VERTICAL SCRUBBERS & IT'S AUXILIARIES (SINGLE PACKAGE)
&
FLANGES & GASKETS (ON ITEM WISE BASIS)

FOB/C&F & FOR (Only for Local Manufacturers SRO 827(1)/2001)

Bids are to be invited on Single Stage Two Envelope Bidding Procedure
Under PPRA Rules 2026, Rule# 27 (b)

TENDER ENQUIRY NO: SSGC/FP/PT/EPADS-1/14564

Bid Closing date & time: 18-12-2026 at 1600 Hrs.
Bid Opening date & time: 18-12-2026 at 1630 Hrs.

Fixed Bid Security for Vertical Scrubbers (Package); USD=166,000 OR PKR=600.
Fixed Bid Security for Flanges & Gaskets; USD=37,000 OR PKR=130.

Note: The bidder is required to submit/upload the Valid PEC Certificate mentioned in the Tender Document/Advertisement (where required) along with the Bid on EPADS-v1.0 else the bid will be liable for rejection. This tender is available on the EPADS-v1.0 link: https://eprocure.gov.pk/#/auth/login. Bidders/suppliers/contractors should participate in this tender through EPADS-v1.0. Supplier should download tender document through EPADS-v1.0, fill BOQ/ Bid form/ schedule of requirement and upload all tender documents with sign and stamp through EPADS-v1.0 otherwise bid will be treated as rejected. The bidder must deposit/submit the physical fixed bid bond to the Tender Room (SSGC HO) before the bid submission date & time, otherwise the bid will be liable to be rejected.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

Venue:
Tender Room, CRD Building, Ground Floor
SSGC Head office complex Karachi -75300
Ph.99021024 – 99021173 - 99021116.

Sui Southern Gas Company Limited

Procurement Department, 2nd Floor, ST-4/B, Block-14, Sir Shah Suleman Road, Gulshan-e-Iqbal, Karachi-Pakistan. Phone: 99023074, 99021223, Fax: 99231583 www.ssgc.com.pk/ssgc

Sui Southern Gas Company Limited

Checklist for Bidders

Enquiry #: _____ Opening Date: _____

Time: _____ M/s, _____

Please ensure before submitting the bid, that following information/ Documents have been submitted / providing along the bid. Kindly Check ( ) appropriate box.

Sr. No.	Checklist Item	Action Required	(Yes/ No)
1	**Tender Document Availability on SSGC website & EPADS**	Ensure the bidder participates via EPADS.	
		Download the tender document from EPADS.	
		Fill the BOQ/ Bid Form/ Schedule of Requirement correctly.	
		Submit the bid on EPADS before the deadline; otherwise, bid will be rejected.	
2	**Physical Bid Bond Submission**	Submit the physical bid bond to the Tender Room (SSGC HO) before the bid submission. And upload Scanned copy of Bid bond on EPADS.	
		If Bid Bond in original not submitted, the bid will be rejected.	
3	**Bid Submission Deadline**	Confirm all documents (electronic and bid bond in original) are submitted before the specified bid submission deadline.	
4	**Signature and Stamp**	Ensure all Tender documents (including SBD & SSGC Tender Documents) are duly signed and stamped and uploaded on EPADS or else bid will be liable for rejection.	
5	**Additional Documents (if any)**	Verify if any other documents specified in Tender document are included in the bid on EPADS	
6	**Tender Fees**	Rs. 0 (Free)	
7	**Technical literature**	Original Technical literature is enclosed, if any duly signed & stamped	
8	**Any change in your current address, Phone Fax no & Email etc. intimated**	Bidders are required to intimate Procurement dept. for any change in Current address, email, contact information etc. in tender documents	
9	**Bid validity**	Bid Validity as specified is mentioned	
10	**Delivery / Completion period**	Delivery / Completion period has been specified as per tender terms	
11	**Corrections/Cutting/Overwriting**	All corrections/cutting/overwriting are singed & stamped	
12	**Sample**	Sample (if necessary) is enclosed as per form attached in Tender Document	
13	**Form-X**	Form- X Duly Signed & Stamped	
14	**Price Schedule / Manual BOQ**	The Price Schedule and Manual BOQ (where applicable) of SSGC tender documents shall be duly filled in, signed, and stamped by the bidder and placed in the Financial folder submission. In addition, the bidder shall ensure that the Financial Form is electronically filled in and submitted through EPADS. Failure to comply with the above requirements shall render the bid liable to rejection in Single Stage–Two Envelope method. All bids shall be evaluated electronically through the EPADS system.	
15	**Undertaking of Eligibility, Legal Capacity, Non-Bankruptcy, Non-conviction, Non-Blacklisting and No Conflict of Interest For Procurement participation**	Bidders are required to duly fill, sign & stamp the Undertaking of Eligibility, Legal Capacity, Non-Bankruptcy, Non-conviction, Non-Blacklisting and No Conflict of Interest For Procurement participation Form attached with the tender document.	

Note: Non-Availability of the above information/documents, or incomplete/incorrect statement on this checklist may result in rejection of the bid at / after the bid opening.

As per SRO296(1)/2023 dated 08th March 2023 "E-Pak Procurement Regulations, 2023" all bidders are advised to register in e-Pak Acquisition and Disposal System (EPADS).

Sui Southern Gas Co. Ltd. Procurement Dept. H.O Gas House

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Bidders Authorized Representative

Sui Southern Gas Company Limited (SSGCL)

Contents

Part – A		
Section – 1	General Terms & Conditions	Included
Section – 1A	Additional Terms & Conditions for FOB/C&F	Included
Annexure–A	Format of Bid Bond Bank Guarantee	Included
Annexure–B	Format of Performance Bank Guarantee	Included
Annexure–C	Declaration by Supplier (Integrity Pact)	Included
Section – 2	Special Conditions of Tender Document	Included /Not required
Part – B		
Section – 3	Bid Form (Schedule of requirement)	Included
Section – 4	Specifications/Drawing (if applicable)	Included/Not required
Section – 5	Undertaking of Compliance with Integrated Management System (IMS) Manual and Blacklisting Mechanism	Included

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

SSGC

SUI SOUTHERN GAS COMPANY LIMITED
Procurement Department

M/s. _____

_____

_____

Tender Enquiry No. _____

INVIATION TO BID

Sui Southern Gas Company Limited, (SSGCL) has pleasure in extending you an invitation, to submit bid for the subject material according to Terms and Conditions specified in the attached Tender Document. Please read following instructions before submission of bid:

1. Bids are to be submitted in sealed envelope provided with the tender, indicating Tender Enquiry Number & its opening date and time on the face of the envelope.
2. Bid Bond @ 2% of the total FOR / FOB value shall be enclosed with the bid without which bid will be rejected and returned to bidder unannounced. The Bid Bond shall remain valid till the last date of the month in which it is expiring.
3. In case the bid opening date falls on a holiday or due to some unavoidable circumstances, it is not possible to open on scheduled date, it will be opened on next working day at the same time and at the same venue.
4. The bidder shall bear all expenses associated with the preparation and delivery of its bid/sample and the Company will in no case be liable in this respect.
5. Prospective bidder requiring any information or clarification of the tender may notify the same by fax or at the mailing address. The Company will respond to any request for explanation or clarification, if received within reasonable time prior to submission of bids.
6. The Company reserves the right to cancel, add, delete or amend tendered items/quantities/any part of the tender during the bidding period without assigning any reason. However, bidders shall be informed about it prior to bid opening/process.
7. The Company reserves the right to accept or reject any bid or part of a bid or to annul the bidding process and reject all bids at any time prior to award of contract/purchase order without thereby incurring any liability to the affected bidder(s).
8. In case of Single stage two (02) envelope bidding procedure (if mentioned in press advertisement & Tender document), sealed technical offer & sealed bid shall be submitted in separate envelopes Bid Bond will be enclosed with "commercial" bid. "Technical Proposal" and "Financial Proposal" is to be mentioned on the top of the envelope. Technical offers will be opened and evaluated first. Financial offers of only technically compliant bidders will be opened at a later intimated date in presence of bidder's representatives. Financial proposal of technically non-compliant bidders will be returned un-opened along with their bid bond.
9. For Tenders invited on F.O.B/C&F basis, conditions as mentioned in Section-1A will also apply.
10. The Company will appreciate confirmation by fax No 92-21-99231583 or email at mmte@ssgc.com.pk or to DGM (Procurement) of your intention to submit the bid and if not interested in submission of bid, it will be appreciated if it is intimated through fax or email with mentioning of reasons.
11. Bids are required to be submitted at:

    Tender Room, CRD Building, Head Office Complex, Sir Shah Suleman Road Gulshan-e-Iqbal, Karachi Pakistan. Ph. 0092-21-99021024, 0092-21-99021223, 0092-21-99021279, 0092-21-99013074, Fax # 0092-21-99231583, Email: mmte@ssgc.com.pk

Hope and look forward for your valued participation.

Thanking you

Yours sincerely

For General Manager (Procurement)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

Section – I

General Terms & Conditions

1. **Submission of bids:**

1.1. Bids are to be submitted in sealed envelope provided with the tender (in such a manner that contents are fully kept enclosed and cannot be seen until opened) indicating tender enquiry number, its opening date and time on the top of the envelope. Envelopes shall be addressed to General Manager (Procurement Department) on the address provided on "invitation to bid". Envelope shall indicate the name and address of the bidder for returning the bid in case it is declared late or submitted without bid bond.

1.2. Sealed bids (as above) shall be mailed/submitted/dropped in tender box placed at Tender Room, CRD Building, SSGC Head Office. Bids are to be delivered on or before closing time after which bid will not be entertained. In case bid is sent through courier, the same shall be delivered at least half an hour before scheduled opening time.

1.3. The Company may at its discretion extend the closing date for the submission of bids, in which case all rights and obligations of the purchaser and bidders previously subject to the closing date will thereafter be subject to the date extended. However, any request for extension received from prospective bidders less than one week prior to bid opening date may not be entertained. In case of extension in bid opening date, the same will be advertised in press and simultaneously shall be intimated to prospective bidder who had purchased the tender documents.

1.4 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct the errors made by the bidder, in case of any correction etc. it shall be signed and stamped by the person signing the bid.

1.5. The quoted price shall be inclusive of all duties/taxes except GST, which is to be mentioned separately. The supplier shall declare (if applicable) regarding non-applicability of GST for which documentary evidence shall be enclosed or could be produced upon demand.

1.6. Rates shall be item-wise, as given in price schedule/schedule of requirement/Bid Form unless otherwise specified.

1.7. Bidder is responsible for timely delivery of bids at location specified 1.2 above. Company will not be responsible for misplacement/ tampering/non-attendance/delay or any other incident in case the bid is not delivered at the designated place & time.

1.8. Any bid received late after the closing date and time, will be rejected and returned unopened.

1.9 The quotation shall only be acceptable on/as per Bid Form. In case for foreign tender when Local Agent submits bid on behalf of different bidders, a separate Bid Bond for each Bid is required. Likewise for tender when bidder submit alternative bids a separate bid bond for each bid is required or else bid will be liable for rejection.

1.10 Deviation from tender terms and conditions isnot allowed. However, in unavoidable circumstances, these shall be mentioned at the bottom of "Section 3: Bid Form" deviation on any other page will not be entertained.

1.11 Discount offered (if any) shall be mentioned on the "bid form" only.

1.12 The bidder(s) or their authorized representative shall put his full signature with stamp & date on each page of tender document as well as enclosure vis-a-vis drawings, specifications etc. Any correction, overwriting shall be duly signed & stamped.

1.13 The bid is to be completed and returned to the Company in accordance with, General terms & conditions. General terms & conditions duly signed & stamped (as a token of acceptance) shall be submitted along with Bid Form (Price schedule) duly completed as per requirement. However, specifications/drawing is to be retained by bidder for their future references.

2. **Eligible Countries / bidders:**

The invitation for bids is open to all manufacturers/suppliers/stockiest/dealers/pre-qualified bidders but is not applicable to those countries where inter trade protocols with Pakistan do not exist or those countries from where imports are not allowed by Government of Pakistan.

3. **Qualification/Disqualification of Suppliers:**

The Company, at any stage of the procurement proceedings, having credible reasons for or prima facie evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information regarding their professional, technical, financial, legal or managerial competency,

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whether already pre-qualified or not. The Company shall disqualify a supplier or contractor if it finds, at any time that the information regarding their qualification as supplier or contractor was false and materially inaccurate or incomplete. Black Listing Mechanism.

4. **Joint Ventures:**

In the event that the successful bidder is a joint venture (formation of two or more companies), the Company will require an undertaking on judicial stamp paper that the parties to the joint venture accept joint and several liabilities for all obligations under the purchase order/contract.

5. **Clarification of tender documents:**

Prospective bidders requiring any further information or clarification of the tender documents may notify, the Company in writing or by fax or at the Company's mailing address indicated in the "invitation to bids". The Company will respond in writing to any request for information or clarification of the tender documents, if received five working days prior to closing date for the submission of bids prescribed by the Company. The Company response (including an explanation of the query) will be sent in writing or by fax/e-mail to all prospective bidders who have purchased the tender documents. Verbal instructions/reference will not be acceptable.

6. **Modification and withdrawal of bid:**

6.1 The bidder may modify or withdraw its bid after the bid submission, provided the written notice of the modification or withdrawal is received by the Company prior to the deadline prescribed for submission of bid. After the bids/quotations are opened, no bidder shall be allowed to revise, propose or request any change in the bid.

6.2 The bidder's modification or withdrawal notice shall be sealed and addressed to GM (P). A withdrawal notice may be sent by fax followed by a signed copy.

6.3 Bids once opened cannot be withdrawn during validity period.

7. **Bid validity:**

All offers shall remain valid up to 90 days (120 days in case of Two Envelope bidding procedure) from the date of opening of bids, until any further extension agreed by the bidder. If the bidder agrees for extending bid validity the bid bond shall also be extended accordingly. A bidder giving extension to his bid validity will not be required or permitted to modify his bid. If there will be any query/clarification or extension request asked by the Company, the bidder should reply the same within 7 days after receipt of the same and if bidder takes more than 7 days the delay in reply will be added to their bid validity period.

8. **Rate Escalation:**

8.1 **All items except line-pipe:**

Quoted prices shall remain valid, firm, irrevocable and fixed till the fulfillment of obligations by the bidder and will not be subject to escalation / change on any account.

8.2 **Line-pipe only:**

8.2.1 Bidders are essentially required to submit detailed breakdown of rates indicating per ton price of:
a) H.R. Coil.
b) All other charges (including wastage, transportation, conversion cost etc).

8.2.2 Rate / price offered by the bidders shall be firm and irrevocable. However bidder offering pipe manufactured from Pakistan Steel Mills (PSM) HR coil are required to submit certified documentary evidence of HR coil rates. Adjustment in line-pipe rates (from the bid opening date till the currency of order) due to change in rate of HR coil manufactured by PSM is admissible to the extent of raw material cost without wastage. The bidders are required to submit certified documentary evidence of HR coil rates published by PSM, at the time of submission of bids. SSGC may verify the document / rates from PSM.

8.2.3 The variation clause however shall not be applicable on line-pipe quantities which were delivered within 20 days of the announcement of the variation (both days inclusive) in price of HR coil by PSM.

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8.2.4 The variation clause also shall not be applicable on the line pipe quantities delivered after the specified delivery schedule (total or monthly consignment wise)

8.2.5 No escalation is applicable on line pipe manufactured from imported HR coil.

9. **Bid bond (earnest money):**

Bid bond equivalent to two percent (2%) of the total offer value, in favor of Sui Southern Gas Company Ltd. shall accompany the bid if bid value is above Rs.500,000 in the form of pay order, demand draft, call deposit receipt or a bank guarantee (specimen of bank guarantee is attached at Annexure-A), issued by a scheduled bank in Pakistan. The bid bond shall remain valid for 120 days (150 days in case of Two Envelope bidding procedure) unless specified otherwise. The bid bond shall be returned/refunded to the un-successful bidders while the bid bond of the successful bidder shall be retained, till submission of Performance bond (if applicable). Bids without bid bond will not be considered. In case the order value is less than Rs: 500.000 the bid bond in lieu of performance bond will be retained till fulfillment of obligations by the supplier. However, in either case the bidder is responsible to arrange the extension the bid bond validity as per requirement. If bid bond submitted by the supplier is more than 2% of ordered value, it may be replaced with appropriate value. If order value is less than Rs. 500,000, the bid bond will be returned along with the order. Bid bonds of non-compliant bidders may be released during evaluation process. The bid bond may be forfeited if a bidder withdraws the bid duringvalidity period specified by the bidder or if successful bidder fails to:

- Accept purchase order.
- Furnish performance guarantee in accordance with clause 16 of Section 1,
- Supply material as per requirement and delivery schedule.

9.1 In the event of bid bond validity following short of the prescribed period of 120 or 150 days as the case may be either (i) due to extension in the bid submission date or (ii) where so required by the procuring agency, then in such an event it shall be mandatory on the padder to extend the bid bond validity upto 120/150days within 30 days of the opening of technical proposal / bid, and / or where so required by the procuring agency.

