted goods to the PURCHASER. However, GST (IGST, CGST, SGST, UGST) on finished products shall be reimbursed by PURCHASER upon submission of proof of payment.
- 33.3 Customs duty payable in India for imported goods ordered by PURCHASER on foreign SELLER shall be borne and paid by THE SELLER.
- 33.4 Any income tax payable in respect of supervisory services rendered by foreign SELLER under the Contract shall be as per the Indian Income Tax Act and shall be borne by SELLER. It is up to the bidder/seller to ascertain the amount of these taxes and to include them in his bid price.
- 34 Books & Records**
- 34.1 SELLER shall maintain adequate books and records in connection with Contract and shall make them available for inspection and audit by PURCHASER or their authorized agents or representatives during the terms of Contract until expiry of the performance guarantee. Fixed price (lump sum or unit price) Contract will not be subject to audit as to cost except for cost reimbursable items, such as escalation and termination claims, transportation and comparable requirements.
- 35 Permits & Certificates**
- 35.1 SELLER shall procure, at his expense, all necessary permits, certificates and licenses required by virtue of all applicable laws, regulations, ordinances and other rules in effect at the place where any of the work is to be performed, and SELLER further agrees to hold PURCHASER harmless from liability or penalty which might be imposed by reason of any asserted or established violation of such laws, regulations, ordinances or other rules. PURCHASER will provide necessary permits for SELLER's personnel to undertake any work in India in connection with Contract.
- 36 General**
- 36.1 In the event that terms and conditions stipulated in the General Conditions of Contract should deviate from terms and conditions stipulated in the Contract, the latter shall prevail.
- 36.2 Losses due to non-compliance of Instructions Losses or damages occurring to the PURCHASER owing to the SELLER's failure to adhere to any of the instructions given by the



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PURCHASER in connection with the contract execution shall be recoverable from the SELLER.

36.3 Recovery of sums due

All costs, damages or expenses which the PURCHASER may have paid, for which under the CONTRACT SELLER is liable, may be recovered by the PURCHASER (he is hereby irrevocably authorized to do so) from any money due to or becoming due to the SELLER under this Contract or other Contracts and/or may be recovered by action at law or otherwise. If the same due to the SELLER be not sufficient to recover the recoverable amount, the SELLER shall pay to the PURCHASER, on demand, the balance amount.

36.4 Payments, etc. not to affect rights of the PURCHASER No sum paid on account by the PURCHASER nor any extension of the date for completion granted by the PURCHASER shall affect or prejudice the rights of the PURCHASER against the SELLER or relieve the SELLER of his obligation for the due fulfillment of the CONTRACT.

36.5 Cut-off Dates

No claims or correspondence on this Contract shall be entertained by the PURCHASER after 90 days after expiry of the performance guarantee (from the date of final extension, if any)

36.6 Paragraph heading

The paragraph heading in these conditions shall not affect the construction thereof.

37 Import License

37.1 No import license is required for the imports covered under this document.

38 Fall Clause

38.1 The price charged for the materials supplied under the order by the supplier shall in no event exceed the lowest price at which the supplier or his agent/principal/dealer, as the case may be, sells the materials of identical description to any persons/organizations including the PURCHASER or any department of the Central Govt. or any Deptt. Of a State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be, during the currency of the order.

38.2 If at any time during the said period, the supplier or his Agent /principal /dealer, as the case may be, reduces the sale price, sells or offers to sell such materials to any persons/organizations including the PURCHASER or any Deptt. Of Central Govt. or State Govt. as the case may be, at a price lower than the price chargeable under the order, he shall forthwith notify such reduction or sale or offer of sale to the PURCHASE Authority who has issued this order and the price payable under the order for the materials supplied after the date of coming into force of

such reduction or sale or offer of sale shall stand correspondingly reduced.

The above stipulation will, however, not apply to:

- a) Exports by the Contractor/Supplier or
- b) Sale of goods as original equipment at prices lower than the prices charged for normal replacement
- c) Sale of goods such as drugs, which have expiry dates.

38.3 The supplier shall furnish the following certificate to the concerned Paying Authority along with each bill for payment for supplies made against this order: -

"I/We certify that there has been no reduction in sale price of the Items /goods /materials of description identical to those supplied to the AGL under the order herein and such items/goods/materials have not been offered / sold by me/us to any person/organizations including the Purchaser or any Deptt. Of Central Govt. or any Deptt. of State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be up to the date of bill/during the currency of the order whichever is later, at a price lower than the price charged to the AGL under the order."

Such a certificate shall be obtained, except for quantity of Items /goods /materials categories under sub-clause (a), (b) & (c) of sub- Para 38.2 above, of which details shall be furnished by the supplier.

39 Publicity & Advertising

39.1 Seller shall not without the written permission of PURCHASER make a reference to PURCHASER or any Company affiliated with PURCHASER or to the destination or the description of goods or services supplied under the contract in any publication, publicity or advertising media.

40 Repeat Order

40.1 PURCHASER reserves the right, within 6 months of order to place repeat order up to 100% of the total order value without any change in unit price or other terms and conditions.

41 Limitation of Liability

41.1 Notwithstanding anything contrary contained herein, the aggregate total liability of SELLER under the Agreement or otherwise shall be limited to 100% of Agreement / Order price.

However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

42 General Terms & Conditions of Works Contract

1. SUBMISSION OF TENDER

A. The contractor shall make all arrangements at his own cost to transport the required materials outside and inside the working places and leaving the premises in a neat and tidy condition after completion of the job to the satisfaction of Owner. All materials except those agreed to be supplied by the Owner shall be supplied by the contractor at his own cost and the rates quoted by the Contractor should be inclusive of all royalties, rents, taxes, duties, statutory levies, if any, etc.