9.2 In the event of the bid security amount deposited / furnished by the bidder falls short by 10% of the requisite Bid security amount. The procuring agency keeping in view the nature of the procurement may consider and allow the bidder to deposit / furnish the balance 10% amount, provided the bidder does so within 15 days of the opening of the bid. Notwithstanding that all other terms & conditions have been fully complied with.

10. **Opening of bids:**

Bids will be opened in presence of bidders or their authorized agents at the address provided on "invitation to bids". The bidder's representatives who are present shall sign the bid opening sheet (attendance sheet) to mark their attendance/witness. Commercial contents of bids will be announced/recorded in bid opening sheet.

11. **Preliminary Examination of bids:**

11.1 The Company will examine the bids to determine their completion, computational errors, provision of guarantees, authorized signature and other related matters.

11.2 Arithmetic errors will be rectified on the following basis. Discrepancy between unit price and the total price obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price will be corrected. Discrepancy between total bid amount and the sum of total prices, the total prices shall prevail and the total bid amount will be corrected.

11.3 Prior to a composed evaluation, the Company will determine the substantial responsiveness of each bid to the bidding documents. In Company's opinion a substantially responsive bid is the one which conforms to all the terms and conditions of the bidding documents without any material deviation.

11.4 Bid determined as not substantially responsive will be rejected by the Company and cannot subsequently be made responsive by the bidder through correction of the non-conformity.

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12. **Clarification of submitted bids:**
To assist in the examination, evaluation and comparison of bids, the Company may at its discretion inquire any clarification from bidder about their bid. All responses by bidders shall be provided in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

13. **Technical Literature & Samples:**

The Bidder(s) shall submit the following:

13.1 Samples (if applicable/required)

13.2 Original or legible copy of technical literature/performance characteristics

13.3 Test Certificates (if applicable/required)

13.4 Documentary evidence for legal import in case of imported material. (At the time of delivery when quoted on FOR basis)

13.5 In case of pipeline operation material bidders must also attach a "proof from supplier/ manufacturer, that goods offered have been used successfully on a high pressure natural gas pipeline elsewhere under tropical climatic conditions.

13.6 **Specification Compliance Sheet:**
Company requires a clause-by-clause commentary on the Specifications, demonstrating the materials responsiveness to those specifications or a statement of deviations and exceptions to the provisions of the specifications, if so required/desired. For purposes of the commentary to be furnished pursuant to above, the bidder shall note that standards for workmanship, material and equipment and references to brand names or catalogue numbers, designated by the Company in the specifications are intended to be descriptive only and not restrictive. The bidder may substitute other authoritative standards, brand names and/or catalogue numbers in its bid provided which demonstrates to the Company's satisfaction that the substitutes are equivalent or superior to those designated in the specifications by the Company.

Bid which does not possess above documents, certificates etc., may be considered technically Non-compliant.

13.7 The offer shall be accompanied with all technical data/documents/certifications as required under the tender specifications. Evaluation shall be carried out on the basis of data/ documents/certifications submitted with the bid. No clarification, additional information may be sought / accepted after bid opening.

13.8 Deviation to technical specifications:
The bidder shall fill the "technical compliance sheet" and mention offered specifications along with reference to its technical brochure/literature (page/clause No.etc). Statement such as "Compliant" or "Confirmed" is not acceptable. Deviation to tender terms and technical specification is not acceptable. However, if bidder feels to mention minor deviation, the same shall be referred categorically on the "Bid Form" as well as on the technical compliance sheet stating reference of its technical data sheet/brochure. In case of insufficient information, data or documents, the Company is not liable to seek clarification and the bid may be determined non-compliant on provided information.

14. **Award/Evaluation Criteria:**

14.1 In case of locally manufactured items e.g. service line material & meter components, manufactured by local vendors, the lowest bidder will be awarded maximum quantity as per his declared capacity and past performance in respect of delivery and quality. New vendors / manufacturers shall also be considered for placement of a purchase order up to a maximum of 10% of the tender quantity if their submitted sample has been tested and approved and provided they have quoted lowest price or agree to accept the order on lowest received price.

14.2 Generally for other items other than above, ordering shall be based on technical compliance and lowest quoted price. Supplies may be subject to pre shipment inspection and post qualification by a third party in case of foreign material. If required during the process of manufacturing and / or inspection, SSGCL representative may visit the manufacturer facility to witness the manufacturing / inspection process.

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14.3 Evaluation may be carried out both on item or on group of items/single or multiple package basis depending upon the nature of requirement exclusively at the discretion of the company to ensure economic procurement.

14.4 Company reserve the right to settle the final terms of supply with the lowest evaluated and commercially responsive bidder: Any effort by the bidder (s) to influence the outcome of bid evaluation or placement of purchase order may result in disqualification of the bidder.

15. Loading of Bids:

Bids may be loaded with following if offer found to be deviated from specifications, delivery schedule, terms & conditions without stating the amount involved in such deviation by following method:

15.1 The cost of compensation / loading amount for that item shall be derived from the bid itself.

15.2 If 15.1 is not possible, average of rates of other bidders, who have quoted for that item conforming to technical specification, shall form the basis for cost compensation/loading.

15.3 The company will encourage participation by local bidders who will be given price preference. Landed cost factor shall be determined as per prevailing Government policy / SRO. However they will submit details of local value addition on raw material imported by them and percentage of locally manufactured component with documentary evidence.

16. Performance Bond:

16.1 In case purchase order value is above Rs:500,000, the successful bidders shall submit performance bond guarantee which is to be submitted within ten days from receipt of LOI or order along with integrity pact. The successful bidders shall submit a performance bank guarantee (PBG) in the form of a pay order or bank guarantee (specimen attached at Annexure-B) issued by a scheduled bank in Pakistan, for an amount equivalent to 10% of the total value of the purchase order or as specified, in the "letter of intent". The performance bond unless specified otherwise; shall remain valid till;

16.1.1 Completion of final satisfactory delivery in case of consumable items.

16.1.2 12-18 months from the date of satisfactory delivery of the equipment/machinery.

16.1.3 Satisfactory delivery/installation of system in case the installation responsibility is on supplier's part.

16.1.4 120 days in case of chemicals.

16.1.5 In case of locally manufacturing item, the PBG equivalent to 3 months delivery schedule will be required after placement of purchase order which should remain valid till completion of final satisfactory delivery of the ordered quantity.

16.1.6 In case of small diameter line pipe (MS/MDPE) the PBG shall remain valid up to 3 months after completion of satisfactory final delivery.

16.1.7 In case of Vehicles, Manufacturer's Warranty is required in lieu of PBG.

16.2 The guarantee will be released after completion of this period, subject to satisfactory performance of the supplied equipment/machinery/system as mentioned at 16.1 above. The supplier shall keep the guarantee valid at their cost until fulfillment of the obligations.

16.3 In case the bidder does not submit the performance bond as specified, the delivery time of goods shall be deemed to have commenced 10 days (15 days in case of import) from the issuance of letter of intent/purchase order. The proceeds of the performance bond shall be payable to the Company as compensation for any loss resulting from the supplier's failure to complete its work under the purchase order/ contract. The validity period of the performance bond is to be extended if the delivery date/period is being extended mutually by the Company/Supplier.

14.

16.4 The performance bond will be discharged / returned by the Company not later than thirty (30) days following the date of completion of the supplier's work under the purchase order/contract including any warranty/guarantee/performance obligations as specified in the special conditions of contract. The supplier shall not be absolved of their liability to perform in case of encashment of performance bond by the Company, who shall have the right to claim and receive all damages/losses incurred due to non-performance.

16.5 The Company shall promptly notify the supplier in writing for any claim arising under this guarantee. Upon receipt of such notice, the supplier shall promptly repair or replace the defective goods or parts thereof, without cost to the Company other than, where applicable the cost of inland delivery of the repaired or replaced goods or parts from the port of entry to the final destination.

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16.6 If the supplier, having been notified, fails to rectify the defect (s) in accordance with the purchase order/contract, the Company may proceed to take such remedial actions as may be necessary at the supplier's expense. Any amount payable by the supplier under this clause may be recovered by the Company by withdrawing from the performance bond without having to notify or seek the approval of the supplier.

16.7 Nothing herein contained shall be construed to limit supplier's obligation of performance of the order/contract to the value of the performance bond.

16.8 **Guarantee/Warranty:** In case where performance guarantee is not applicable, the supplier shall confirm that all suppliedgoods under the contract/purchase order are new, unused, of the most recent or current modelsand incorporate all recent improvements in design and goods unless provided otherwise in the contract/purchase order. This guarantee shall remain valid for a period of twelve to eighteen months after the goods have been delivered or commissioned.

17. **Purchase Order/Contract:**
Purchase order of quoted material may be placed on fulfillment of conditions mentioned at 14 &16 above which is through formal confirmation for proceedings with the suppliers.

18. **Assurance:**
The successful bidder will be required to give satisfactory assurance of its ability and intention to deliver the goods, pursuant to the tender enquiry and contract within the time set forth therein.

19. **Force Majeure:**

19.1 In the event of either party hereto being rendered unable, wholly or partially, by force majeure circumstances to carry out its obligations under the purchase order/contract documents, such party shall give notice and full particulars and other satisfactory evidence of such force majeure circumstance(s) in writing or by fax to the other party within 7 days after theoccurrence of the cause(s). Relied upon the obligations of the party giving such notice so far as they are affected by such force majeure shall be suspended for the period during cause(s) shall, as far as possible, be remedied and obviated with all reasonable dispatch. The term 'force majeure' as employed herein, shall mean acts of God or public enemy, civil insurrection, fires, floods, earthquakes or other physical disasters, order or request of governments, blockade or embargo. It is, however, clarified that strikes, lockouts, shortage or non-availability of raw materials, rains, and disturbances, other labor dispute or congestion's in ports on the supplier's side shall not be included in the term 'force majeure'.

19.2 In case the force majeure contingencies last continuously for more than one month, both parties will agree on the necessary arrangements for the further implementation of the purchase order/contract. In case further implementation is unforeseeable and impossible, both parties shall arrange for the termination of the purchase order/contract, but without prejudice to their rights and obligations prior to such termination it being understood that each party shall fulfill its contractual obligations so far as they have fallen due before the operation of force majeure.

20. **Amendment in purchase order/contract:**

20.1 The Company may at any time by a written notice to the supplier make changes within the general scope of the purchase order/contract in any one or more of the following:-

20.1.1 Drawings, designs or specifications where goods to be furnished under the purchase order/contract are to be specifically manufactured for the Company.
20.1.2 The method of shipment or packing.
20.1.3 The place of delivery.
20.1.4 Quantities of item up to a maximum variance of +15% of purchase order/contract value.

20.2 Company reserves the right to increase/decrease the quantities or delete any or all items listed in the price schedule/schedule of requirement/bid form without assigning any reason.

20.3 Upon notification by the Company of such modifications the supplier shall submit to the Company an estimated cost for the proposed modification within ten (10) calendar days of receipt of notice of the modification and shall include an estimate of the impact (if any) of the modification on the delivery dates under the purchase order/contract, as well as a detailed schedule for the execution of the modification, if applicable.

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20.4 The supplier shall not perform modification in accordance with clause 20.1 above until the Company have authorized a modification order in writing on the basis of the estimate proyided by the supplier as described in clause 20.3.

20.5 Modification mutually agreed upon shall constitute a part of the work under the purchase order/contract and the provisions and conditions of the contract shall apply to the said modification.

20.6 If modification made by the Company results in a variation in purchase order/contract quantities whose net cost effect is within 15% of the total value then the original purchase order/contract rates would be applicable. Any "modification" affecting the quantities and the corresponding cost effect beyond 15 percent would be mutually agreed upon between the Company and the supplier.

21. Extension in delivery period:

21.1 Delivery of the goods shall be made by the supplier in accordance with the schedule of requirement and delivery period; however, the supplier may claim extension of the time limits as set forth in the schedule of requirements and delivery period in case of

21.1.1 Modification in the goods ordered by the Company pursuant to clause 20.

21.1.2 Delay in provision of any services which are to be provided by the Company (services provided by the Company shall be interpreted to include all approvals by the Company under the contract).

21.1.3 Delay in performance of work caused by orders issued by the Company.

21.2 The supplier shall demonstrate to the Company's satisfaction that it has used its best endeavors to avoid or overcome such causes for delay and the parties will mutually agree upon remedies to mitigate or overcome such causes for delay.

21.3 Not withstanding clause 21.1 above, the supplier shall not be entitled to an extension of time for completion unless the supplier at the time of such circumstances arising, immediately has notified the Company in writing of any delay that it may claim as caused by circumstances pursuant to clause 21.1 above and upon request of the Company, the supplier shall substantiate that the delay occurred is due to the circumstances referred by the supplier.

22. Packing:

22.1 The material shall be in original/sealed packing to ensure delivery without any damage during transit.

22.2 If any of the good is discovered to be damaged or unacceptable at the point of embarkation, the supplier shall be responsible for replacement of those goods free of any charge and cost to the Company, within the delivery time schedule of the contract/purchase order.

22.3 The identification marks showing contents, quantity and contract/purchase order number shall be printed on each skid/metal container/case containing one copy of invoice & packing list.

22.4 Handling and Transportation:
The Supplier shall arrange for the proper stacking of the Goods and for its proper storage and lashing and for other such provisions/suitable measures as may be necessary to safeguard against movement and damage to the Goods from the point of loading to its designated destination.

23. Inspection:

23.1 Pre-delivery inspection may be carried-out at the premises of supplier(s) and/or post delivery inspection at company's any location, by the appointed inspector/inspection team, third party inspectors appointed by the Company.

23.2 The Company reserves the right to arrange inspections and tests to the goods or manufacturing processes at any stage at any of the premises of the supplier or its subcontractor(s) or and at the point of delivery end at the goods final destination. Where conducted on the premises of the supplier or its sub-contractor(s), all reasonable facilities and assistance including access to drawings and production data shall be furnished to the inspectors at no charge to the Company. Such inspection, however, shall not relieve the Supplier to fulfill the obligations under the

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purchase order/contract. If goods fail to conform to the specifications, the Company may reject them.

24. **Delivery:**

24.1 Free delivery at any of the following locations, unless specified otherwise:

24.1.1 R & D Section, Stores Department Abul Hasan Ispahani Road, Karachi.
24.1.2 R & D Section, Stores Department F-37, SITE Karachi.
24.1.3 R & D Section, Stores Department F-76, Dope Yard SITE, Karachi.
24.1.4 Meter Manufacturing Plant, Sir Shah Suleman Road, Gulshan-e-Iqbal Karachi.
24.1.5 Khadeji Store, 57th Kilometer at Super High way Karachi.
24.1.6 Any other location specified by the company.

24.2 Delivery period shall commence after 10 days (15 days in case of import) of the issuance of letter of intent or from the date of purchase order/contract whichever is earlier, unless otherwise specified.

24.3 The supplier shall replace defective material at their risk & cost including transportation, duty, taxes etc.

24.4 GST Invoice if applicable be submitted at R&D section Stores Department along with material & delivery challan.

24.5 Unloading and stacking through cranes, fork lifters, labor etc. will be arranged by supplier at delivery site (for material like Pipes/Heavy Machinery & Equipment etc).

24.6 Delivery is to be made strictly in accordance with "delivery schedule" as specified by the Company.

24.7 The rejected material is to be collected/lifted by the supplier within a maximum period of one month after its intimation by the Company. Beyond specified period, the Company shall not be responsible for storage/safety of the uncollected material.

25. **Delivery Failure:**

25.1 In case the supplier fails to supply/ship the material within the stipulated period, the Company have the right to make an alternative arrangement for the purchase of the goods on such terms as may be offered. In such event all losses, cost and charges sustained/incurred by the Company on stated purchase shall be recovered from the Supplier without prejudice to any other right or remedy available to the Company which includes recovery of losses sustained by the Company from any due payment of the said supplier.

25.2 In the event Company remains unable to make such alternative arrangements, the Company has the right to recover from the supplier any or all losses sustained as a result of the supplier's failure to ship/supply the goods as per schedule of delivery.

25.3 In the event Company being forced to purchase any quantity or any other alternative not specified in this document as a result of any failure to supply/ship the material, the Company shall have the right to terminate the contract/purchase order without prejudice to any other rights or remedies available to the Company.

26. **Payment:**

26.1 The supplier after delivery of goods and its acceptance shall submit invoice to Finance Department of the Company, containing following information i.e.

(a) Purchase order No. & date
(b) Items
(c) Quantity
(d) Price
(e) Invoice value
(f) Point of delivery
(g) Delivery challan indicating delivery date, etc.

Payment will be made within 30 days of completion of stated formalities.

26.2 Income Tax @ 3.5% or as applicable under the prevailing government rules will be deducted at source (except where the supplier provides an income tax exemption certificate). Quoted price shall be inclusive of all taxes, except GST, which shall be mentioned separately. Supplier(s) are required to submit signed and stamp acknowledgement slip, Sales Tax return, Annex "C" & Annex "I" (whichever applicable) in which Sales Tax(of relevant Sales Tax invoice) is paid.