2. STATUTORY LEVIES

A. The Contractor accepts full and exclusive liability for the payment of any and all taxes, duties, cess, levies and statutory payments payable under all or any of the statutes. Variations of taxes and duties arising out of the amendments to the Central / State enactments, in respect of sale of goods / services covered under this bid shall be to AGL's account, so long as:

- They relate to the period after the opening of the price bid, but before the contracted completion period (excluding permitted extensions due to delay on account of the contractors, if any) or the actual completion period, whichever is earlier; and
- The vendor furnishes documentary evidence of incurrance of such variations, in addition to the invoices/documents for claiming Input Tax credit, wherever applicable.

B. The rates quoted should be inclusive of all taxes. However, wherever the tax is to be deducted at source, the same will be deducted from the bills of the Contractor and paid to the concerned authorities. The proof of such payments of tax will be furnished to the contractor.

The Vendor shall comply with all the provisions of the GST Act / Rules / requirements like providing of tax invoices, payment of taxes to the authorities within the due dates, filing of returns within the due dates etc. to enable AGL to take Input Tax Credit. In case of imports, vendor shall provide import documents and invoice fulfilling the requirement of Customs Act and Rules. Vendor will be fully responsible for complying with the Customs provisions to enable AGL to take input Tax Credit.

In case, AGL is not able to take Input Tax Credit due to any noncompliance/default/negligence of the seller of goods / service provider, the same shall be recovered from the pending bills/dues (including security deposit, BG etc.).

Vendor shall be responsible to indemnify the AGL for any loss, direct or implied, accrued to the AGL on account of supplier/service provider failure to discharge his statutory liabilities like paying taxes on time, filing appropriate returns within the prescribed time etc.

3. Anti - Profiteering Clause

GST Act. anti-profiteering provisions mandates that any reduction in tax rates or benefits of input tax credits be passed on to the consumer by way of commensurate reduction in prices. Vendors to take note of the same and pass such benefits while quoting their price.

43 **General Terms & Conditions For Supply**

1. PRICE

- a. Unless otherwise agreed to in the terms of the Purchase Order, the price shall be firm and not subject to escalation for any reason whatsoever till the execution of entire order, even though it might be necessary for the order execution to take longer than the delivery period specified in the order.
- b. Price shall be exclusive of GST (CGST, SGST, IGST as applicable), Customs Duty and applicable cess, which are leviable by law on sale of finished goods to AGL. The nature and extent of such levies shall be shown separately.

2. TAXES & DUTIES:

- a. GST (CGST, SGST, IGST as applicable), Customs Duty and applicable Cess as applicable shall be reimbursed for the materials consigned to AGL as per limits indicated in the offer against documentary evidence to be furnished by the Supplier. AGL shall pay only those taxes, duties and levies as indicated by Supplier at the time of bid submission/as agreed subsequently (prior to opening of priced bids). Taxes / Duties and/or Levies not indicated by supplier in Bid, but payable, shall be to Supplier's account. In case of any increase/decrease applicable in GST (CGST, SGST, IGST as applicable) Custom Duty and applicable Cess indicated with reference to limits mentioned in the offer / bid or new taxes / duties / levies imposed by the Indian Government through Gazette notification after the date of submission of last Price bid but prior to Contractual Delivery Date, the AGL shall reimburse/adjust the increase/decrease in taxes & duties on satisfactory supporting documents.
- b. Supplier shall be responsible for availing all applicable concessions in taxes, duties, levies etc. as per terms of Purchase Order. Any loss, direct or implied, accrued to AGL on account of supplier's failure to avail concessions shall be borne by Supplier.

3. CUSTOMS DUTY (CD) VARIATION

- a. The prices mentioned in offer are subject to Customs Duty (CD) variation. In case of any increase in rates of Customs Duty, IGST and applicable Cess by the Indian Government through Gazette notification after the submission of last priced offer but within the time schedule for import of materials, as mentioned. AGL shall reimburse the increase in taxes & duties at actuals against satisfactory supporting documents.
- b. All downward variations in the rates of all such duties shall be to AGL's account and same shall be calculated on actual CIF value of imported materials. Supplier shall submit all relevant documents to AGL for the proof of duty paid by them within one month from the date of Bill of Entry (BOE).
- c. Custom Duty variation shall be paid by AGL up to the limit of maximum CIF value of imported components as indicated in the offer.
- d. Rate of Custom Duty along with tariff number considered by Supplier in the prices shall be indicated in the offer.

The Vendor shall comply with all the provisions of the GST Act / Rules / requirements like providing of tax invoices, payment of taxes to the authorities within the due dates, filing of returns within the due dates etc. to enable AGL to take Input Tax Credit. In case of imports, vendor shall provide import documents and invoice fulfilling the requirement of Customs Act and Rules. Vendor will be fully responsible for complying with the Customs provisions to enable AGL to take Input Tax Credit.

In case, AGL is not able to take Input Tax Credit due to any noncompliance / default / negligence of the seller of goods / service provider, the same shall be recovered from the pending bills/dues (including security deposit, BG etc.).

Vendor shall be responsible to indemnify the AGL for any loss, direct or implied, accrued to the AGL on account of supplier/service provider failure to discharge his statutory liabilities like paying taxes on time, filing appropriate returns within the prescribed time etc.