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26.3 In case supplier is not liable to pay tax under the income tax ordinance or is liable to pay tax at a lower rate the supplier shall obtain a certificate from the tax authorities in Pakistan to that effect. In case the required certificate is not produced by the supplier prior to the date of payment, then the Company shall deduct tax at source from the gross payment payable to supplier.

27. Liquidated damages:

27.1 If supplier fails to deliver ordered material within the stipulated period/scheduled time specified in purchase order, Company, without prejudice to any other remedies, shall deduct from the bill or any other due payments/guarantees, as liquidated damages, a sum equivalent to 0.1% per day of the undelivered goods up to maximum 10%. The liquidated damages shall also be applicable for the cancelled quantity of goods under clause 28.

27.2 Whenever liquidated damages become payable, in the event that delivery of all goods and equipment is not made within the time period specified except on account of force majeure, the Company shall quantify the same and shall serve notice to the supplier requiring payment thereof. If the supplier fails to remit payment within 15 days of receipt of such notice, the Company shall forth-with become entitled to recover the same without recourse to the supplier, by calling upon The Performance Bond, withdrawals by way of liquidated damages shall not reduce the value of the Performance bond.

27.3 The payment of liquidated damages shall not relieve the supplier from performing and fulfilling all its obligations under the contract/purchase order, nor shall the right and entitlements of the Company be affected or reduced in any manner.

27.4 In case of order placed on FOB/C&F basis, the delivery period shall commence from the date of confirmation of L/C. However, delayed submission of PBG period in excess of time limit will be deducted from the delivery period for the purpose of recovery of late delivery charges.

27.5 The liquidated damages shall be the sum equivalent to point one (0.1%) percent of the Contract price of the delayed goods as unperformed services for each day of delay, until actual delivery or performance, up to a maximum deduction of ten (10) percent of the Contract price. Once this maximum is reached, the Company may consider termination of the Contract at the risk and cost of the Supplier.

28. Default by Supplier:

28.1 The Company may, without prejudice to any other remedy by written "notice of default" sent to the supplier, cancel the purchase order whole or in part; if:

28.1.1 The supplier fails to deliver any or all of the ordered quantity as per specified delivery schedule or any extension thereof granted by the Company

28.1.2 The supplier fails to perform any other obligation(s) under the "purchase order".

28.1.3 The Company during the delivery period has reasons to believe that the supplier will not be able to fulfill the obligations under the purchase order/contract.

The Company prior to exercising its right to cancel the purchase order/contract shall issue notice to the Supplier specifying the default(s) and the supplier shall submit an explanation within seven (07) days of receipt of such notice. If such explanation is not furnished within the stipulated time or if so furnished, is found to be unsatisfactory and/or the default(s) continues, purchase order/contract may be cancelled. The Company in addition to cancellation of purchase order/contract may suspend/cancel the enlistment of supplier.

28.2 The Company shall have the right to terminate/cancel the contract/purchase order concluded between the supplier and Company; if:

28.2.1 The successful bidder fails to furnish the performance bond as under clause 16 thereof.

28.2.2 The supplier fails otherwise to perform, fulfill or comply with terms, conditions, regulations and requirements of the contract/purchase order to carry out the work in accordance with the provisions thereof or abandons the shipment.

28.2.3 The supplier becomes bankrupt or insolvent or makes an assignment for the benefit of its creditors.

28.2.4 One or more consignments of material delayed by a period of more than three months or non-supplied.

28.2.5 Rejection of manufacturing items as a result of observation by inspection team

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28.2.6 Penalty on higher rejection rate of supplied goods.

28.3 The supplier shall have the right to terminate the contract/purchase order if:-

28.3.1 The Company fails to establish the "letter of credit" within the stipulated period as required.

28.3.2 The Company becomes bankrupt or insolvent or makes an assignment for the benefit of its creditors.

28.3.3 The Company is in default and breach of its obligation and liabilities under the contract/purchase order.

29. **Resolution of dispute:**

The Company and the supplier shall make every effort to resolve the disagreement or dispute arising between them amicably by direct discussion under or in connection with the purchase order/contract.

30. **Applicable law:**

The purchase order/contract shall be governed by and interpreted in accordance with the laws of the Islamic Republic of Pakistan.

31. **Declaration/Integrity Fact/Certification:**

31.1 Successful supplier shall furnish the declaration (specimen attached at Annexure-C) within 10 days after issuance of LOI/order /contract if the order/contract value becomes Rs:10 million or above.

31.2 In case of F.O.B/C&F Purchase order/Contract, the Principal as well as "local agent" both will sign the "integrity pact" as required under this clause.

31.3 Bidders to submit a certificate on Rs:100/- non-judicial stamp paper certifying that they are not black listed by the Government/Autonomous bodies and declared as defaulted supplier.

32. **Arbitration/resolution of disputes:**

32.1 Any difference or dispute arising out of or in connection with the contract between the Company and the supplier which can not be amicably resolved shall be referred to arbitration in Karachi, Pakistan, to two arbitrators, one appointed by each party of such difference/ dispute. In case the judgment of the said Arbitrator being at variance, the matter shall be referred to an "umpire", who shall be appointed by both the side Arbitrators. The umpire shall be retired judge of a High Court or the Supreme Court of Pakistan. Such arbitrators and umpire shall together proceed to adjudicate he disputes in accordance with the Arbitration Act, 1940, as amended from time to time.

32.2 Prior to exercising any right by the Company or supplier to terminate the purchase order/ contract under the conditions stipulated above, a return notice shall be required to be given to the other party specifying such default(s) and calling for submission of an explanation within seven (7) days of receipt of such notice. If such explanation is not furnished within the stipulated time or if so furnished, is found to be unsatisfactory, and the default(s) continuous, the purchase order/contract be terminated with notice to other party.

32.3 The agreement shall be governed by Law of Islamic Republic of Pakistan and the arbitration language shall be English.

32.4 During the course of arbitration, the supplier shall not suspend the performance of his esponsibilities and obligations under the contract unless authorized by the Company in writing to do so.

32.5 In addition to the remedies as stated above, there is a "grievance committee" formed by the Company which can be approached by supplier in case of non-settlement of issues at any stage if supplier feels that settlement is not insight or not justified.

33. **Redressal of grievances by the procuring agency.-**

33.1 Grievance Committee is in place to address the complaints of bidders that may occur prior to entry into the procurement contract.

33.2 Aggrieved bidder may lodge a written complaint concerning his grievances not later than fifteen days after the announcement of the bid evaluation report.

33.3 Bidder is to submit complaint on letter head duly signed by the authorized person. Tender reference, details / nature of complaint, complainant active telephone, cell, postal address, email

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address must necessarily be provided. Incomplete / anonymous complaints will not be responded at all.

33.4 The Committee shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint

33.5 Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.

34. Blacklisting of Suppliers and Contractors:

The Company shall permanently blacklist or temporarily debar (at least for 6-months from participating in SSGC's tender proceedings) if, a supplier or contractor who either constantly fails to perform satisfactorily performance or found to be indulged in corrupt and fraudulent practices as defined below:

34.1 Corrupt and fraudulent practices" includes the offering, giving, receiving, or soliciting of anything of value to influence the action of an official/Company.

34.2 If the supplier/contractor found responsible for the detriment of the Company during proceedings of procurement/contract, process or its execution.

34.3 Misrepresentation of facts in order to influence the procurement process or the execution of the purchase order/contract.

34.4 Collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non- competitive levels and to deprive the Company of the benefits of free and open competition.

35. Supplier's Guarantee and Responsibilities:

The Bidder/Supplier shall guarantee that the materials supplied against this tender enquiry is new and is of acceptable quality and has been tried and apptoved on similar jobs. The validity and scope of such guarantee will be in accordance with conditions stated in this document. In case the opinion of the Company the Goods fail to perform the services in accordance with the specifications specified in Section IV due to manufacturing defects/defective material and/or workmanship, the Supplier shall replace, repair or reconstruct such Goods at his own cost in Pakistan wherever the Goods shall be located so that such Goods shall be restored to such conditions that it shall perform in satisfactory operating condition or to replace it with new Goods at Supplier's cost so that the goods shall perform in accordance with the specifications and details as set forth in the Contract/tender documents. If the Supplier shall fail to do so after expiry of 15 days notice to this effect served on him by the Company, the Company shall be at liberty to repair, replace and/or reconstruct the Goods at its costs provided in the event, the Company shall be entitled to recover total cost of such replacement form the Supplier withdrawing from the Performance Guarantee.

36. Language:

The bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the bidder and the Company shall be written in English language. Any printed literature furnished by the bidder may be written in another language provided that this literature is accompanied by an English translation in which case for purpose of interpretation of the bid, English translation shall govern.

37. Vehicle Applied by Authorized dealer of local manufacturer :

Incase of vehicle supplied ly authorized dealer of local manufacturer, the authorized dealer will be responsible to get the vehicle (s) registered through Excise Department Government of Sindh and provide Original Registration book / Original Registration Invoice / Tax payment receipt / other related documents & provide the vehicle (s) number plate (s) to SSGC. Registration fee will be reimbursed by SSGC subject to submission of Government of Sindh Excise Department receipt.

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Additional Terms for Tenders on F.O.B/C&F basis:

1. **Submission of bids:**

1.1 Bid bond (Earnest money) @ 2% of the total F.O.B value as per clause 9, of section 1 of "General terms & conditions" is required to be submitted with the bid. It may be noted that bids without bid bond will be rejected and returned to bidder.

1.2 In case the bidder is manufacturer the bid shall either be completely prepared by the foreign bidder including signing and stamping of all documents. In case, such documents are being signed by the local agent of the bidder, the bid shall essentially include supplier's original Performa invoice and an original authority letter in favor of local agent to sign the documents on their behalf. The bid is liable for rejection if these conditions are not met.

1.3 In case of Bidder offering to supply goods which the bidder did not manufacture or otherwise produce, the bidder shall be duly authorized by the goods manufacturer or the producer to submit bid or supply the goods on their behalf

1.4 Bids shall be submitted (preferably through local agents) in two copies, (original + copy).

1.5 The price on unit FOB and C&F basis is to be quoted separately. Following are to be essentially indicated in the bid form:

- 1.5.1 Country of origin.
- 1.5.2 Port of shipment.
- 1.5.3 Estimated gross/net weight, dimension & volume of offered item and estimated weight of each item.
- 1.5.4 Delivery period or schedule in case of bulk quantities.
- 1.5.5 Original technical literature.
- 1.5.6 Beneficiary's complete address.

1.6 Foreign bank charges and L/C confirmation charges will be borne by the supplier.

1.7 **Bid Currency:**

The rates shall be quoted in bidder's home country or in United States Dollars. A bidder expecting to incur a portion of its expenditures in the performance of the contract in more than one currency and wishing to be paid accordingly shall indicate the same in their bid. However, bidder from Pakistan would be paid in Pak Rupee.

(Clause 1.5 of General Terms & Conditions is not applicable)

2. **Bid bond:**

2.1 Bid bond shall be equivalent to two percent (2%) of the total F.O.B value, in favor of Sui Southern Gas Company Limited and shall be in the form of pay order, demand draft, call deposit receipt or a bank guarantee (specimen attached at Annexure-A), issued by a scheduled bank in Pakistan. The bid bond shall remain valid for 120 days (150 days in case of Single Stage Two Envelope bidding procedure) unless specified otherwise. The bid bond shall be returned/refunded to the un-successful bidders while the bid bond of the successful bidder shall be retained till submission of Performance bond. Bids without bid bond will not be considered. In case the order value is less than US$:25,000 the bid bond in lieu of performance bond, will be retained till fulfillment of obligations by the supplier. However, in either case the bidder is responsible to arrange the extension of bid bond validity as per requirement. If bid bond submitted by the supplier is more than 2% of ordered value, it may be replaced with appropriate value. Bid bonds of non-compliant bidders may be released during evaluation process. The bid bond shall be denominated in the currency of the bid or any other freely convertible currency.

2.2 Bid submitted on behalf of different principals shall be required to submit separate bid bond along with the bid for each offer.

(Note as mentioned at Clause 9, 9.1 & 9.2 of General Terms & Conditions shall also apply).

3. **Conversion to single currency:**

In order to carry out evaluation and comparison, the Company will convert all bid prices expressed in various currencies to Pak Rupees at the buying exchange rates established by the State Bank of Pakistan or any other commercial bank in Pakistan for similar transactions on the date of opening of bids. In case of Two Envelope Bidding System, the exchange rates prevailing at the time of opening of Technical Proposals will be used for conversion and evaluation.

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4. **Evaluation Criteria:**

4.1 The evaluation of bids will be carried out on C&F / landed cost basis, however purchase order will be placed on FOB price on freight to collect basis. The bidders are required to submit best freight charges obtained by them from Pakistan National Shipping Corporation (PNSC) in order to have a uniform basis to arrive at C&F cost. Bill of lading to indicate "freight payable by the consignee at destination" in local currency. Foreign currency exchange rate (selling) will be considered as of bid "opening date".

4.2 In the case of goods to be offered from outside Pakistan, custom duties and other similar import taxes which are applicable shall be added to the bid.

4.3 In case shipment by air it shall be arranged through Company's airfreight forwarder (s) or their nominated agent. "on freight to collect basis ".

(Clause No. 14.3 to 14.4 of General Terms & Conditions are also to be applicable).

5. **Loading of Bids:**

Freight charges from port of loading up to Karachi port or unit C&F value must be indicated in bid form, failing, which bid will be loaded by 5 to 10% freight charges. Bid will be declared non-compliant if loading results an extensive increase in price of material.
(Clause 15 of General Terms & Conditions is also applicable).

6. **Performance bond:**

6.1 In case purchase order value is US$:25,000/- or above or equivalent for other currencies, letter of intent will be issued to successful bidders for submission of performance bond guarantee which is to be submitted within 15 days from receipt of L.O.I. The successful bidders shall submit a performance bank guarantee (P.B.G) in the form of bank guarantee (specimen attached at Annexure-B) issued by a scheduled bank in Pakistan, for an amount equivalent to 10% of the total value of the purchase order or as specified, in the letter of intent .The performance bond unless specified otherwise, shall remain valid till:

6.1.1 Completion of final satisfactory delivery in case of consumable items.
6.1.2 12-18 months from the date of satisfactory delivery of the equipment/machinery.
6.1.3 Satisfactory delivery/installation of system in case the installation liabilities will be on supplier's part.
6.1.4 120 days in case of chemicals.

6.2 The Letter of Credit shall be operative upon receipt of Performance Bond (as specified in para6.1) and integrity pact , any delay due to late submission of Performance Bond will be on supplier's account. Late submission of PBG should not affect the delivery schedule.

6.3 The performance bond shall be denominated in foreign currency or in currency of the contract/purchase order or in a freely convertible currency acceptable to the Company and shall be in the form of a bank guarantee.

6.4 In very special case subject to approval of the management, the P.B.G could be acceptable in Pak Rupee. However, an undertaking should be given by the supplier that in case of encashment of P.B.G. supplier shall deposit short fall amount due to Pak Rupee exchange rate.

6.5 Warranty/Guarantee:
In case where performance guarantee is not applicable, the supplier shall warrant that all goods supplied under the contract/purchase order are new, unused, of the most recent or current models and all recent improvements in design and goods have been incorporated, unless provided otherwise in the contract/purchase order. This guarantee shall remain valid for a period of twelve to eighteen months after the goods have been delivered or commissioned.
(Clause 16.2 to 16.8 of General Terms & Conditions are also applicable).

7. **Delivery:**

7.1 In case of "FOB" order/contract, shipment(s) shall be effected per vessel of Pakistan National Shipping Corporation (PNSC) owned or chartered vessels on "freight to collect" basis. Bill of lading to indicate "freight payable by the consignee at destination". In case goods ready for shipment and the PNSC vessel is

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not available at port of loading, supplier shall intimate the same to Company immediately so that matter could be taken with PNSC in Pakistan.

7.2 In case of C&F order/contract, the supplier hereby guarantees/ensure:

7.2.1 To use clean and dry vessel suitable for marine transportation and shall not use tramp vessels.

7.2.2 The goods/material will be shipped/dispatched with all care and diligence at their risk & cost and goods to be stored below deck. Accordingly, the supplier shall be responsible for all damages/losses during inland and marine transportation from the supplier's plant until arrival at Karachi port.

7.2.3 To provide as part of its work all services and functions related to handling, loading, unloading, lashing and securing in ship's holds and all costs, charges and expenses of which shall be included in the purchase order/contract price, unless otherwise specified.

7.3 In case of FOB order/contract, the supplier's obligations shall be over after the goods have crossed the ship's rails. The co-ordination, scheduling and lining-up for a PNSC vessel shall be the obligation of the supplier.