4. Anti - Profiteering Clause

GST Act. Anti-profiteering provisions mandates that any reduction in tax rates or benefits of input tax credits be passed on to the consumer by way of commensurate reduction in prices. Vendors to take note of the same and pass such benefits while quoting their price

44 General Terms & Conditions of contract for Consultancy Services

A. STATUTORY LEVIES, TAXES AND DUTIES

- 1 The Consulting-firm accepts full and exclusive liability for payment of all taxes under any Statute as applicable in performance of the service and quoted price should include all such taxes & duties, if applicable which will be quoted separately.
- 2 All Domestic Consulting-firm's should have GST registration and to provide a copy of such registration certificate and classification of service along with bid document unless exempted for which necessary document support is provided.
- 3 In case of Foreign Consultants, where the service is provided from the establishment within India, clause 1 and as applicable to Indian Bidder in 2 would apply. Where the service is provided from the establishment situated outside India, GST tax will be paid by the Owner as recipient of service as per existing Act & Rules.
- 4 The Owner may claim Input Tax credit. The bidder should quote GST separately. Bidder should provide tax invoice as per the act / rules to enable owner to claim Input Tax Credit.
- 5 All taxes & duties payable outside India in respect of performance of the contract shall be borne & paid by the Consultant. The Consulting-firm shall bear and pay all the liabilities in respect of non-observance of all legal formalities as per various statutory provisions.
- 6 Unless specifically provided for in the tender documents or any Special Conditions, Variations of taxes i.e.GST quoted in price bid arising out of the amendments to the Central / State enactment, in respect of services covered under this bid shall be to Owner's account, so long as:

- (i) **They relate to the period from the date /time of opening of the bid, but before the contractual completion period (excluding permitted extensions due to delay on account of the Consulting-firm, if any) or the actual completion period, whichever is earlier; and**
 - (ii) The consultant furnishes documentary evidence of incurrence of such variations, in addition to the invoices and filing required returns for claiming Input Tax credit, wherever applicable.
- 7 The Consultant shall bear and pay all liabilities in respect of statutory variations in taxes and duties and imposition of new taxes and duties that may be imposed after the delivery and payment schedule execution dates, as originally stipulated, in case the delivery dates are extended due to reasons attributable to Consultant.

The Vendor shall comply with all the provisions of the GST Act / Rules / requirements like providing of tax invoices, payment of taxes to the authorities within the due dates, filing of returns within the due dates etc. to enable AGL to take Input Tax Credit.

In case, AGL is not able to take Input Tax Credit due to any noncompliance/default/negligence of the seller of goods / service provider, the same shall be recovered from the pending bills/dues (including security deposit, BG etc.).

Vendor shall be responsible to indemnify the AGL for any loss, direct or implied, accrued to the AGL on account of supplier/service provider failure to discharge his statutory liabilities like paying taxes on time, filing appropriate returns within the prescribed time etc.



SECTION VI
SCHEDULE OF RATES (SOR)

SCHEDULE OF RATES (SOR)

| S.N. | Description of Work / Item(s) | Units | Quantity | Unit price including cost of imported raw material / components & customs duty thereon, Pkg / fwdg, freight, Transit Insurance, TPI on finished goods, Loading and Unloading at site, Excluding GST | Total Amount including cost of imported raw material / components & customs duty thereon, Pkg / fwdg, freight, Transit Insurance, TPI on finished goods, Loading and Unloading at site, Excluding GST |
|------|---|---------|----------|---|---|
| 10 | Design, Engineering, Attenuation Calculation, Soil Resistivity Survey at ICCP Anode ground Bed location, preparation of Bill of Materials, Drawing, Data sheet & synchronization of the new ICCP network with the existing ICCP to avoid over/under-protection for Permanent Cathodic Protection system of proposed 4" to 10" Pipeline as per PTS Permanent Cathodic Protection System and Scope of Work for CP System. | Lumpsum | 2 | | |
| 20 | Supply, Installation, Testing and Commissioning of AC Operated CP Transformer Rectifier (TR) Unit as per below mentined capacity, Automatic controlled, SCADA facility with remote monitoring excluding battery bank for DC power supply as per specified design 25/25A,230 AC Input,IP41 (Indoor) | Nos | 2 | | |
| 30 | Supply of Anode Junction Box containing necessary shunt & resistor having degree of protection IP 55 & Installation termination along with necessary shunt /resitor, civil foundation work | Nos | 2 | | |
| 40 | Supply of Cathode Junction Box containing necessary shunt & resistor having degree of protection IP 55 & Installation termination along with necessary shunt /resitor, civil foundation work | Nos | 2 | | |
| 50 | Supply and Installation of Permanent Reference Electrodes Cu-CuSO4 including cable laying cost at desired pipeline locations, excavation, backfilling, restoration and connection complete in all respect | Nos | 6 | | |
| 60 | Supply of Deepwell Anode ground Bed with 25 A Capacity with depth upto 25-50 mtr | Nos | 2 | | |
| 70 | Supply, Laying of Cable including Trenching, Sand Padding, providing Bricks and Warning mats, Backfilling, Restoration, Route marking & Termination, Testing and Commissioning of 1 Core x 35 Sq.mm X LPE Insulated PVC Sheathed armored copper conductor cable as per AJB and CJB header & bonding | Meter | 450 | | |
| 80 | Supply Installation, Testing of Anode tail cable 1CX10 sq mm HMWPE Sheathed and PVDF100 unarmoured copper cable | Meter | 550 | | |

| | | | | | |
|-----|---|---------|------|--|--|
| 90 | Supply, Laying of cable including Trenching, Sand padding, providing Bricks and Warning mats, Route marking & Termination, Testing and Commissioning of 1 Core x 6 Sq.mm X LPE Insulated PVC Sheathed armored copper conductor cable 1) from CJB to Reference cell & from CJB to TRU 2) from CJB to Pipeline & from CJB to TRU | Meter | 1200 | | |
| 100 | Supply, Laying of Cable including Trenching, Sand Padding, providing Bricks and Warning mats, Backfilling, Restoration, Route marking & Termination, Testing and Commissioning of 4 Core x 4 Sq.mm X LPE Insulated PVC FRLS Sheathed armored copper conductor along with glanding bas per TRU Power supply | Meter | 40 | | |
| 110 | Supply & Installation of PIN BRAZING UP TO 35 SQ MM | Nos | 12 | | |
| 120 | MONTHLY MONITORING OF PSP - CP SYSTEM TILL 3 MONTHS FROM DATE OF COMMISSIONING | Lumpsum | 2 | | |

Bidder to Quote GST (%) : _____

**** The Quoted GST % shall be applicable on total quoted amount**

PREAMBLE TO SCHEDULE OF RATES

- 1.0 The Schedule of Rates (SOR) shall be read in conjunction with all other sections of the Bid Document.
- 2.0 The Bidder is deemed to have studied the drawings, specifications, General Conditions of Contract (GCC) and details of works to be done within the Time-schedule specified in the Bid document and should have acquainted himself of the conditions prevailing at Project-site.
- 3.0 All duties and Taxes, GST and other levies or any other statutory payment payable by the bidder for supply of goods / material at AGL store/site shall be included in the SOR.
- 4.0 Bidders must submit firm prices for all the items of SOR. Bids of all such Bidders not complying with this requirement shall not be accepted.
- 5.0 Bidders shall quote as per the items of SOR only. No comment, explanation or Clarification in SOR is acceptable.
- 6.0 The quantities specified in SOR are tentative and shall be used to evaluate the Bidder's position. AGL does not make any commitment for quantities to be ordered on daily or monthly basis; and payments shall be released for actual quantities ordered and supplied/executed.
- 7.0 No claim shall be entertained during the currency of the contract towards any item due to the above including where the Bidder/ contractor has quoted low / high prices.
- 8.0 All items of work mentioned in the SOR shall be carried out as per the specifications, drawings and instructions of Purchaser and the Prices are deemed to be inclusive of costs towards material, consumables, labour, supervision, tools & tackles and detailing of construction/ fabrication drawings, isometric wherever required as called for in the detailed specifications and condition of the Contract.
- 9.0 Purchaser reserves the right to cancel / delete / curtail any item of work if necessary. Such a step shall not be considered as a reason for changing the Prices.
- 10.0 The prices quoted in SOR shall be deemed to include all activities of work mentioned in item-description (short description) of SOR (detailed).

Name, Signature & Stamp of
Authorized Signatory of Bidder



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SECTION VII
PACKING AND MARKING & SHIPPING

PACKING, MARKING, SHIPPING AND DOCUMENTATION SPECIFICATIONS FOR INDIGENOUS MATERIALS

1.0 GENERAL

- 1.1 This specification forms an integral part of the relevant PURCHASE ORDER, in addition to the specifications, drawings and instructions explicitly listed in the PURCHASE ORDER.
- 1.2 Seller shall strictly comply with all applicable prescriptions in the specifications. Lack of relevant information and/or documents shall not absolve the SELLER of his responsibilities and any loss arising out of non-compliance shall be to supplier's account.

2.0 PROJECT

Name of PURCHASER, Project location and some other relevant information are as per Bid document / Annexure.

3.0 PACKING

- 3.1 The packing specifications incorporated herein are supplementary to the internal and external packing methods and standards as per current rules of IRCA goods tariff Part-I. All packing shall be done in such a manner so as to reduce volume as much as possible. Fragile articles should be packed with special packing materials depending on the type of materials.
- 3.2 Items shipped in bundles must be securely tied with steel wire or strapping. Steel reinforcing rods, bars, pipes, structural materials, etc. shall be bundled in uniform lengths and the weight shall be within the breaking strength of the securing wire or strapping.
- 3.3 All delicate surfaces on equipment/materials should be carefully protected and painted with protective paint/compound and wrapped to prevent rusting and damage.
- 3.4 All mechanical and electrical equipment and other heavy articles shall be securely fastened to the case bottom and shall be blocked and braced to avoid any displacement/shifting during transit.
- 3.5 Attachments and spare parts of equipment and all small pieces shall be packed separately in wooden cases with adequate protection inside the case and wherever possible should be sent along with main equipment. Each item shall be suitably tagged with identification of main equipment, item denomination and reference number of respective assembly drawing. Each item of steel structure and equipments shall be identified with two erection markings with minimum lettering height of 15 mm. Such marking will be followed by connection numbers in indelible ink/paint. A copy of the packing list shall accompany the material in each package.
- 3.6 All protrusions shall be suitably protected by providing a cover comprising of tightly bolted wooden discs on the flanges.
- 3.7 Wherever required, equipments/materials/instruments shall be enveloped in polyethylene bags containing silica gel or similar dehydrating compound.



3.8 Detailed packing list in waterproof envelope shall be inserted in the package together with equipment/material.

One copy of the detailed packing list shall be fastened outside the package in waterproof envelope and covered by metal cover.

3.9 The Seller shall be held liable for all damages or breakages to the goods due to the defective or insufficient packing as well as for corrosion due to insufficient protection.

3.10 Packaged equipment or material showing damage, defects or shortages resulting from improper packaging material or packing procedures or having concealed damage or shortages, at the time of unpacking shall be to the seller's account.

4.0 MARKING

4.1 Each package shall be marked on three sides with proper paints/indelible waterproof ink as follows:

PURCHASER
 PROJECT
 DEST
 INATION

Delivery Order No..... Net

Wt..... Kgs Gross W t..... Kgs.

Dimensions.....X.....X.....CM.

Package No. (Sl. No. of total

packages)..... Seller's Nam

e.....

4.2 Additional marking such as 'HANDLE WITH CARE', 'THIS SIDE UP', 'FRAGILE' or any other additional indications for protection and safe handling shall be added depending on the type of material.

4.3 Specific marking with paint for 'SLINGING and 'CENTRE OF GRAVITY' should be provided for all heavy lifts weighing 5 Tons and above.