7.4 The supplier shall reimburse the Company all additional duties, taxes and other such charges paid by the Company on account of short shipment by the supplier for all items subsequently shipped on a no-charge basis or otherwise by the supplier. The supplier shall also reimburse the Company all additional duties, taxes and other such charges paid by the Company on account of incorrect invoicing by the supplier.

7.5 Shipment shall be deemed to have been made when the supplier has shipped the goods against a clean bill of lading and all other such documentation, as specified in clause 9.3 & 9.4 appearing next in sequence) have been furnished to the Company.

7.6 The supplier shall ensure that all above mentioned acts and other incidental and ancillary functions are conducted in accordance with sound and acceptable engineering practices. The Company shall be entitled to oppose any incorrect or inadequate practice adopted by supplier in this respect and the supplier shall take corrective action/measure forthwith to correct such omissions. If any goods are discovered to be damaged or unacceptable at the point of loading, the supplier shall be responsible for replacement free of all charges and costs to the Company within the delivery period specified in the purchase order/contract.

8. **Insurance:**

8.1 All goods supplied under the purchase order/contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in delivery clause 7.

8.2 Marine Insurance shall be the responsibility of the Company unless otherwise specified.

8.3 The supplier shall advise the Company by fax at least seven (7) days prior to the expected date of shipment, the following particulars:-

8.3.1 Name of the vessel and of the shipping company.

8.3.2 Age of the vessel (which should be less than 20 years).

8.3.3 Lloyds 100A1 or equivalent classification of the vessel.

8.3.4 ETD from Port of dispatch and ETA at Karachi

8.3.5 FOB/C&F value of the consignment.

The above information shall also be transmitted to the Company's underwriters, M/s. National Insurance Corporation by fax No. 0092-21-9202779 and to the Company referring Policy No. NIF/M/K/OP/002/73.

9. **Payment:**

9.1 Payment of FOB/C&F prices shall be made in the currency of bid through an irrevocable letter of credit (L/C) established in favor of the supplier, negotiable through the bank of their choice. Bidder shall indicate full name and address of the negotiating bank and the place at which they wish to negotiate the letter of credit. All bank charges outside Pakistan will be on supplier's account and all bank charges within Pakistan will be at Company's account. If confirmed letter of credit is required then charges for confirmation will be on supplier's account.

9.2 The supplier's request (s) for payment shall be made to the Company in writing as follows:

9.2.1 It shall be accompanied by an invoice describing, as appropriate, the goods delivered and the services incurred and by shipping documents submitted pursuant to Clause 9.4 hereof and upon fulfillment of other obligations stipulated in purchase order/contract.

9.2.2 Against shipping documents on arrival of ordered material at consignee destination. Bidder (s) will have to clearly mention, if they wish to opt for this mode of payment

9.3 The letter of credit shall be available upon presenting the following documents to the negotiating bank within 15 days of the date of the bill of lading covering shipment of each consignment:

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9.3.1-	Invoice	----	4 copies
9.3.2-	Packing list	----	4 copies
9.3.3-	Bill of lading " freight to be paid by consignee at destination" evidencing shipment in terms of the purchase order to Karachi-Pakistan made copies. out to order in the name of Co.'s bank, Notify party Sui Southern Gas Company Ltd.,	----	3 originals & 6 non-negotiable
9.3.4-	Certificate of Origin (Verified/ Endorsed by Chamber of Commerce)	----	2 copies
9.3.5-	Manufacturers test certificate/	----	2copies Inspection report.

9.4 Without prejudice to the supplier's responsibility for providing documents mentioned as at 9.3.1 to 9.3.5 above to bank, the supplier shall forward the following non-negotiable documents directly to Company immediately after shipment so as to reach the Company at least 15 days prior to the arrival of the vessel at Karachi port.

9.4.1	-Invoice	----	6 copies
9.4.2	-Bill of Lading	----	6 copies
9.4.3	-Packing List	----	6 copies
9.4.4	-Certificate of Origin (Verified /Endorsed by Chamber of Commerce)	----	2 copies
9.4.5	-Manufacturers Test Certificate/	----	2 copies Inspection Report.

9.4.6 The invoice to be exactly as per order/contract. Any deviation which render or cause the company to pay demurrage or any other charges with respect to clearance/handling etc. will be borne by the supplier.

9.5 No payment hereunder shall be deemed to be accepted by the Company of the goods covered by such payment nor release the supplier from responsibility thereof under the terms of the purchase order/contract.

9.6 If the Company is compelled to pay demurrage or storage charges or incurs any loss or suffers any damage at Karachi Port on account of non-compliance by the supplier of above requirements, the Company shall be entitled at their sole discretion to recover the same amount from supplier.

10. Termination of purchases order by supplier:

10.1 The supplier shall have the right to terminate the contract/purchase order if:-

10.1.1 The Company fails to establish the letter of credit within the stipulated period as required under clause 9.1 hereof after the supplier has made compliance with the provisions of clause 6.

10.1.2 The Company becomes bankrupt or insolvent or makes an assignment for the benefit of its creditors.

10.1.3 The Company is in default and breach of its obligation and liabilities under the contract/purchase order.

11 Installation/Commissioning/Training:

If installation/commissioning and training is required, the charges will be paid in Pak Rupee and will be subject to deduction of all local duty and taxes (as applicable).

12 Vehicle (s) supplied by foreign manufacturer / principal:

12.1 In case of supply of any type of vehicle (s) / earth moving vehicle (s) by the foreign principal / manufacturer. After clearance of vehicle from the custom, the local agent of the foreign supplier / manufacturer / principal will be completely responsible to get the vehicle (s) registered through Excise Department Government of Sindh and provide Original Registration book / Original Registration Invoice / Tax payment receipt / other related documents & provide the vehicle (s) number plate (s) to SSGC. Registration fee will be reimbursed by SSGC subject to submission of Government of Sindh Excise Department receipt.

12.2 The bidder / supplier shall quote only those vehicle (s) / which fully comply to Pakistani environment and can operate in Pakistan. The bidder should ensure that vehicle (s) consumable i.e (fuel/oil & lubricant/ spares) are easily available in Pakistan.

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SSGC

Annexure - A

On Non Judicial Stamp Paper of Rs. 50/- (Fifty) Per 100,000
Format of Bid Bond Guarantee

BANK GUARANTEE NO.....
DATE OF ISSUE.....
DATE OF EXPIRY.....
AMOUNT.....

TE # SSGC/FP/_____

Sui Southern gas Company Limited,
ST. 4/B, Block-14,
Gulshan-e-Iqbal,
Sir Shah Suleman Road,
Karachi.

Dear Sirs,

Bid Bond Bank Guarantee

In consideration of M/s.....hereinafter called the Bidder having submitted the accompanying bid & in consideration of value received from Bidder we hereby agree and undertake as follows:

- To make unconditional payment of Rs..... upon your written demand without further recourse, question or reference to the Bidder or any other person in the event of withdrawal of the aforesaid bid by the Bidder before the end of the period specified in the bid after the opening of the same for the validity thereof or if no such period to be specified within 90 days (150 days in case of Single Stage Two Envelope bidding procedure) after said opening and or in the event that the Bidder shall within the period specified therefore or if no period specified within 15days after the prescribed forms are presented to the Bidder for signature the Bidder shall fail to execute such further contractual documents if any, as may be required by the terms of the bid as accepted or on the Bidder failure to give the requisite Performance Bond as may be required for the fulfillment of resulting contract.

- To accept written intimation (s) from you as conclusive and sufficient evidence of the existence of a default of non-compliance as aforesaid on the part of Bidder and to make payment accordingly within 03 days of the receipt of the written intimation.

- No grant of time or other indulgence to, or composition or arrangement with the Bidder in respect of the aforesaid Bid with or without notice to us shall in any manner, discharge or otherwise, however, effect this Guarantee and our liabilities & commitments hereunder.

- This Guarantee shall be binding on us and our successors in interest and shall be irrevocable.

Yours faithfully,

(Stamp and signature of the issuing bank)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O Gulshan-e-Iqbal

SSGC

Annexure - B

On Non Judicial Stamp Paper of Rs. 50/- (Fifty) Per 100,000
Format of Performance Bond Guarantee

BANK GUARANTEE NO.....
DATE OF ISSUE.....
DATE OF EXPIRY.....
AMOUNT.....

Sui Southern gas Company Limited,
ST. 4/B, Block-14,
Gulshan-e-Iqbal,
Sir Shah Suleman Road,
Karachi.

TE # SSGC/FP/_____

Dear Sirs,

In The Sum of Rs.....Account.....
To You in Karachi under the Purchase

In consideration of your having placed Purchase Order No..... dated:..... On M/s..... called Supplier and in consideration for value, received from Supplier, we hereby agree and undertake as under:

1. To make unconditional payments to you from time to time as called upon or make an unconditional payments Rs..... Being Ten Percent (10%), of the value of the Purchase Order price mentioned in the said Purchase Order, on your written demand(s) without further resource, question or reference to Supplier or any other person, in the event of default or non-performance and / or non-fulfillment by Supplier of his obligations liabilities & responsibilities under and in pursuance of the said Purchase Order of which you shall be the sole judge.

2. To accept written intimation from you as conclusive and sufficient evidence of the existence of a default or breach as aforesaid on the part of Supplier and to make payment accordingly within 3 (three) days of receipt thereof.

3. To keep this guarantee in full force from the date hereof as specified in General or Special terms & conditions.

4. That on grant of time or other indulgence to amendment in the terms of the purchase order by agreement with Supplier in respect of the Performance of his obligations under and in pursuance of the said Purchase Order with or without notice to us, shall in any mannet discharge or otherwise, however, affect this Guarantee and our liabilities and commitments there under.

5. This Guarantee shall be binding on us and our successors in interest and shall be irrecoverable.

6. This Guarantee shall not be affected by any change in the constitution of the Guarantor Bank or the constitution of M/s .....the Supplier.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

Yours faithfully,

(stamp and signature of the issuing bank)

ANNEXURE - G

Tender Enquiry No. SSGC/...../...../...../

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BYTHE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS.10.00 MILLION OR MORE

Contract Number: Contract Value: Contract Title:

Dated:

[Name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoP) through any corrupt business practice.

Without limiting the generality of the foregoing [Name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fee etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultations fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[Name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representative or warranty.

[Name of Supplier] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [Name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.



Tender Enquiry No. SSGC/FP/_____

Special Conditions of Tender Document

Note: ***In case of any conflict between Special Conditions of Tender Document and any other terms & conditions, the Special Conditions of Tender Document will govern / prevail.***

1. **Warranty / Guarantee Coverage**

i) The successful bidder / supplier guarantee that the goods supplied against above tender enquiry are in all respect in accordance with the tender specifications & Purchase Order and that material used are in accordance with the latest approved standards and are of good workmanship / quality. Any item or part of item if found to be substandard or not meeting the specified criteria as per pre-shipment / post shipment inspection report, than in such as event the Supplier / Bidder hereby warrants and undertake to replace the same on Duty Delivery Paid (DDP) basis (INCOTERMS 2010) i.e. free of all cost including but not limited to transportation, taxes and levies. In case successful bidder / supplier failure to replace the defective item /remove the defect(s) free of cost within the period specified by the Purchaser, the successful bidder / supplier will refund the relevant cost including all other expenses incurred by the purchaser in this regard.

ii) The successful bidder / supplier must confirm that the warranty for no-consumable items will remain valid for 18 months and for consumeable items (i.e. Chemical, Battery etc.) will remain valid for 6 Months after the goods have been successfully delivered or commissioned.

iii) It is mandatory that the successful bidder / supplier will submit the attached undertaking at Annexure-II, duly filled, signed & stamped.

iv) In case where performance bank guarantee is not applicable, the supplier shall confirm that all supplied goods under the contract / purchase order are new, unused, of most recent or current models and incorporate all recent improvements in design and goods unless and otherwise provided in the contract / purchase order.

v) The Warranty Undertaking being provided by the local agent of the successful bidder (Principal) is required to be submitted at least on Rs.200/- Non-judicial Stamp paper and should be duly notarized / attested. In the event when this Warranty Undertaking is being submitted by the principal who is overseas resident in that case the same would required to be notarized by the notary public and duly attested by the Pakistan Embassy or High Commission in that particular jurisdiction. Needless, to mention that in both cases the Warranty Undertaking will be executed by the duly authorized representative of the local agent or the principal, as the case may be.

2. **Bid Security:**

a) Bid bond submission (2%) of the bid amount as mentioned in the clause 1.1 & 2 of Additional Terms for tender on F.O.B/C&F basis & 9 of General Terms & Conditions, to be treated as null & void, however, other contents of clause 1.1 & 2 of Additional Terms for tender on F.O.B/C&F basis & 9 of General Terms & Conditions will remain unchanged. The submission of fixed amount of Bid security is appearing in the Price Schedule/BoQ.

b) All the bidders are advised to furnish fixed bid security (Original Instrument) as per amount in Pak Rs. Or US$ appearing in price schedule/BOQ failing which their bid will be rejected.

c) Incase the bidder submit bid in the currency other than Pak Rs. Or US $ their bid bond shall be equivalent after the conversion to the amount of fixed bid bond given in Pak Rs. Or US$ as mentioned in Price Schedule/BOQ. The exchange rate (issued by the Treasury Management Group of the National Bank of Pakistan or the State Bank of Pakistan selling rate) prevailing at the time of bid opening date will be applicable.

d) The submission of fixed amount of bid security is also mandatory for all the bids valuing Rs.500,000/- or less.

e) The word lowest bidder or the lowest evaluated bid has been substituted to read as **most advantageous bid.**

e) Sub-clause 9.2 of the General Terms & Conditions to be treated as null & void, however, other contents of clause 9 will remain unchanged.

3- **Method For Submission of Bid Bond(Under Single Stage Two Envelope Bidding Procedure):**

In case of Single Stage Two Envelope Tenders the fixed bid bond as per clause#09 of General Terms & Conditions and Clause# 02 of Additional Terms for tenders on FOB/ C&F basis to be placed in the Technical Proposal. However, if the bid bond is placed in the Financial proposal will also be considered. Without submission of bid bond(either in Technical proposal or Financial proposal) the bid will be rejected.

4. **Bid Validity:**

All offers shall remain valid up to 120 days from the date of opening of bids and bid bond shall remain valid for 150 days.

5. **Evaluation Criteria and Comparison of Bids**

In accordance with SRO 827 (I) / 2001 bidders tendering for Engineering goods produced in Pakistan and those Engineering goods specified in CGO-11 and amendments thereof by the Central Board of Revenue or Engineering Development Board. The successful bidder shall be accorded a Price preference in rupees up to a specific percentage (in proportion to the value addition) of the lowest quoted landed cost of an item of foreign origin with similar specifications as mentioned in the tenders

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Karachi

i) Provided that:-
   (a) The saving in foreign exchange is not less than the amount of price preference;
   (b) It is ensured that, in each case of such preference, the total import requirements for producing the supplies tendered for locally manufactured items has been duly indicated by the bidders.

ii) Price preference shall be allowed as under:-
   (a) Having minimum of twenty percent value addition through indigenous manufacturing, price preference shall be fifteen percent:
   (b) Having over twenty percent and up to thirty percent value addition through indigenous manufacturing, price preference shall be twenty percent, and
   (c) Having over thirty percent value addition through indigenous manufacturing, price preference shall be twenty five percent.

iii) For the above purpose, we will require a complete breakdown of ex-factory price for goods manufactured in Pakistan. Any offer not accompanied with this cost breakdown will not be allowed to receive the above price preference.

iv) Benefit of SRO 827 (1)/2001 shall be accorded to only those local manufacturers who are engaged in the manufacturing of goods specified in CG0 - 11 of 2007 or its latest version or as certified by the EDB.
However in case of offer on FOB basis, the landed cost to be determined in accordance with the following criteria be taken for evaluation in case of International bidders, and shall be taken for the purpose of comparison with the price quoted by local manufacturers, who shall also be accorded the price preference in terms of SRO 827 (1)/2001. **The landed cost determined in accordance with the afore said criteria shall be taken for bid evaluation in case of international bidders, and shall be taken for the purpose of comparison with the price quoted by the local manufacturers. Example of landed cost for evaluation of the international bidders is given here under:**