4.4 In case of bundles/bags or other packages, wherever marking cannot be stenciled, the same shall be embossed on metal or similar tag and wired securely at two convenient points.

5.0 SHIPMENT

5.1 Dispatch of materials shall be made in accordance with the relevant terms of the Purchase/Delivery Order. Any change in mode of transport shall be resorted to only after prior approval in writing. Seller shall ensure dispatch of equipments/materials immediately after they are inspected and released. All consignments shall be booked in the name of Purchaser and not under self-basis.

5.2 Dispatch By Road

- (a) The Seller shall be responsible for dispatch of materials on DOOR-DELIVERY basis through a reliable Bank-Approved transport company unless otherwise the transport company is named by PURCHASER.
- (b) The SELLER shall ensure with Transport Company the delivery of materials within a reasonable transit period. SELLER shall also obtain from transporter, particulars of Lorry Number, Transporter's Challan Number, destination of lorry (if transshipment is involved), Transporter's Agent at destination, if any, etc. and intimate same to Engineer In charge., AGL

5.3 Dispatch by Rail

5.3.1 The SELLER shall be responsible for:

- (a) Dispatch by the shortest possible route. The Seller shall as far as possible, Dispatch the materials by the fastest goods train like QTS, Super Express Goods, etc. wherever such facilities exist.
- (b) Correct classification of goods and freight charges.
- (c) Obtaining clean Railway Receipts without any qualifying remarks.

Should there be any restriction for movement by a particular route, the Railway authorities should be requested to move goods by the next alternative route, subject to prior consent of Engineer In charge, AGL.

5.3.2 As "SMALLS"

When the materials that do not make up a wagonload by weight/volume or for minimum freight payable for a wagon the Dispatch should be affected as "smalls".

SELLER should obtain from the Railway, the particulars of wagon in which the "Smalls" have been loaded, station at which sealed, train Number and date/time of movement and transmit the same to the Engineer In charge, for monitoring their movement.

5.3.3 As Wagon Loads

Consignments, though of lesser weight, but otherwise constituting a "wagon load" by volume should be dispatched as "wagon load" paying the freight applicable to a minimum wagon load or at the smalls rate, whichever is advantageous, as per Rule-164 of IRCA Goods Tariff Part-I (Vol.I).

When consignments call for full wagon(s), indents should be placed with the Railway Station concerned after predetermining accurately the type and number of wagons required. In case of covered wagons, it should be ensured that the same are watertight. If a particular type of wagon is in short supply, request should be made to the Railway Authorities to supply the next suitable type of wagon. Suitable packing in the wagon shall be done, wherever necessary, to ensure maximum safety of the material in transit.

When ODC packages are involved, the SELLER shall apply to the Railway Authorities with loading sketches showing overall dimensions and the wagon proposed to be utilized sufficiently in advance for obtaining movement sanction and to establish firm transportability. Copies of all such correspondence together with loading sketches should be sent to Engineer Incharge, AGL. ODC packages shall be loaded, packed and lashed strictly in accordance with the Railway Regulations. Should there be any delay/difficulty in obtaining the required wagon(s), the SELLER shall inform Engineer In charge, AGL immediately giving details of the required number of wagons, type, carrying capacity, etc. and indent number so that the matter may be taken up with the Railway Authorities concerned.

After Dispatch, SELLER shall obtain from the Railway Authorities, particulars of the wagon/train number, date of movement and destination junction for the particular train and furnish the same to the Engineer In charge, AGL for follow-up action on movement, as may be necessary.

After Dispatch of the equipment from dispatching station, if movement of the wagon is held-up due to improper/loose lashing resulting in shifting of the load and consignment is required to be readjusted / refixed the vendor shall be responsible to arrange for the same as per Railway requirements. Similarly, in case some infringement in dimensions of the loaded consignment is detected by Railway Authorities after its movement from dispatching station and if it is required to be corrected either by adjustment of the load or by cutting a few protrusions the same shall be arranged by vendor at their cost.

5.4 Shipment by Air

Wherever SELLER is instructed by PURCHASER to airfreight any material, the SELLER shall take prompt action for the same. Immediately after air shipment is effected, the Seller shall intimate by Fax / Email, the details of airway bill number and date, flight number, number of packages etc. to the Engineer In charge, AGL.

5.5 Destination

The consignments should be dispatched as indicated in bid document Purchase/Delivery Order.

5.6 Advance Information

Immediately after a shipment is made, SELLER shall send advance information as to the particulars of materials, value, Delivery Order Number, date of Dispatch, railway receipt number, wagon number/goods consignment note number, truck number, name of transport company and their destination office/associate's address etc./Airway Bill



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Number and flight details by way of Fax / E-Mail to Engineer In charge and Engineer – C&P, AGL.

5.7 Transmission of Dispatch Documents

Seller shall, within 48 hours of the Dispatch of the material depending upon the payment terms of the Purchase Order, either negotiate through PURCHASER's Bankers or forward direct by Registered Post, the railway receipt/consignment note/Airway Bill to the Purchaser at project site accompanied by the original invoices, packing lists and challans.

The SELLER shall be responsible for any delay in clearance of the consignment at destination and consequent wharf age / demurrage, if any, due to delay in transmittal of the Railway Receipt, Consignment Note/Air Way Bill.

Copies of such Dispatch advise together with 2 copies of invoices and packing lists shall be simultaneously distributed to PURCHASER's (HO & Site).

6.0 TRANSIT RISK INSURANCE

All equipments/ materials will be insured for transit risk by PURCHASER unless otherwise specified. The Insurance cover will be provided from warehouse - to - warehouse.

7.0 DESPATCH THROUGH APPROVED TRANSPORTERS

All materials shall be dispatched through any bank approved transporter.