EXAMPLE

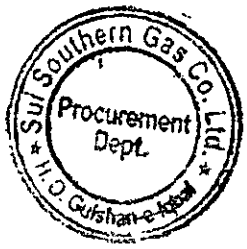
S. No.	**Cost Components for computing landing cost of imported Engineering goods in terms of S.R.O 827 (1)/2001 in Pak Rupees.**
i.	FOB Value.
ii.	Sea Freight (Actual quoted by the bidder on the basis of PNSC rates, which shall be announced by the bidder at the time of opening of the bid).
iii.	C&F value (**i** + **ii**). (CFR value).
iv.	Insurance @ 1% of C&F Value given at **iii** above.
v.	CIF value (**iii** + **iv**).
vi.	Handling Charges @ 1 % of CIF Value given at v above.
vii.	Import Value (**v** + **vi**) for the purposes of levying Customs Duty.
viii.	Customs Duty at applicable rate, which shall be calculated on the import value given at **vii** above.
ix.	Duty Paid Value.
x.	Sales Tax at applicable rate, which shall be calculated on the duty paid valve given at **ix** above.
xi.	Duty & Sales Tax paid value (**ix** + **x**).
xii.	Withholding Tax at applicable rate, which shall be calculated on duty and sales tax paid value given at **xi** above.
xiii.	LC Charge@ 0.25% of FOB Value given at **i** above.
xiv.	Clearing Charges @ 0.25% of C&F Value given at **iii** above.
xv.	SED at applicable rate, Which shall be calculated on the import value given at **vii** above to be taken as nil as it stands withdrawn.
xvi.	**Provincial Infrastructure Cess (at applicable rate) on %age of import value given at vii**
xvii.	KPT Wharfage @ Rs.140 per cubic meter or the prevailing rate.
xviii.	Cranage Loading & Other Charges@ 0.25% of C&F Value given at **iii** above.
xix.	Inland Transportation Charges from Port to Coating Factory (From Port of final destination in case of products other than pipes, where coating is not required).
xx.	Cost of imported engineering goods (**xi to xix**).
xxi.	LESS: Handling Charges taken at Sr. No. **vi** (Notional Value taken for calculating assessed value for purpose of calculating custom duty, sales tax and withholding tax by the customs authority).
xxii.	LESS: Sales tax taken at **x** above. (Adjustable as output tax).
xxiii.	LESS: With Holding Tax. (Adjustable against final assessed tax).
xxiv.	Total deductions (**xxi** + **xxii** + **xxiii**)
xxv.	Net cost of imported engineering goods (**xx minus xxiv**)

v) Foreign bidders are essentially required to submit letter of PNSC for ocean freight transportation rate for break bulk/hedges from their local agent.

vi) Please indicate approximate shipping specification, i.e. weight and measurements of the packages/bundles and also total gross weight (in terms of metric tons), and total gross volume (in terms of cubic meters) of each consignment separately.

vii) For evaluation of bids customs duty, taxes and all other charges prevailing on the date of public opening of bids will be used, where applicable.

viii) For the purpose of price comparison and evaluation of bids, financial charges will also be added to arrive at a landed cost, which will inter-alia include, mark up and L/C opening charges etc.



ix) If the local manufacturer becomes the lowest evaluated bidder after Price Preference, order will be placed at the price (landed Cost) quoted by the lowest evaluated international bidder. In case the local bidder does not accede to the request of SSGCL for best negotiated rates at par with those received from International bidder for particular item(s) then, the order will be placed on the lowest evaluated international bidder.

x) "Price Preference" shall not be in "Value Terms" it should only be for the sake of reference for comparison purposes (local & foreign bids).

xi) Bank details shall be mentioned by the bidders for the purpose of opening LC/ Payment.

6. **Declaration / Integrity Pact / Certification:**
it is required to be submitted by the Successful Bidder on their letter heads after issuance of Purchase Order (PO) or Letter of intent (LOI) for the value of Rs.10,000,000/- (Ten Million) or above in case of local bidder and US$ 100,000 & above in case of foreign bidder.
Submission the declaration as at ANNEXURE-C is a mandatory requirement for successful bidder.

7. **Third Party Pre-Shipment Inspection Criteria / Scope of Work as given in theTender Documents will be followed at the time of Third Party Inspection, which will be carried out by SSGC nominated Third Party Inspection Firm in case the order value exceeds US$100,000 except screwed pipe fitting tenders.**

8. ***"The successful Bidder shall provide the revenue stamps and copy of challan, of value at the rate of twenty Five (25) paisa per every Hundred Rupees or part thereof of the amount of the purchase order, or at the prevailing rate as specified by the Government of Province of Sindh." Further as per Government of Sindh Board of Revenue notification NO.CIS/SWB/BOR/R&T-17/2022-808 dated 08-06-2022 all judicial and non-judicial stamp paper of the denomination of rupee five hundred and above shall be exclusively on e-stamp.***

9. *Bank Guarantee (Bid Bond Guarantee/Performance Bank Guarantee) will be made on Non-Judicial stamp paper at the prevailing rate as specified by the respective Provinces. Further the bidder/contractor submitting the Bid Bond guarantee/Performance Bond guarantee being prepared by the State Bank's schedule banks should ensure that there should be no deletion/insertion/alteration/modification of any terms in the Bid Bond/PBG guarantee format as given in the tender document or else bid will be liable for rejection.*

10. ***"Original counter slip of token which is issued with original tender document to be attached on the TOP of envelope at the time of bid submission."***

11. **Cancellation of Purchase Order**
In case the supplier fails to deliver the material within the specified delivery schedule as given in Purchase order (P.O.) and maximum upto 240 days after the expiry of the specified delivery schedule as per Purchase Order, the Purchase Order may be treated as cancelled at supplier's sole risk & cost. However, for the sake of clarity liquidated damages (Clause-27 of General Terms Conditions) and Default by Supplir (Clause-28 of General Terms Conditions) will be treated as given in the General Terms & Conditions of the tender documents.

12. **Correct Postal Address**
Bidders are essentially required to provide coorect and latest postal, e-mail & web addresses, phone/cell/fax numbers at the time of purchase of tender documents for effective and timely communication, failing which in event of any non-delivery of information / communication the procuring agency will be considered as non-responsive.

13. In case the local agent requires to offer bid from more than one principal / Manufacturer, it is mandatory to purchase separate tender document for each principal / Manufacturer, failing which the bid submitted with the original tender document will only be accepted and the bid with photocopy of tender document will be rejected.

14. ***Blacklisting Mechanism of Suppliers and Contractors and their Local Agent:***
Black listing mechanism is attached separately in the tender documents which will become an integral part of Tender Documents and now be followed / enforced in true letter & sprit and supersede the Black listing terms as mentioned in the General Terms & Conditions.

15. *The Successful Contractor(s) / Supplier(s) / Consultant(s) shall submit a copy of Professional Tax Certificate with their Invoices / Bills failing which the payment will not be released.*

16. **Authentications of Performa Invoice / Authority Letter and other documents by the Principal / Manufacturer:**
The Authentication of Authority Letter and Performa Invoice will be obtained from the Principal / Manufacturer as and when required. If the authenfication not received within the stipulated time frame the bid will be liable for rejection and the Bid Bond / Earnest Money will be encashed.

17. ***Bid Bond & PBG (Performance Bank Guarantee) for Proprietary Tenders***
In case of proprietary Tenders, the Bid Bond & Performance Bank Guarantee (PBG) are not required / Applicable.

18. ***Any Bidder who change / amend the BOQ / Price Schedule (description / Bid Form, Quantity, UOM etc.) will render the bid as conditional bid and will be liable for rejection.***

19. ***Delivery Schedule will commence after the opening of Letter of Credit (LC). In case the bidder does not submit the performance bond as specified, the delivery time of goods shall be deemed to have commenced 10 days (15 days in case of import) from the issuance of letter of intent / prchase order. The proceeds of the performance bond shall be payable to the Company as compensation for any loss resulting from the supplier's failure to complete its work under the purchase order / contract.***

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20. **In the event of release of Performance Bank Gurante (PBG) after its encashment, the amount of the PBG to be released will be converted in Pak Rupees at the exchange rate prevailing at the time of encashment. The amount so converted will be released in Pak Rupee (PKR) to the foreign bidder or to their local agent duly authorized by the foreign principal.**

21. **SSGC will not pay invoices if they are turned in after 6 months of work completion / material delivered.**

22. *As per FBR Regulations Ref# C.No.4 (24) IT- Budget/2021-142150-R, Dated: 23rd September, 2021 to make the payment online. Therefore, all the local manufacturers are required to provide their only one Bank Account number (IBAN number) on the 'FORM-X' attached duly signed & stamped as one time information, which shall be firm (not changeable) for all the future payment transactions.*

23. **It is mandatory for the bidders to follow all the terms and conditions given in the tender documents without any addition / deletion / amendment and submit the bid accordingly. Therefore, in this context, the bidders are requested not to give their own terms and conditions as it tantamount towards the conditional bid. Otherwise their terms and conditions will not be considered and the Purchase Order / Contract will be awarded based on only as per SSGC tender terms and conditions.**

24. **Payment:**

The supplier after delivery of goods and its acceptance shall submit invoice to Finance Department of the Company, containing following information i.e:

(a) Purchase order No. & date	(b) Items	(c) Quantity	(d) Price	(e) Invoice value
(f) Point of delivery	(g) Delivery challan indicating delivery date, etc.			
(h) Supplier(s) are required to submit signed and stamp acknowledgement slip, Sales Tax return, Annex "C" & Annex "I" (whichever applicable) in which Sales Tax (of relevant Sales Tax invoice) is paid.				

Payment will be made within 30 days of completion of stated requirements.

25. **Joint Ventures:**

In the event that the bidder is bidding as a Joint Venture, the Company will require the joint venture agreement duly executed by the parties to the Joint Venture to be submitted with the bid. The joint venture parties shall also furnish an undertaking to be jointly and severally liable for all liabilities arising out of obligation under the Purchase Order / Contract. The, Joint Venture agreement of the parties must specify share of each partner and name of the lead partner along with their registration with the FBR, SST and BST as the case may be failure to specify these two narrations the joint venture agreement will not be entertained.

26. *In case the insurance policy submitted by the contractor is expired during the execution of job, it is the responsibility of the user department to coordinate with the contractor to get it renewed/updated till the period the job is completed/commissioned.*

In case the job is not completed within the given time as per tender terms and the insurance policy submitted by the contractor expires, the contractor is liable to get this insurance policy renewed / updated immediately till the period of the job is completed / commissioned as per tender terms failing which the contractor will be responsible for any loss to SSGC.

27. *Bidders can quote their rates on both i.e. Price Schedule as well as Bill of Quantity (BoQ).*

28. *Company reserve the right to award the Purchase Order /LOI to the most advantageous bidder.*

29. *As per SRO 592(I)/2022 of PPRA Regulations, for Procurement Contracts/Purchase Orders worth of Rs. 50 million and above, bidders/contractors are required to submit the Beneficial Owner's Information for Public Procurement Contracts/Purchase Orders (Annexure-I).*

30. *Incase quoted item(s) falls under SRO No. 604 (see attachment) i.e. Solar Power System, PV Module/Cells and allied accessories/parts/spares etc. - then in that case supplier is responsible to fully comply stated SRO and to arrange, provide and bear all associated costs for all necessary test reports, certificates, pre-shipment inspection reports, other documents etc. (as mentioned in SRO). Further, Pre-Shipment Inspection should be from approved companies as mentioned in Appendix H of Import Policy Order (see attachment).*

31 **Fixed Bid Security – Alternative Bid**

A bidder cannot submit two bids/offers with a single fixed bid security/pay order. However, the alternative bids/offers with separate fixed bid security/pay order can be accepted, failing which the bids will be liable for rejection. In case the bidder quote different make/brands/model that will also be considered as an Alternative bid/offer and require to submit separate Bid bond for each make/brand/model.

32. Bidder will be blacklisted and henceforth cross debarred for participating in respective category of Public Procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration (which is an integral part of tender document), however, without indulging in corrupt and fraudulent practices, if in breach of obligation(s) under the Bid conditions:

a) The bidder have withdrawn or modified their bid during the period of bid validity as specified in the tender terms.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

b) Having been notified of the acceptance of bid by procuring agency during the period of bid validity (i) failure to sign the contract or accept purchase order (ii) fail or refuse to furnish the performance security or to comply with any other condition as mentioned in the tender document.

33. Wherever the "Rate Only" is mentioned (either on BOQ or anywhere in tender documents) the same shall only be applicable not exceeding 15% of the original procurement for the same items as given in the BOQ for package basis. In case the requirement is on item wise basis (not package basis) then not exceeding 15% of the original Procurement for the same items (on item wise basis) as given in the BOQ.

34. **Lots:** In case when the tender is floated on LOT basis, following clauses to be applied:

a) The bidder(s) are essentially / mandatorily required to submit fixed bid bond as mentioned in the bid form/BOQ/Invitation to Bid. Separate fixed bid bond to be submitted against each individual LOT and its validity to be 150 days at the time of opening of technical proposal.

b) Evaluation for each LOT will be carried out separately. Each LOT will be awarded separately.

35. For open competitive bidding if the most advantageous bidder is new local manufacturer, 10% trial order will be placed and remaining 90% order will be awarded to the next most advantageous bidder at their own quoted rates.

36. Subsequent to the issuance of Purchase Order/LOI, successful bidder has to submit 10% Performance Bank Guarantee of the Purchase Order/LOI value unless & untill specified in the Tender Documents. Clause# 16.1.5 mentioned in General Terms & Conditions to be treated as null & void.

37. Where the Pre-shipment inspection is applicable and incase of partial shipment is required by the bidder the cost of the 1st Pre-shipment inspection will be borne by SSGC, whereas, cost of the 3rd Party inspection for the remaining shipment(s) will be borne by the bidder/manufacturer.

38. Purchase order value mentioned in the clause # 6 of sub-clause # 6.1 (Performance Bond) of Additional Terms for Tenders on FOB/C&F basis (Section-1A) to be read as **US $ 10,000** instead of US $ 25000. However, other contents of clause & sub-clauses of 6 (Performance Bond) of Additional Terms for tender on F.O.B/C&F basis will remain unchanged.

39. Redressal of Grievances And Settlement of Disputes:

- Any bidder feeling aggrieved by any act of the procuring agency after the submission of his bid may lodge a written complaint concerning his grievances within seven days of announcement of the technical evaluation report and five days after issuance of final evaluation report.
- In case, the complaint is filed against the technial evaluation report, the GRC shall suspend the procurement proceedings.
- In case, the complaint is filed after the issuance of final evaluation report, the complainant cannot raise any objection on technical evaluation of the report. Provided that the complainant may raise the objection on any part of the final evaluation report in case where single stage single envelope bidding procedue is adopted.

40. The sub clauses 33.2, 33.4 & 33.5 of clause 33 of General Terms & Conditions to be treated as null & void.

41. All the bidders are allowed to participate in the subject procurement without regard to nationality/origin, except bidders of some nationality/origin, prohibited in accordance with policy of the Federal Government. Following countries are ineligible to participate in the procurement process:

- India
- Israel

42. In Open Competitive Bidding Procedure where the quoted price is less than Rs. 500,000/- the Bid Bond will be retained in lieu of PBG.

43. In case the Bid Bond is not required, the bidder must submit the Form of Bid-Securing Declaration attached with the Tender Document else the Bid will be liable for rejection.

44. All Tenders floated through EPADS are to be governed by S.R.O. 296(I)/2023 dated: March 8, 2023 "E-Pak-Procurement Regulations 2023". In case of any conflict between SSGC Tender Terms / Instructions to Bidders and the PPRA EPADS Rules, the S.R.O. 296(I)/2023 will prevail.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O Gulshan-e-Iqbal

45. **Samples:**

When sample submission is required. Suppliers/bidders must submit samples:

a) Along with the bid, if stated in the tender documents.

b) Within the time specified in the tender.

c) Upon request from the User Department for technical evaluation through official email/ letters.

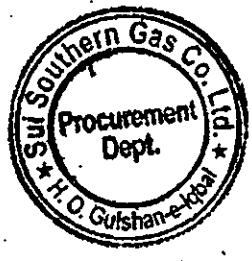
SAMPLE SUBMISSION LOCATION/ DEPARTMENT:

All samples must be submitted to the Procurement Department - Tender Room, SSGC Head Office with Duly filled in form "Y" attached in the tender document. Samples submitted other than the Procurement Department - Tender Room, SSGC Head Office will not be considered/accepted.

The supplier/bidder must:

- Fill in all required details (e.g., Tender No., Bidder Name, and Sample Description).
- Attach supporting documents (if required).
- Submit the completed Form-Y along with the sample.

In absence of any of the above stated requirements the Samples will not be considered/accepted.



Tender Enquiry No. SSGC/...../...../...../

ANNEXURE: I

Declaration of Ultimate Beneficial Owners Information for Public Procurement Contracts.

1. Name
2. Father's Name/Spouse's Name
3. CNIC / NICOP/Passport No.
4. Nationality
5. Residential address
6. Email address
7. Date on which shareholding, control or interest acquired in the business.
8. In case of indirect shareholding, control or interest being exercised through intermediary companies, entities or other legal persons or legal arrangements in the chain of ownership or control, following additional particulars to be provided:

1	2	3	4	5	6	7	8	9	10
Name	Legal form (Company/Limited Liability Partnership /Association of Persons/Single Member Company/Partnership Firm/Trusted/Any other Individual, Body Corporate (to be Specified)	Date of Incorporation / Registration	Name of Regulating Authority	Business Address	Country	Email Address	Percentage of shareholding, control or interest of BO in the Legal Person or Legal Arrangement	Percentage of shareholding, Control or Interest of Legal Person or Legal Arrangement in the Company	Identity of Natural Person who Ultimately owns or Controls the Legal Person or Arrangement

9. Information about the Board of Directors (details shall be provided regarding number of shares in the capital of the company as set opposite respective names).