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SECTION – VIII

FORMS AND FORMATS



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FORM – 1
BIDDER'S GENERAL INFORMATION

To

Aavantika Gas Limited

202 – B, 2nd Floor, NRK Business Park,
 Vijay Nagar Square, A.B. Road,
 Indore (M.P), Pin – 452010

1-1 Bidder Name: _____

1-2 Number of Years in Operation: _____

1-3 Address of Registered Office: _____

City _____ District _____

State _____ PIN/ZIP _____

1-4 Operation Address

if different from above: _____

City _____ District _____

State _____ PIN/ZIP _____

1-5 Telephone Number:

(Country Code) (Area Code) (Telephone Number)

1-6 E-mail address: _____

1-7 Website: _____

1-8 Fax Number: _____

(Country Code) (Area Code) (Telephone Number)

1-9 ISO Certification, if any {If yes, please furnish details}

1-10 Bid Currency _____

1-11 Port of shipment / Dispatch Point _____

Bidder Seal & Sign

NATURAL GAS- CLEAN ENERGY, GREEN ENERGY



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- 1-12 Whether Supplier / Manufacturer _____
Dealer/Trader/Contractor
1-13 Type of Material Supplies : _____
1-14 Banker's Name : _____
1-15 Branch : _____
1-16 Branch Code : _____
1-17 Bank account number : _____
1-18 GSTN No.: _____
1-19 State / UT.: _____
1-20 PAN No. : _____
1-21 Whether SSI Registrant Or not : _____
1-22 EPF No. _____

(SIGNATURE OF BIDDER WITH SEAL)

NOTE:

1. Bidders have to submit the supporting document confirming the above registrations.



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FORM – 2
BID FORM

To
 Aavantika Gas Limited
 202 – B, 2nd Floor, NRK Business Park,
 Vijay Nagar Square, A.B. Road,
 Indore (M.P), Pin – 452010
 Dear Sir,

After examining/reviewing the Bidding Documents for indented material, including technical specifications, drawings, General and Special Conditions of Contract and Price schedule etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to bid to execute the whole of the Job for the item in conformity with, the said Bidding Documents, including Corrigendum / Addenda Nos.....

We confirm that this bid is valid for a period of Four (4) months from the date of opening of Techno-Commercial Bid, and it shall remain binding upon us and may be accepted by any time before the expiration of that period.

If our bid is accepted, we will provide the performance guarantee equal to 10% (ten per cent) of each Delivery Order, for the due performance with in fifteen days of such award. Until a final Contract is prepared and executed, the bid together with your written acceptance thereof in your notification of award shall constitute a binding Contract between us.

We understand that Bidding Document is not exhaustive and any action and activity not mentioned in Bidding Documents but may be inferred to be included to meet the intend of the Bid Documents shall be deemed to be mentioned in Bidding Documents unless otherwise specifically excluded and we confirm to perform for fulfillment of Agreement and completeness of the Work in all respects within the time frame and agreed price.

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

SEAL AND SIGNATURE
 DATE:

Duly authorized to sign bid for and on behalf of

(SIGNATURE OF WITNESS)

WITNESS NAME:
 ADDRESS:



**FORM – 3 A
ANNUAL TURNOVER**

Bidder must fill in this form

Annual Turnover data for the last 3 years:

| Year | | Amount (in INR) |
|---------|--|--------------------|
| Year 1: | | |
| Year 2: | | |
| Year 3: | | |

1. The information supplied should be the Annual Turnover of the bidder
2. A brief note should be appended describing thereby details of turnover as per audited results.

SEAL AND SIGNATURE OF THE BIDDER



FORM – 3 B
FINANCIAL STATUS

Bidder must fill this form

FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR

| Description | For the year of |
|--|--------------------|
| | Amount (in INR) |
| 1. Current assets | |
| 2. Current Liabilities (including secured and un-secured short term loans & working capital loans) | |
| 3. Working Capital (Current Assets-Current liabilities) | |
| 4. Net Worth Owners funds (Paid up share capital and Free Reserves & Surplus) (NW) | |

- Attached are copies of the audited balance sheets, including all related notes and income statement for the last Audited Financial year, as indicated above, complying with the following conditions.
 - All such documents reflect the financial situation of the bidder
 - Historic financial statements must be audited by a certified accountant.
 - Historic financial statements must be complete, including all notes to the financial statements.
 - Historic financial statements must correspond to accounting periods already completed and audited (no statement for partial periods shall be requested or accepted)

SEAL AND SIGNATURE OF BIDDER



FORM – 3 C
FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING
CAPITAL IS INADEQUATE / NEGATIVE

(To be provided on Bank's letter head)

To,
 M/s Aavantika Gas Limited

Date:

Dear Sir,

This is to certify that M/s----- (name of the Bidder with address) (hereinafter referred to as Customer) is an existing Customer of our Bank.

The Customer has informed that they wish to bid for Aavantika Gas Limited Tender No.----- dated----- for----- (Name of the supply/work/services/consultancy) and as per the terms of said Tender Document they have to furnish a certificate from their Bank confirming the availability of line of credit.

According M/s----- (name of the Bank with address) confirms availability of line of credit to M/s----- (name of the Bidder) for at least an amount of Rs.....

It is also confirmed that the net worth of the Bank is more than Rs. 100 Crores (or Equivalent USD) and the undersigned is authorized to issue this certificate.

Yours truly,

For.....(Name & address of Bank)

(Authorized signatory)
 Name of the signatory:
 Designation:
 Email Id:
 Contact No.:
 Stamp:

Note:
 This Declaration Letter for line of credit shall be from single bank only. Letters from multiple banks shall not be applicable. However, banking syndicate will be acceptable wherein a group of banks can jointly provide line of credit to the bidder.



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FORM – 4
PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT/ BID SECURITY
 (To be stamped in accordance with the Stamp Act)

Ref.....

Bank Guarantee No.....

Date.....

To

Aavantika Gas Limited,
 Second Floor 202-B, NRK Business Park,
 Vijay Nagar Square, AB Road,
 Indore-452010,

Dear Sir(s),

In accordance with Invitation for Bid under your reference No. _____
 M/s. _____ having their Registered / Head Office at
 _____ (hereinafter called the Tenderer) wish to participate in the
 said bidding for _____ .

As an irrevocable Bank Guarantee against Earnest Money for the amount of
 _____ is required to be submitted by the Bidder as a condition precedent for
 participation in the said bidding which amount is liable to be forfeited on the happening of
 any contingencies mentioned in the Bidding Document.

We, the _____ Bank at _____
 having our Head Office _____
 (Local Address) guarantee and undertake to pay immediately on demand without any
 recourse to the bidder by AAVANTIKA GAS Ltd., the amount _____
 _____ without any reservation, protest, demur and recourse. Any
 such demand made by AAVANTIKA GAS Ltd., shall be conclusive and binding on us
 irrespective of any dispute or difference raised by the Bidder.

This guarantee shall be irrevocable and shall remain valid upto _____ [this date
 should be valid for 2 months in excess of bid validity]. If any further extension of this
 guarantee is required, the same shall be extended to such required period on
 receiving instructions from M/s. _____
 whose behalf this guarantee is issued.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on
 this _____ day of _____ 200__ at _____.

WITNESS:

(SIGNATURE)
 (NAME)

(SIGNATURE)
 (NAME)
 Designation with Bank Stamp

(OFFICIAL ADDRESS)

Attorney as per Power of Attorney
 No. _____
 Date: _____

INSTRUCTIONS FOR FURNISHING BANK GUARANTEE FOR EMD/BID SECURITY

1. The Bank Guarantee by bidders will be given on non-judicial stamp paper as per stamp duty applicable. The non-judicial stamp paper should be in the name of the issuing bank. In case of foreign bank, the said banks guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper.
2. The expiry date as mentioned in bid document should be arrived at by adding 2 months to the date of expiry of the bid validity unless otherwise specified in the Bidding Documents.
3. The bank guarantee by bidders will be given from bank as specified in ITB
4. A letter from the issuing bank of the requisite Bank Guarantee confirming that said bank guarantee /all future communication relating to the Bank Guarantee shall be forwarded to the Purchaser at its address as mentioned at ITB.
5. Bidders must indicate the full postal address of the bank along with the bank's e-mail/ Fax no. From where the earnest money bond has been issued.
6. If a bank guarantee is issued by a commercial bank, then a letter to Employer confirming its net worth is more than Rs. 1,000,000,000/- (Rupees one hundred crore) or equivalent along with documentary evidence.

Bank details for BG/LC (SFMS) receiving through SFMS:

Bank Name: ICICI Bank Limited

Bank IFSC: ICIC0000041

Bank A/c No.: 004105013583

Bank Address: ICICI BANK LTD, MALAV PARISAR,4 CHOTI KHAJRANI, A.B. ROAD.INDORE 452008 (M.P), INDORE

The bidders bank has to send the below details in the BG SWIFT message to our Banker:

77C: Details of Guarantee

7035: ICIC0000041

7036: ICICI BANK LTD, INDORE AC NO 004105013583

7037: AG533170984 Unique Identifier Number (Mandatory)

7038: XXXXX

7039: XXXXXX(XX)DT XX.XX.2024



FORM – 5

**LETTER OF AUTHORITY
 PROFORMA FOR LETTER OF AUTHORITY FOR ATTENDING AND SUBSEQUENT
 NEGOTIATIONS / CONFERENCES**

No.

Date:

Aavantika Gas Limited
 202 – B, 2nd Floor, NRK Business Park,
 Vijay Nagar Square, A.B. Road,
 Indore (M.P), Pin – 452010

Dear Sir,

We _____ **hereby authorize following representative(s) to attend Bid opening and for any other correspondence and communication against above Bidding Document:**

Name & Designation _____ Signature _____

Name & Designation _____ Signature _____

We confirm that we shall be bound by all commitments made by aforementioned authorized representatives.

Yours faithfully,

Signature

Name & Designation

For and on behalf of

Note: This letter of authority should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.

Not more than two persons are permitted to attend techno –commercial un-priced and price bid opening.



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FORM – 6

**NO DEVIATION CONFIRMATION
(OM BIDDER'S LETTERHEAD)**

Aavantika Gas Limited
202 – B, 2nd Floor, NRK Business Park,
Vijay Nagar Square, A.B. Road,
Indore (M.P), Pin – 452010

Dear Sir,

We understand that any deviation / exception in any form may result in rejection of bid. We, therefore, certify that we have not taken any exceptions/deviations anywhere in the bid and we agree that if any deviation / exception is mentioned or noticed, our bid may be rejected.

(SEAL AND SIGNATURE OF BIDDER)



FORM – 8

DETAILS OF SIMILAR WORK DONE DURING PAST FIVE YEARS

| Sr. No. | Description of the work | Location of the work | Full Postal Address and phone nos. of Client & Name of Officer-in-Charge | Value of Contract | Date of Commencement of Work | Scheduled Completion Time (Months) | Date of Actual Completion | Reasons for delay in project completion, if any |
|---------|-------------------------|----------------------|--|-------------------|------------------------------|------------------------------------|---------------------------|---|
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

Note: Copies of Letter of awards and completion certificate for the above works to be enclosed. The Work completed earlier than five years need not be indicated here. The list of work, not of similar nature need not be indicated here Failing to comply aforementioned instructions may lead to rejection of bid.