Sui Southern Gas Co. Ltd. ★ H.O. Gulshan-e-Iqbal ★ Procurement Dept.

Tender Enquiry No. SSGC/...../...../...../

1	2	3	4	5	6	7	8
Name and surname (in block Letter's)	CNIC no (in case of foreigner Passport No)	Father's / Husband's Name in Full	Current Nationality	Any other Nationality (ies)	Occupation	Residentially address in full of the registered / principle office address for a subscribers other that natural Person	Numbers of shares taken by cash subscribers (in figures and words
			Total numbers of shares taken (in figures and words)				

10. Any other information incidental to or relevent to beneficial owners).

Name and signature
(Person authorized to issue notice on behalf of the company)

Procurement Dept.

ANNEXURE - II

WARRANTY UNDERTAKING

M/s. Sui Southern Gas Co. Ltd.
SSGC House, Sir Shah Suleman Road,
Gulshan-E-Iqbal, Karachi.

From _____ (FIRM NAME)

Tender Enquiry No. _____ Date _____

1. In case we stands as the lowest bidder and the order is placed on us against the cited tender enquiry, we hereby guarantee that the goods supplied against above tender enquiry are in all respect in accordance with the tender specifications and that material used are in accordance with the latest approved standards and are of good workmanship / quality. Any item or part of item if found to be substandard or not meeting the specified criteria as per pre-shipment / post shipment inspection report, than in such as event the Supplier hereby warrants and undertake to replace the same on DDP basis (INCOTERMS 2010) i.e. free of all cost including but not limited to transportation, taxes and levies.

2. In case of our failure to replace the defective item /remove the defect(s) free of cost within the period specified by the Purchaser, we will refund the relevant cost including all other expenses incurred by the purchaser in this regard.

3. This warranty will remain valid for 18 months after the goods have been successfully delivered or commissioned.

Signature _____

Company Stamp _____

Sui Southern Gas Co. Ltd. * Procurement Dept. * H.O. Gulshan-e-Iqbal

Supplier code: _____

FORM-X

Bank account details form for all Beneficiaries

(Mandatory requirement for Digital Online Banking)

As per FBR Regulations ref # C.No.4 (24) IT-Budget/2021-142150-R dated 23rd Sept'2021 to make the payment online w.e.f. 01-11-2021. All beneficiaries are required to fill in the below details, which is mandatory:

Name of Firm: _____

Address of Firm: _____

_____

CNIC #: _____

NTN #: _____

Bank Name: _____

Bank A/C Title name: _____

Branch code: _____

Bank A/c #: _____ (16 Digits)

Bank IBAN #: _____ (24 Digits)

☐ Information already submitted.

Note: Please be attached copy of Cheque / Account Maintenance Certificate.(Mandatory)



_____

Authorized Sign & Stamp

Date:_____

Note: All payments transactions will be made on above mentioned Account details. This is only a one time information to be provided by the all beneficiaries. Incase if the above detail has already submitted, please tick the box above "Information already submitted" and also ensure Form-X is duly signed & stamped.

Sui Southern Gas Company Limited

SSGC

FORM "Y"

(SSGC – sample submission form)

SECTION A: BIDDER INFORMATION	
FIELD	**DETAILS**
Bidder Name / Firm Name	
NTN / GST No.	
Address	
Contact Person	
Contact Number	
Email Address	
Declaration by Bidder	
I/We hereby declare that the sample(s) submitted are in accordance with the tender specifications and terms. I/We understand that failure to submit correct and complete samples may lead to disqualification.	
Signature of Bidder:	

SECTION B: TENDER DETAILS	
FIELD	**DETAILS**
Tender No.	
Tender Opening Date	
Item(s) for which sample is submitted	
Quantity of Sample Submitted	
Specification/Description of Sample	
Make:	
Brand:	
Serial No:	
Generics; size, height, weight, width:	
Other description:	

SECTION C: FOR OFFICE USE ONLY (TO BE FILLED BY TENDER ROOM)	
FIELD	**DETAILS**
Date & Time of Submission	
Received By (Tender Room Staff Name & Sign)	
Tender Room Stamp	
Remarks (if any)	

Sui Southern Gas Co. Ltd. Procurement Dept. G.H.Q. Gulshan-e-Iqbal

Form of Bid-Securing Declaration

[The Bidder shall fill in this Form in accordance with the instructions indicated.]

Date: *[date (as day, month and year)]*
No.: *[number of Bidding process]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[complete name of Procuring Agency]*

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.

We accept that we will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if we are in breach of our obligation(s) under the Bid conditions, because we:

(a) have withdrawn our Bid during the period of Bid validity specified in the Letter of Bid; or

(b) having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid validity, (i) fail or refuse to sign the Contract; or (ii) fail or refuse to furnish the Performance Security (or guarantee), if required, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Name of the Bidder* _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder** _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____ day of _____, _____

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

Sui Southern Gas Co. Ltd. ★ Procurement Dept. ★ H.O. Gulshan-e-Iqbal

PRICE SCHEDULE FOR GOODS TO BE OFFERED OUTSIDE PAKISTAN

TENDER ENQUIRY NO : SSGC/FP/PT/EPADS-1/ 14564

Section-3

VERTICAL SCRUBBER & IT'S AUXILIARIES (On Complete Package Basis)

Sr. No	Description	Country of Origin / Make / Brand	Qty	Unit	Unit FOB price Port of Loading	Total FOB Cost / Item (COL 4x6)	Unit Price C&F (Port of Entry Karachi)	Total C&F Port of Entry) (COL 4x8)	Unit FOR Price	Total FOR Price (COL 4x10)
1	2	3	4	5	6	7	8	9	10	11
1	**VERTICAL SCRUBBERS** **[1] 53151803** SCRUBBER VERTICAL (CYCLOTUBE TYPE) INLET/OUTLET CONN. 8" x 600 RTJ FOR GAS FLOW RANGE 25-60 MMSCFD AND OPERATING PRESSURE RANGE 700-1300 PSIG (AS PER SPECS.SECTION-IVA)		1	Each						
2	**VERTICAL SCRUBBERS** **[2] 53151993** AUTOMATIC LIQUID LEVEL CONTROL SYSTEM COMPLETE AND AS PER SPECIFICATION PARA 2.7 (I).		1	Each						
3	**VERTICAL SCRUBBERS** **[3] 53152003** LIQUID LEVEL GAUGES WITH ISOLATING VALVES AND FITTINGS AS PER SPECIFICATION PARA 2.7 (II).		1	Set						
4	**VERTICAL SCRUBBERS** **[4] 53152013** PRESSURE GAUGES WITH ISOLATING VALVES AND DIFFERENTIAL PRESSURE GAUGES AS PER SPECIFICATIONS 2.7(III).		1	Set						
5	**VERTICAL SCRUBBERS** **[5] 53152033** SAFETY RELIEF VALVE.		1	Set						
6	**VERTICAL SCRUBBERS** **[6] 53152043** SPECTACLE BLINDS FOR IN / OUT CONNECTIONS.		1	Each						
				Grand Total						

Delivery Schedule: **As per mentioned in SOR.**

The bidder must deposit/submit the separate physical fixed bid bond to the Tender Room (SSGC HO) for the above Price Schedule (Items at Serial# 1 to 6) before the bid submission date & time, otherwise the bid will be liable to be rejected.

Fixed Bid Security for Vertical Scrubber package is; USD=600 or PKR=166,000.

NOTE TO SUPPLIER: * According to SRO827(1)2001, "engineering goods" means good specified in CGO11/2007, as per SRO the bidder will be considered as local manufacturer for the engineering goods if their names are appearing in the CGO list.

IMPORTANT

We draw your special attention to:

1. Prices given here in shall take into account with relevant factors including discounts, if any.
2. Proforma Invoice of the principal is mandatory required to be submitted by the Supplier which shall match with the price schedule.
3. In case when bidder submit alternate bids a separate bid bond for each bid is required. otherwise bid will be liable for rejection.
4. All offer shall remain valid up to 120 days from the date of opening of bids and bid bond shall remain valid for 150 days.
5. The prices on FOB and C&F (PNSC freight to be submitted by the bidder(s) is mandatory) basis should be quoted separately as given above.
6. Following information shall be mentioned in the bid.
   (a) Country of Origin (b) Port of Shipment (c) Estimated Gross weight / Volume
7. The bid validity and the delivery schedule shall match with the schedule of Requirement / Bid Form. In all circumstances the bid validity and delivery schedule given on Schedule of Requirement / Bid Form will prevail without any further recourse.
8. Any Bidder who change/amend the BOQ or Price Schedule (Description, Quantity, UOM etc.) will render the bid as conditional bid and will be liable for rejection.

Signature : _____

Person Name : _____

Company's Name : _____

Date : _____

STAMP

End of Page, any entry beyond this line would be invalid

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

PRICE SCHEDULE FOR GOODS TO BE OFFERED OUTSIDE PAKISTAN

TENDER ENQUIRY NO : SSGC/FP/PT/EPADS-1/ 14564

Section-3

FLANGES & GASKETS (ON ITEM WISE BASIS)

Sr. No	Description	Country of Origin / Make / Brand	Qty	Unit	Unit FOB price Port of Loading	Total FOB Cost / Item (COL 4x6)	Unit Price C&F (Port of Entry Karachi)	Total C&F Port of Entry) (COL 4x8)	Unit FOR Price	Total FOR Price (COL 4x10)
1	2	3	4	5	6	7	8	9	10	11
7	**WELD NECK FLANGES** **[7] 09183573** FLANGE WELD NECK 10" NB,RTJ, CLASS 600,BORE 9.750"ID, ASTM A105 (AS PER SPECS.)		8	Each						
8	**WELD NECK FLANGES** **[8] 09183533** FLANGE WELD NECK 8" NB, RTJ, CLASS 600, BORE 7.625"ID, ASTM A105 (AS PER SPECIFICATIONS ATTACHED)		45	Each						
9	**WELD NECK FLANGES** **[9] 09183413** FLANGE WELD NECK 4", RTJ, CLASS 600, BORE 3.826" ID,ASTM A105 (AS PER SPECS. ATTACHED)		4	Each						
10	**SOFT IRON OVAL RING JOINT GASKETS** **[10] 09270493** OVAL RING R-49 FOR 8" RTJ FLANGES CLASS 600(AS PER SPECS. ATTACHED)		45	Each						

Delivery Schedule: **As per mentioned in SOR.**

The bidder must deposit/submit the separate physical fixed bid bond to the Tender Room (SSGC HO) for the above Price Schedule (Items at Serial# 7 to 10), whether bidder quote one item or upto all included items (Serial# 7 to 10) in this Price Schedule/BOQ before the bid submission date & time, otherwise the bid will be liable to be rejected.

Fixed Bid Security for Flanges & Gaskets is; USD=130 or PKR=37,000.

NOTE TO SUPPLIER: * According to SRO827(1)2001, "engineering goods" means good specified in CGO11/2007, as per SRO the bidder will be considered as local manufacturer for the engineering goods if their names are appearing in the CGO list.

IMPORTANT

We draw your special attention to:

1. Prices given here in shall take into account with relevant factors including discounts, if any.
2. Proforma Invoice of the principal is mandatory required to be submitted by the Supplier which shall match with the price schedule.
3. In case when bidder submit alternate bids a separate bid bond for each bid is required. otherwise bid will be liable for rejection.
4. All offer shall remain valid up to 120 days from the date of opening of bids and bid bond shall remain valid for 150 days.
5. The prices on FOB and C&F (PNSC freight to be submitted by the bidder(s) is mandatory) basis should be quoted separately as given above.
6. Following information shall be mentioned in the bid.
   (a) Country of Origin (b) Port of Shipment (c) Estimated Gross weight / Volume
7. The bid validity and the delivery schedule shall match with the schedule of Requirement / Bid Form. In all circumstances the bid validity and delivery schedule given on Schedule of Requirement / Bid Form will prevail without any further recourse.
8. Any Bidder who change/amend the BOQ or Price Schedule (Description, Quantity, UOM etc.) will render the bid as conditional bid and will be liable for rejection.

Signature : _____

Person Name : _____

Company's Name : _____

Date : _____

STAMP

End of Page, any entry beyond this line would be invalid

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

SSGC SUI SOUTHERN GAS COMPANY LIMITED

STATEMENT OF REQUIREMENTS

Annexure-I

REF. NO:			
DATE	21	09	2026

DEPARTMENT: Planning and Development

DESCRIPTION OF JOB/PROJECT: 8" x 2.5KM Pipeline project from POD Hatim Faiz to MVA Lundo

JOB / PROJECT EXPECTED DATE OF COMMENCEMENT: September 2026

JOB NUMBER: 51270003

SCHEDULE & PLACE OF DELIVERY: 20 weeks from the date of opening of LC (for C&F Contracts)- 16 weeks from the date of opening of LC (For FOB) /Khadeji Stores

SR. NO.	DESCRIPTION OF MATERIAL REQUIRED	INDEX NO.	UOM	QUANTITY
VERTICAL SCRUBBER				
1.1	Vertical Scrubber (Cyclotube Type) for gas flow range 25 – 60 MMSCFD and operating pressure range 700-1300 psig. Inlet/Outlet 08" size, ANSI Class 600 RTJ as per SOR and specifications attached (Annexure –I & II)	53151803	No.	01
AUXILIARIES FOR VERTICAL SCRUBBER (as per technical specifications clause 6.13)				
1.2	Automatic Liquid Level Control System complete and as per technical specification clause 6.13.	53151993	No.	01
1.3	Liquid Level Gauges with Isolating Valves and fittings as per technical specification clause 6.13.	53152003	Sets	01
1.4	Pressure Gauges with Isolating Valves and Differential Pressure Gauges as per technical specifications clause 6.13.	53152013	Sets	01
1.5	Safety Relief Valve as per technical specifications clause 6.13..	53152023	Sets	01
41.6	Spectacle Blinds for in / out connections.	53152043	Sets	01

Note:

- Every vessel must be registered with National Board of Boiler and Pressure vessel Inspectors and have its own respective manufacturing number against which it should be found traceable with NBBI
- National Board number marks & ASME U-Stamp should be existent on each Vertical Scrubber with traceable data record in NBBI.

INDENTOR

FAIZ AHMED
Dy. Chief Manager
(Projects)-P&D
Sui Southern Gas Co. Ltd.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O Gulshan-e-Iqbal

HEAD OF DEPARTMENT (WITH STAMP)

ENGR. ZAHID SALMAN
Dy General Manager-I
Planning & Development
Sui Southern Gas Co. Ltd.

SECTION-4

~~APPENDIX~~

SSGC

SUI SOUTHERN GAS COMPANY LIMITED (SSGC)

TECHNICAL SPECIFICATION FOR UN-FIRED PRESSURE VESSEL (VERTICAL SCRUBBER)

(ON PACKAGE BASIS)

Sui Southern Gas Co. Ltd. ★ Procurement Dept. ★ H.O. Gulshan-e-Iqbal

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Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

21/05/25

1. GENERAL

1.1. Scope

The purpose of this specification is to describe the minimum functional and technical requirements of Un-Fired Pressure Vessel (Vertical Scrubber) for Natural Gas.

1.2. Definitions

PURCHASER means OWNER and MANUFACTURER means CONTRACTOR/SUPPLIER/ BIDDER. This definition shall apply throughout this specification.

1.3. Error or Omissions

Any errors or omissions noted by the manufacturer in this Specification shall be immediately brought to the attention of the purchaser.

1.4. Deviations

All deviations to this Specification, other specifications or attachments shall be brought to the knowledge of the purchaser in the bid. All deviations made during the procurement, design, manufacturing, testing and inspection shall be with written approval of the purchaser prior to execution of the work. Such deviations shall be shown in the documentation prepared by the manufacturer.

1.5. Conflicting Requirements

In the event of conflict, inconsistency or ambiguity between the contract scopes of work, this Specification, and National Codes & Standards referenced in this Specification or any other specification, the manufacturer shall refer to the Purchaser whose decision shall prevail.

Some requirements in this specification may be modified by specific requirements in the data sheet Specification. In case of conflict, the specific requirements supersede this specification.

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM - P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

21/05/26

Sui Southern Gas Co. Ltd. Procurement Dept. H.O Gulshan-e-Iqbal

2. ABBREVIATIONS / SYMBOLS:

ABBREVIATION	NAME
ANSI	American National Standard Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASNT	American Society of Non-Destructive Testing
ASTM	American Society of Testing and Materials
ATM	Atmosphere
BB	Bolted Bonnet
BC	Bolted Cover
BE	Beveled End
BW	Butt Welding
CA	Corrosion Allowance
CONC	Concentric
Cr	Chromium
CS	Carbon Steel
D	Diameter
ECC	Eccentric
EFW	Electric Fusion Welded
EQ	Equal

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

21/05/26

Sui Southern Gas Co. Ltd. ★ Procurement Dept. ★ H.O. Gulshan-e-Iqbal

ERW	Electric Resistance Welded
F6	Stainless Steel, 13% Cr
FF	Flat Face
GALV	Galvanize
Gr.	Grade
GAD	General Arrangement Drawings
HEX	Hexagonal
ITP	Inspection Test Plan
LJ	Lap Joint
LR	Long Radius
LWN	Long Weld Neck
Manuf	Manufacturer
Max	Maximum
MVA	Main Valve Assembly
MAWP	Maximum Allowable Working Pressure
MDMT	Minimum Design Metal Temperature
NI	Nickel
NPT	Threading as per ANSI B1.20.1
OD	Outside Diameter
PBE	Plain both Ends

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

21/05/26

Sui Southern Gas Co. Ltd. ★ Procurement Dept. ★ H.O. Gulshan-e-Iqbal

PE	Plain End
P&ID	Process & Instrumentation Drawing
PVC	Polyvinyl Chloride
PT	Pressure-Temperature
PWHT	Post Weld Heat Treatment
PO	Purchase Order
R	Radius
RED	Reducing
RF	Raised Face
RJ/RTJ	Machined Face for Ring Joint
RTJ	Ring Joint Face
SAW	Submerged Arc Welding
SB	Screwed Bonnet
Sch	Schedule
SMLS	Seamless
SOR	Schedule Of Requirements
SRV/PSV	Safety Relief Valves/Pressure Safety Valves
SS	Stainless Steel
STD	Standard
SW	Socket Welding

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM - P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

21/05/24

TBE	Threaded both Ends
TE	Threaded End
THK	Thickness
TL	Tangent Length
VDRL	Vendor Data Requirement List
WB	Welded Bonnet
WN	Welded Neck
WOG	Water, Oil and Gas

3. CODES, REGULATIONS, STANDARDS:

Manufacturer shall meet or exceed the requirements of the latest edition of the following applicable codes, regulations and standards, except as superseded herein. In the event of a conflict between this specification and other specifications or correspondence, the COMPANY shall be consulted and a ruling, in writing, shall be obtained before any work is started.

- ASME B31.8, Gas Transmission and Distribution Piping Systems
- ASME B31.3, Process Piping, Edition 2016
- ASME Section VIII, Div – 1, Pressure Vessels
- ASME Section IX, Qualification Standard for Welding and Brazing Procedures, Welders, Brazers and Welding and Brazing Operators.
- ASME Section V, Non-Destructive Examination.
- ASME B16.5, Steel Pipe Flanges and Flanged Fittings
- ASME B16.47, Large Diameter Steel Flanges (NPS 26 through NPS 60)
- ASME B16.20, Metallic Gaskets for Pipe Flanges - Ring Joint, Spiral Wound, Edition 2012.
- ASME B16.21, Nonmetallic Flat Gaskets for Pipe Flanges

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

21/05/20

Sui Southern Gas Co. Ltd. ★ H.O. Gulshan ★ Procurement Dept.

- ASME B16.9, Wrought Steel Butt-Welding Fittings, Edition 2015
- ASME B16.11, Steel Socket Weld Fittings, Edition 2016
- ASME B16.34, Valves - Flanged, Threaded and Welding End, Edition 2013
- ASME B36.10M, Welded and Seamless Wrought Steel Pipe, Edition 2015
- ASME B36.19M, Stainless Steel Pipe, Edition 2004
- ASME B40.100, Pressure Gauges and Gauge Attachments
- API 600, Steel Gate Valves - Flanged and Butt-welding ends, 13th Edition
- API 602, Compact Steel Gate Valves – Flanged, Threaded Welding and extended-body ends, 10th Edition
- API 594 Check Valves: Wafer and Wafer-lug, and double flanged type, 7th Edition
- API 6D, Specification for Pipe line valves (Gate, Plug, Ball and Check valves), 24th Edition
- API 6FA, Specification for fire test for Valves, 3rd Edition
- API 607, Fire Test for soft seated quarter-turn valves, 6th Edition
- API 6FD, Specification for Fire Test for Check Valves, Latest Edition
- API 598, Valve Inspection and Testing, 10th Edition
- API 5L, Specification for seamless and welded steel pipe, 45th Edition
- BS 1868, Steel Check valves (Flanged and Butt-welding ends), 1975+A1:1990 or latest Edition
- BS 1873, Steel Globe and Globe stop and Check valves (Flanged and Butt-welding ends). Edition 1975
- BS 5351, Steel Ball valves, Edition 1986
- BS 5352, Steel wedge Gate, Globe and Check valves (50 mm and smaller), Edition 1981
- BS 6755, Testing of valves Part 1: Production pressure testing requirements, Edition 1986
- BS 6755, Testing of valves Part 2: Specification for Fire-type testing requirements

Reviewed By	Mr. Mehboob Ali DGM - Transmission	Mr. Faiz Ahmed DGM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

Sui Southern Gas Co. Ltd. H.O. Gulshan-e-Iqbal Procurement Dept.

21/05/26

- ASTM Standards, as applicable, Edition 1986.
- Bolt Torqueing/Tensioning procedure for Flanged connection

3.1 Some requirements in this specification may be modified by specific requirements in the Purchase Specification. In case of conflict, the specific requirements supersede this specification.

3.2 Any deviation from this specification must be approved, in writing, by COMPANY. Such written approval must be obtained prior to the commencement of any work which would constitute such a deviation.

4. ENVIRONMENTAL & DESIGN CRITERIA:

4.1. General

Unless otherwise stated on the data sheets the vessel will be located in an open exposed area.

4.2. Environmental data

Please refer to data sheet.

4.3. Area Classification

Vessels will be located in a safe area unless otherwise specified in data sheet. The requirement given in the data sheet shall prevail.

5. MANDATORY REQUIREMENTS:

5.1 Bids are invited directly from the Manufacturer or their authorized local agents in Pakistan. Besides local agent, principal involvement would be acceptable as regional Sales Representative, if applicable. However, in any case, Bids from stockiest and Brokers will be rejected.

5.2 The local agents/suppliers are required to submit valid authorization letter from the Manufacturer failing which will make bid non-compliant.

5.3 The bidder shall provide a clear and concise, clause by clause, compliance or exception (with

Reviewed By	Mr. Mehboob Ali DCM – Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O Gulshan-e-Iqbal

21/05/26

detail) commentary to these technical specifications duly signed and stamped on each page by Manufacture which is mandatory for technical evaluation, failing to submit this document may be considered non-responsive.

5.4 The bidder shall submit duly filled, signed and stamped this specification and Data sheet (by Manufacturer) with bid.

5.5 Proof of Certification as specified in Section 8 of the technical specification.

5.6 Design Calculation & Documents as specified in Section 9 of the technical specification.

5.7 Performance Guarantee as specified in Section 10 of the technical specification.

5.8 Sales Track Record as specified in Section 18 of the technical specification.

6. SCOPE OF SUPPLY

6.1 This specification covers the design and fabrication of vertical scrubber units to be supplied and used for the removal of liquid from the high/medium-pressure natural gas stream. The vertical scrubber units shall be installed on gas transmission/distribution pipelines or SMS designed for a maximum operating pressure of (Pressure class rating Psig) as specified in the SOR/data sheet

6.2 The design life of the equipment shall be minimum 20 years.

6.3 6.3 These specifications cover the design and fabrication of multi-cyclotube type vertical Scrubber (Pressure Vessel) to be supplied under these specifications and to be used for the removal of liquid and solid particles from the high/medium pressure natural gas stream. The Scrubbers shall be on gas transmission/distribution pipelines or SMS designed for a maximum operating pressure of class rating as specified in SOR/datasheet.

6.4 For design parameters, refer to data sheet.

6.5 Unless specified otherwise, the nozzle projections shall comply with the requirements as per latest edition of ASME VIII, Div. 1.

6.6 The principal shall be satisfied that the design of a cladding or lining (if mentioned in data sheet) accounts for the effect of differential thermal expansion and has sufficient ductility to accommodate any strain likely to be imposed during service. Further requirement of cladding also given in the data sheet.

6.7 Requirements for fireproofing or insulation will be individually specified for each vessel as per data sheet.

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6.8 Nozzle Connections & Manholes are identified in data sheet.

6.9 Inlet/Outlet connection size, flanged type, class rating, and applicable code is identified in data sheet.

6.10 The Scrubbers will be required to remove the dust particles and mist entrained in the gas stream with 100% removal efficiency for 6 microns. The Bidder shall specify the removal efficiency for particle size below 6 microns and as mentioned in data sheets.

6.11 **PARAMETERS**

(i)	Gas Flow Range	As specified in the SOR. (Annexure – I)
(ii)	Critical / Minimum Operating Pressure	As per data sheet
(iii)	Max Operating Pressure	As per data sheet
(iv)	Operating Temperature Range	As per data sheet
(v)	Gas Quality	As per Annexure – III
(vi)	Pressure Drop	3 psi for maximum condition

6.12 **NOZZLE CONNECTIONS & MANHOLES**

6.12.1 Inlet/Outlet shall be as specified in the SOR, flanged connection, RTJ/RF, ANSI Class 150,300 or 600 and ANSI B 16.5. Inlet and outlet shall be in 9 o'clock and 3 o'clock position respectively while facing gauge glass and pressure gauges (orientation to be confirmed at the time of vessel's manufacturing drawings approval). Vertical off-set between Inlet and Outlet, if required, shall be in accordance with manufacturer's design.

6.12.2 Vent connections shall be of 2" size, flanged ANSI Class rating and flange connection is as per data sheet and connection shall be fitted with manual ball valve and a blind flange.

6.12.3 Connection for Safety Valve shall be provided on the vessel top with an Isolation Ball Valve. Manufacture would be responsible for appropriate sizing of Safety Relief Valve (SRV/PSV).

6.12.4 Supply of spare parts for at least two times maintenance of PSV.

6.12.5 All flanged connections, including Safety Valves (2" or larger), shall be ANSI Class 150, 300 or 600, in accordance with the ANSI Class rating of the vertical scrubber specified in the

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SOR/data sheet.

6.12.6 Safety Relief Valve connection on top of the vessel shall be provided with a threaded outlet if smaller than 2" in size.

6.12.7 Threads to ANSI B2.1, NPT.

6.12.8 Instrument gas connection of appropriate size and threaded outlet type shall be provided on the vessel.

6.12.9 Pressure gauges' connections at inlet and outlet of appropriate size (by manufacture).

6.12.10 Differential pressure gauge connections of appropriate size (by manufacture).

6.12.11 2" drain connection for clean out and manual liquid discharge.

6.12.12 2" connection with auto drain Valve for automatic liquid level control.

6.12.13 Liquid level controller connections of appropriate size (by manufacture).

6.12.14 Level gauge connections (by manufacture).

6.12.15 Sizes for man-hole with cover and davit arm for inspection and cleaning of the internals is as per data sheet.

6.13 AUXILIARIES

6.13.1 Instrument hook-up connection shall be addressed in respective P&ID, Data sheets and hook-up drawing.

6.13.2 Automatic Liquid Control System comprising of the following and ready for installation:

- Snap acting type level controllers with isolating valves and fittings.
- Liquid Level Control Valves.
- Instrument gas interconnecting piping/tubing (SS316), isolating valve and fittings for hookup from vessel instrument gas connection to level controllers including high/low pressure regulators and from controllers to liquid level control valve.
- Isolating valve at upstream of liquid level control valve.

6.13.3 Liquid level gauges including gauge glass isolating valves and fittings

6.13.4 Pressure gauges at inlet and outlet with isolating valves and differential pressure gauge with

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5-valves manifold.

6.13.5 Safety Relief Valve – with Submission of API/ISO & ASME Section VIII-A'UV" Stamp Certification from offered Manufacturer. Suitable spectacle blinds are to be provided for Inlet and Outlet.

6.13.6 Spares for operational of vertical scrubber & auxiliaries

6.13.7 Bidder shall submit a complete instrumentation assembly drawing showing all hookup details for field installation to facilitate smooth functioning of the vertical scrubber and automatic liquid level control system

6.13.8 Field installation of all Auxiliaries on vertical scrubber will be the responsibility of Supplier/Manufacturer to ensure the field performance of liquid level control system. Undertaking would be required with the bid from Manufacturer/ Supplier for instrument assemblies' installation job at site

6.13.9 Bidder shall provide the separate price list of the following items:

- Automatic Liquid control system, comprising the following:
  - Liquid Level Controllers with isolating valves and fittings
  - Liquid Level control valves.
  - Instrument gas interconnecting piping/tubing (SS 304/316), isolating valve and fittings high/low pressure regulators.
  - Isolating valve at up-stream of liquid level control valve
  - Isolating valve at up-stream of liquid level control valve
  - Pressure gauges with isolating valves at inlet & outlet.
  - Differential pressure gauges with isolating valves
  - Safety relief valves

6.13.10 Each Vertical Scrubber shall be provide with Safety Relief Valves for maximum operating pressure corresponding to class rating specified for Vertical Scrubber in data sheet. Bidder shall quote separately for these valves and give details of installation.

6.13.11 The Supplier shall provide the manufacturing drawings for Review/Approval to the Purchaser before commencement of fabrication of the equipment. The Review/Approval of these shall

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not relieve the Supplier/Manufacturer from any responsibilities and liabilities in connection with the equipment ordered and the contract delivery period.

6.13.12 Nozzle loading shall be as follows:

NOZZLE SIZE	RESULTANT FORCE(N)	RESULTANT MOMENT(NM)
2"	1435	380
3"	2930	1140
4"	4100	2080
6"	7000	5230
8"	10190	9800
10"	13950	16510
12"	16500	22820
14"	17500	26110
16"	19350	32310
18"	21000	38310
20"	22450	44260
24"-30"	24750	54880

6.13.13 The above table gives the resultant forces and moments induced from pipework systems, which are to be allowed.

6.13.14 Contractor shall consider the force acting radially together with the moment adding either in a longitudinal or circumferential direction.

6.13.15 The above table does not apply to equipment nozzles within packaged units where actual loading conditions should be applied.

6.13.16 Supplier shall ensure that the above nozzle loadings will not induce unacceptable stress levels in the vessel shell or head, in compliance with the relevant vessel design code.

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7. DESIGN CODE

7.1 For design code ASME section VIII shall be followed and for design parameters refer data sheet. vessel shall be ASME u-stamped. Further requirement of hydro test shall be as per UG-99 of ASME Sec VIII, Div-I. Further hydro test parameter also given in data sheet. Heat treatment shall be as per ASME Sec VIII, Div-I.

7.2 Shell OD has been given in the data sheet whereas height of vessel with detail dimension & material description shall be provided by the manufacturer.

8. PROOF OF CERTIFICATION

8.1 The manufacturer shall provide documentation for the in-house quality control programmed with the bid documents which is strictly adhered to for the production of all manufactured equipment. The programmed must adhere to the internationally accepted quality control standard ISO 9000 series.

8.2 The manufacturer shall provide with the bid, the ASME "U" certification covering details and scope for design, manufacturing of Pressure Vessel and related equipment.

8.3 Failure to submit ASME U Certification may result in rejection of the bid

8.4 The Supplier shall supply six copies of as-built drawings including one reproducible, test certificates and six copies of comprehensive operation, maintenance and repairs manual.

8.5 The manufacturer shall provide with the bid, the "NB" certification covering details and scope for Pressure Vessel and related equipment.

8.6 NB marks & ASME U-Stamp should be existent on each Vertical Scrubber with traceable data record of ASME U-Stamp & NB marks.

8.7 Failure to provide certification for proof may result in rejection of the bid.

9. DESIGN CALCULATION & DOCUMENTS

9.1 The manufacture shall submit with bid, design calculation sheet and data sheet, for scrubber sizing, performance curve / data and pressure drop etc. for the equipment and auxiliaries.

9.2 Design software calculation shall be performed on internationally recognized software like compress and Pv-elite and submitted to SSGCL for review before start of fabrication.

9.3 The Bidder shall also submit with the bid, details of cyclotube including materials for cyclotube.

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design parameters and also submit drawings for internals of scrubbers.

9.4 The Bidder shall submit with the bid, printed technical literature, drawings (P&ID & GAD) etc.; of the quoted items showing details such as dimensions, connections, material and other technical details.

9.5 The Bidder shall submit with the bid, a complete instrumentation assembly drawing showing all hookup details for field installation to facilitate smooth functioning of the Scrubber and automatic liquid level control system.

9.6 Failure to provide above documents may result in rejection of bid

9.7 The Bidder shall provide price list of recommended spares for separation equipment and auxiliaries for two years operational maintenance.

10. PERFORMANCE GUARANTEE:

10.1 The manufacturer shall be required to guarantee that offered vertical scrubber along with accessories will meet the minimum performance requirements when operating under stated design conditions.

10.2 The manufacturer will provide the undertaking on company letter's head for process guarantee which confirm the following;

- Sizing of Equipment.
- Internal Efficiency.
- Sizing of Level Control Valve & Level Gauge.

11. SPECIFICATION OF SCRUBBER

11.1 Vertical scrubber shall be designed to meet the operating and design condition as stated in schedule of requirement (SOR).