SEAL AND SIGNATURE OF BIDDER



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FORM – 9

PROFORMA FOR CONTRACT PERFORMANCE BANK GUARANTEE
 (ON NON-JUDICIAL PAPER OF APPROPRIATE VALUE)

Ref: Bank Guarantee No.....

Date.....

To
 Aavantika Gas Limited
 202 – B, 2nd Floor, NRK Business Park,
 Vijay Nagar Square, A.B. Road,
 Indore (M.P), Pin – 452010

Dear Sirs,

M/s _____ have been
 awarded the work of _____ (Specify Tender Name & No.),
 vide _____ LOI/PO/NO
 _____ (Specify the LOI/ PO / WO
 No.)

_____ for AAVANTIKA GAS
 Ltd.,
 202 – B, 2nd Floor, NRK Business Park, Vijay Nagar Square, A.B. Road, Indore (M.P.) India.

The Contracts conditions provide that the CONTRACTOR shall pay a sum of _____ (as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract Performance Guarantee includes guarantee executed by Nationalized Bank, undertaking full responsibility to indemnify AAVANTIKA GAS Ltd., in case of default.

The said _____ (name of the contractor's firm) has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ (name of the Bank) hereby undertake and agree with you that if default shall be made by M/s _____ in performing any of the terms and conditions of the tender or in payment of any money payable to AAVANTIKA GAS Ltd., we shall on demand pay without any recourse to the contractor to you in such manner as you may direct the said amount of _____ only or such portion thereof not exceeding the said sum as you may from time to time require.

2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said _____ and to



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enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said

_____ which under law relating to the sureties would but for provision have the effect of releasing us.

3. Your right to recover the said sum of _____ (_____) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. This guarantee shall be irrevocable and shall remain valid upto _____, If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____ on whose behalf this guarantee is issued.
6. The Bank Guarantee's payment of an amount is payable on demand and in any case within 48 hours of the presentation of the letter of invocation of Bank Guarantee. Should the banker fail to release payment on demand, a penal interest of 18% per annum shall become payable immediately and any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the jurisdiction of Indore Courts.
7. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney dated _____ granted to him by the Bank.

Yours faithfully,
 _____ Bank

By its Constituted Attorney

Signature of a person duly authorized to sign on behalf of the Bank.



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INSTRUCTIONS FOR FURNISHING CONTRACT PERFORMANCE GUARANTEE

1. The Bank Guarantee by successful bidder(s) will be given on non-judicial stamp paper as per stamp duty applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said bank guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper and place of bid to be considered as Indore.
2. The bank guarantee by bidders will be given from bank as specified in ITB.
3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said bank guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Purchaser
4. If a bank guarantee is issued by a commercial bank, then a letter to Owner confirming its net worth is more than Rs. 1,000,000,000/- (Rupees one hundred Crores) or its equivalent in foreign currency along with a documentary evidence.

Bank details for BG/LC (SFMS) receiving through SFMS:

Bank Name: ICICI Bank Limited

Bank IFSC: ICIC0000041

Bank A/c No.: 004105013583

Bank Address: ICICI BANK LTD, MALAV PARISAR,4 CHOTI KHAJRANI, A.B. ROAD.INDORE 452008 (M.P), INDORE

The bidders bank has to send the below details in the BG SWIFT message to our Banker:

77C: Details of Guarantee

7035: ICIC0000041

7036: ICICI BANK LTD, INDORE AC NO 004105013583

7037: AG533170984 Unique Identifier Number (Mandatory)

7038: XXXXX

7039: XXXXXX(XX)DT XX.XX.2024



FORM -10

**CERTIFICATE OF NON-INVOLVEMENT OF AGENT
(ON BIDDER'S LETTERHEAD)**

Aavantika Gas Limited
202 – B, 2nd Floor, NRK Business Park,
Vijay Nagar Square, A.B. Road,
Indore (M.P), Pin – 452010

Dear Sir,

This is to certify that we have not engaged involve any Agent / Consultant / Retainer / Associate who is not an employee of _____ (name of your company) for payment of any remuneration thereof in India or abroad. Therefore, no Agent's / Representative's / consultant's commission is payable in India or abroad against this Contract.

SIGNATURE AND SEAL OF BIDDER

Notes:

1. This certificate should be issued in the Letter Head of the Bidder.
2. This certificate is to be issued only if there is no Agent / Consultant/ Retainer/ Associate is involved.



E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION & COMMISSIONING OF ICCP SYSTEM



F- 11

**DECLARATION
(ON BIDDER'S LETTER HEAD)**

In view of participating in the subject Tender, We hereby confirm that we have not been banned by any CGD Company for the tendered product/service.

SEAL AND SIGNATURE OF BIDDER



E-Tender No.: AGL/Head Office/Contract and Purchase/9/25-26/ET/9
[ICCP SYSTEM]
DESIGN, SUPPLY, INSTALLATION & COMMISSIONING OF ICCP SYSTEM



Form F-12

DECLARATION ON TENDER DOCUMENT DOWNLOADED (on Bidder's letter head)

No.

Date:

Aavantika Gas Limited,
Indore (M.P.)

Sub: Bid Document no. AGL/Head Office/Contract and Purchase/9/25-26/ET/9 [ICCP SYSTEM] for Design, Supply, Installation and Commissioning of ICCP System, Corrigendum & Reply to bidder's queries etc.

Sir,

We hereby confirm that we have read each page of the subject Tender document along with Corrigendum & Reply to bidder's queries thoroughly and understood the complete Scope of Work and other terms & conditions. We hereby also confirm that tender terms & conditions are acceptable to us and entire scope of work shall be executed as per Project Timeline at the Quoted Rates without any deviation.

Yours faithfully,

Signature
Name & Designation
For and on behalf of

SEAL & SIGNATURE OF BIDDER