11.2 Design shall be based on worst condition to which equipment shall be exposed to considering minimum & maximum pressure, temperature, flow, internal & external stress, all loadings (as mentioned in ASME Sec VIII Div-1 UG22) etc. Final design value for the scrubber shall be considered by increasing 10% value in worst case scenario.

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11.3 The vertical scrubber shall be designed using any reputed internationally recognized software.

11.4 The scrubber shall be self-supporting and designed to withstand the loadings exerted by internal or external pressure, weight of vessels, winds, all loadings (as mentioned in ASME Sec VIII Div.-1 UG22) & other environmental factors, reaction of supports, impacts & temperature.

11.5 Vertical scrubber components, supports shall be designed to withstand the results of following combination of load and forces within the limits of stress set by code and the deflections defined in below clauses;

11.5.1 Erection condition (the fabricated weight plus the weight of any internals and externals present during erection).

11.5.2 Operating and Design Conditions (the empty weight plus the weight of all internal and operating fluid).

11.5.3 Hot shut down condition (as for the operating & design condition, but excluding the operating fluid).

11.5.4 Shop Hydrostatic Test condition (the fabricated weight plus the weight of water to fill the vessel).

11.5.5 Site Hydrostatic Test condition (the hot shutdown condition plus the weight of water to fill the vessel).

11.5.6 Transportation / Dynamic Loading condition.

11.5.7 Any other condition, which would affect the safety of the vessel e.g. cyclic loading etc.

11.6 Deflection Limits Due to Applied Loads:

11.6.1 The static deflection of vertical scrubber in the corroded condition due to full wind load, must be specified by manufacturer limited at the time of bid.

11.6.2 The deflection due to applied load and self-weight of distributors, gratings, etc. and their supports, in corroded condition, shall be limited to 1 in 500 of their span.

11.6.3 Vertical scrubber with a ratio of overall height to diameter exceeding 15 shall be designed for dynamic stability under wind induced vibrations.

11.7 Unless specified otherwise, vertical scrubber shall be designed with a 1/8" (3 mm) corrosion allowance. The corrosion allowance shall be added to shell strength members, nozzles & any other carbon steel part in contact with the natural gas.

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11.8 Internal pipe minimum thickness shall be 1/8" plus twice the corrosion allowance or standard weight pipe (whichever is greater).

11.9 For dimension and tolerance, contractor shall comply with requirements as per ASME Sec – VIII Div. -1.

11.10 **Mechanical Requirements:**

11.10.1 The minimum thickness for shell & heads of carbon steel and low alloy steel scrubbers shall be considered as follows:

11.10.2 Minimum Thickness = Calculated Thickness + Corrosion allowance + tolerance + loadings

11.10.3 Calculated Thickness will be considered based on all applicable loading condition.

11.10.4 After forming, the minimum thickness shall not be less than for carbon steel vertical scrubber as follows:

Vessel ID	Minimum Thickness
1000 mm & below	6 mm
1001 – 2000 mm	8 mm
2001 & above	10 mm

11.10.5 For nozzles of carbon steel and low alloy steel vertical scrubbers, minimum wall thickness shall be the greater than code requirement including corrosion allowance or the following For carbon steel nozzles,

- 8 inch and smaller size shall be minimum sch. 40 seamless pipes.
- 10 inches and above size shall be minimum 9.2 mm thickness.

11.10.6 Skirts shall be designed for load conditions, but shall not be less than 6mm wall thickness for carbon and low alloy steels.

11.10.7 For high alloy materials, it shall be minimum 5 mm wall thickness.

11.10.8 Internal of vertical scrubbers shall not be less than 6 mm excluding corrosion allowance.

11.10.9 The corrosion allowance considered is based on the natural gas composition attached as Annexure – III. In generally for sweet services and suitable carbon steel services, corrosion allowance shall be taken 3 mm as minimum.

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11.10.10 Wear plates or impingent baffles shall be installed at inlet nozzles subject to erosion.

11.10.11 Formed Heads shall be 2:1 elliptical and fabricated from one plate as much as possible. If Heads produced from more than one plates, it should be radiographed 100% from welds.

11.10.12 The thickness of formed heads shall not be thinner than adjacent shell nominal thickness.

11.10.13 Vertical scrubber shall be supported by a skirt or legs. The skirt/legs shall be of the height required to provide the clearance between bottom of the head and the base of Skirt/legs as required for piping access etc. but in no case shall the clearance be less than 18".

11.10.14 Small vertical vessels for less than 1200 mm inside diameter may be supported on structural legs or lugs.

11.10.15 Skirts are mandatory for all vertical vessels with a height to diameter ratio greater than 5.

11.10.16 All vessels shall be designed to be self-supporting without benefits of guys and braces.

- At least top 1000 mm (Not from TL) shall be same material as bottom head. Lower part may be carbon steel.
- All openings in the skirt shall be reinforced to compensate for loss of structural strength.
- For 2:1 ellipsoidal head skirt outside diameter shall be same as bottom head outside diameter.
- Unless otherwise specified, minimum anchor bolts, spacing shall be 5 times of anchor bolt diameter.
- The minimum diameter of anchor bolts shall be M22 or 7/8 inch for vertical pressure vessels.
- The number of anchor bolts shall be multiple of 4 and shall straddle the normal vessel centerlines.
- The anchor bolts shall be arranged with 300 – 600 mm in pitch. If the anchor bolts pitch exceeds the limit, their size shall be increased.
- Where no tensile load is applied to anchor bolts, the minimum number of bolts are in accordance with following:

Inside Dia	Min Number of Bolts

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D ≤ 2000 mm	4
2000 < D ≤ 3000	8
3000 < D ≤ 4000	16
4000 < D ≤ 6000	20
6000 < D	24

11.10.17 Manholes, hand holes and girth flanges shall be provided for operation, maintenance and inspection to meet code requirements.

- Opening shall be designed based on MAWP.
- MAWP shall be calculated based on shell, head, body flange and nozzle/manhole flange PT ratings.
- Full penetration weld shall be used for all body flange, nozzle and manhole attachments. Other attachment weld details are not acceptable.
- No threaded connections shall be screwed directly into any part of vessel except for telltale holes in reinforcing pads. Weldolet, threadolets or sockolet shall be used.
- Unless otherwise permitted, Nozzle shall be flush with inside of vessel. Especially, vent and drain nozzle neck shall not be protruded inside.
- All bolt holes in manholes and nozzles shall straddle the normal vessel centerlines.
- Reinforcing pad for nozzles and manholes shall be used except below which shall be integral reinforced nozzle neck.
  - Nozzle of 2" Nominal Size
  - Flange rating of class 150,300 and 600 or higher
  - Vessel with lethal service
  - Vessel with shell thickness exceeding 50 mm
  - If specified in vessel data sheet.
- Reinforced pad inside the vessel is not permitted.
- 2-inch connection shall be LWN type. Welding neck plus forged neck type is acceptable if LWN is not feasible.

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- Long radius elbows shall be used, where required.
- For gauge glasses, level controls, etc. where two or more nozzles are required for installation, it must be set with a jig to prevent tolerance from being additive.
- All flanges 24" and smaller shall be according to ASME B16.5 as specified in data sheet. ASME B16.47 shall be referred for flanges over 24" dia.
- The bore of flanges shall match inside diameter of pipe.

11.11 **Manholes**

11.11.1 Vertical Scrubber shall be provided with manholes to access inside of vessel.

11.11.2 Unless otherwise specified manholes sizes shall be as follows;

Inside Diameter	Size
Upto 1500 mm	20"
1501 & above	24"

11.11.3 Manhole cover shall be equipped with davit except for cold service where hinges should be used.

11.11.4 Manholes shall be complete with blind flanges, bolting, gaskets and spares.

11.12 **Internal Attachments**

11.12.1 The vessel fabricator shall furnish and install all internal support, bars, gratings support, vortex breaker, demister pad, impingent plate, internal baffles, piping and all other internal as and where required.

11.12.2 All internal equipment which is to be welded in place, shall be installed before post weld heat treatment.

11.12.3 Major Internal piping shall be flanged for ease of removal through vessel manhole.

11.12.4 All removable internals shall be fabricated in sections so as to pass through the vessel manholes.

11.12.5 Support and fixed internals welded to shell/head shall be seal welded to prevent crevice corrosion.

11.12.6 Internal receiving liquid head shall be designed to stand liquid head.

11.12.7 At least one tray of each diameter and of each type shall be trial assembled in the shop.

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11.12.8 Wear plates or impingement baffles shall be provided at the inlet nozzles subject to erosion velocity. Wear plate/baffles should be removable without cutting or burning required.

11.12.9 Unless otherwise specified, internal baffle shall be provided on upper side level connection for vertical columns.

11.13 **External Attachments**

11.13.1 Vessel Fabricator shall furnish and install external pressure stiffeners, lifting lugs, ladder and platform lugs and pipe support unless otherwise specified.

11.13.2 Reinforcing pads shall be continuously welded to vessels beneath all attachments where welding of such attachments would cause excessive concentration of stress on vessels.

11.13.3 All pads, wear plate or other fully seal welded pads shall have two ¼" NPT telltale holes located at 180 degrees apart that have been drilled and tapped. Each pad shall be filled with silicone sealant after painting.

11.13.4 Vessels greater than 2000mm installed height shall be fitted with a full length ladder along with cage. Platform shall be provided as necessary for safe access to spectacle blinds, manholes, relief valves, control valves, controllers etc. Gratings shall be used for platforms.

11.13.5 All vessels shall be furnished with a minimum of two lifting lugs which shall be designed for all load equal to two times the shipping weight.

11.13.6 Lifting lug shall have pad plate to prevent damage of shell due to crevice corrosion between shell and lifting lugs.

11.13.7 Transportation sketch to be provided with shipping documents for vessel lifting.

11.13.8 For Skirt based vessels, a tailing lug must be provided at 90 Deg to lifting lugs.

11.13.9 Two earth lugs along with grounding rods as per design shall be provided for concrete or steel structure mounted items.

11.13.10 All attachments shall be continuously welded.

11.13.11 Verification of stress imposed on shell by external attachments, design any pads and determine weld details for clips accordingly.

11.13.12 Fabricator shall also check clip locations to avoid interference with nozzles, manholes, seams, and other similar items.

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12. MATERIALS

12.1 Materials of construction shall be in accordance with ASME Code.

12.2 If not specified, contractor shall determine the type of material and thickness to be used for pressure retaining parts or directly attached parts and non-pressure parts. All material used for fabrication of vessel shall be new and unused. Relevant MTC's shall be provided of each material used in fabrication.

12.3 Generally, materials used for vessels shells, heads, other pressure parts and reinforcement pads shall be minimum as follows. Further equivalent material of same mechanical properties and strength can be used with the prior approval of Purchaser and must mention in their bid. Further requirement of impact tested as mentioned below in table shall be as per UCS-66 of ASME sec-VIII, Div-I.

Shell	SA 516 Gr-70 N (a)
Head	SA 516 Gr-70 N (a)
Reinforcement PAD	SA 516 Gr.70 N (a)
Flanges	SA 105 N (a, d)
Nozzle Neck	SA 106 Gr.B (b)
Gasket	Gaskets (For Cl-150 Flanges)
Skirt	SA 516 Gr-70 N/SA 36
Lifting Lugs / PAD	SA 36 / SA 516 Gr. 70 N
Fittings (Internal & External)	SA 234 WPB/ SA 105 N
Name Plate / Bracket	SS 316
Earthling Lugs	SS 304
Internal	SS 304/ Bidder to confirm
Bolt/Nut	SA 193 B7/ SA194-2H
Anchor Bolts	Sa 36 / SA 307 Gr-B
Nozzle Material	
Vent	SA-105
DPI	SA-105
Instrument Gas Connection	SA-105
Inlet	Nozzle # SA 106 B Smls Pipe

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	PAD # SA 516-70
Outlet	Nozzle # SA 106 B Smls Pipe
	PAD # SA 516-70
Drain	Nozzle # SA 106 B Smls Pipe
	PAD # SA 516-70
PSV	Nozzle # SA 106 B Smls Pipe
	PAD # SA 516-70
Pipe(b)	SA106-B(a) / SA 333 - Gr.5
Tube(b)	SA179 / SA 334 - Gr.6
Equipment Name Plate	
Plate	SA-240,Gr304

Note:

a) Material upgrading is acceptable to avoid impact test requirement.

b) Seamless Material.

c) Material shall have enough impact properties at MDMT.

d) SA 105 shall be fine grain and normalized.

e) SA-36 or SA-283, SA-285 or SA-515 materials shall not be used for pressure parts.

f) Casting shall not be used.

12.4 Bolts and nuts shall be furnished for all cover plates, manholes, blind flanges and bolted attachments supplied with vessels.

12.5 External bolting shall be alloy steel stud type and selected for maximum and minimum design temperature.

12.6 Bolts up to 7/8" shall have coarse threads while 8 thread series shall be used for 1" and larger bolts.

12.7 Bolts shall not extend more than 6 mm beyond the nuts.

12.8 Gaskets shall be supplied for all bolted connections i.e. manholes, cover plates and blind flanges etc. with vessels.

12.9 Unless otherwise specified, gaskets shall be in accordance with ANSI B16.5.

12.10 Gaskets shall be provided for nozzles connected to external pipe work and valves of class as required Flanges while Spiral Wound Gaskets for Raised Face Flanges to ANSI B 16.5 ANSI Class 150,300 or 600 (as per requirement).

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13. MANUFACTURING / FABRICATION

13.1 The contractor shall provide the manufacturing/construction drawings within 2 weeks after PO placement for review / approval to the Purchaser.

13.2 Fabrication activity shall start only after manufacturing / construction drawings approved by the purchaser within 1 week after review of contractor documents.

13.3 Variation in construction drawing will not dealt to the change of specifications & quoted rates. The approval of the Purchaser shall not relieve the Supplier/Manufacturer from any responsibilities and liabilities in connection with the equipment ordered and the contract delivery period.

13.4 The contractor shall give due and proper notice of commencements of vessel fabrication in reasonable time under these specifications to the Purchaser.

13.5 The purchaser reserves the right to depute its representative during fabrication in order to witness/verify the fabrication activity with terms and conditions of the contract.

13.6 Plates shall be formed in the same direction as the final roll given in manufacture.

13.7 Welding:

13.7.1 Long Seam for vessel shall be located at 180° apart as much as possible.

13.7.2 Minimum weld to weld distance (weld toe to toe) shall be 50 mm or four times the thickness of thicker part (whichever is more).

13.7.3 In case fittings have to be interfered with other seam. It is subject to approval of company.

13.7.4 Following welding process is acceptable;

Scope	Carbon Steel	Austenitic S.S
SMAW	Yes	Yes
SAW	Yes	Yes
GTAW	Yes	Yes
GMAW	Yes (a, b)	Yes (a, b)
FCAW-G	©	©

a. Limited to root pass and seal welding only when the metal is adequately cleaned by sandblasting.

b. Shall not be used for pressure retaining parts.

c. Non pressure carbon steel parts except direct attachment weld to pressure parts can

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be applied, if design temperature is warmer than -29°C.

13.7.5 Qualification of welding procedure and the qualification of welders shall be done in accordance with these specifications and ASME Code Sec – IX.

13.7.6 Welding Procedure Specifications (WPS) and Procedure Qualification Record (PQR) along with test reports shall be submitted to owner for approval before starting any welding activity.

13.7.7 Welder Qualification test / welding operator shall be carried out in presence of purchaser nominated 3rd Party Inspector / Purchaser's representative.

13.7.8 Shell seams shall be located to miss long internal attachments welds (trays, down comers etc.) and all nozzles and manhole openings & their reinforcing pad.

13.7.9 Longitudinal and circumferential joints in vessel shells and heads shall be full penetration double welded butt type with "X" type grooves. Where the design requires the use of single welded butt joints, the weld detail employed shall be such as to ensure a full penetration joint.

13.7.10 Full penetration weld with full fusion shall be required for all pressure retaining part welds. All nozzles and manholes shall be attached to vessels by full penetration welds. Fillet weld is acceptable for the outside circle of reinforcing pads.

13.7.11 Welding of attachments shall be completely fusion corner welded in full length.

13.7.12 Single fillet weld connections are not permitted. Continuous fillet welds shall be used for all internal and external structures, supports and fittings to be welded for the vessel wall.

13.7.13 Welds are to be ground flush with the plate on the inside of the vessels where necessary for the passage of trays and baffles. Melting out of the reverse side of the weld shall not permitted.

13.7.14 Welding shall be performed in the "Flat position" as far as possible and the welding sequence shall be established in order to minimize residual stresses.

13.7.15 Welding electrode shall be of AWS approved quality.

13.7.16 All welding shall be completed prior to final post weld heat treatment and hydro test.

13.7.17 Use continuous seal welds on all edges to attach internals such as baffles and support rings to the shell or head. Internal or external attachments in hydrogen service shall be made with full penetration welds or with welds vented internally when full penetration welds are not

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feasible.

13.7.18 No welding shall be allowed after PWHT. All attachments including ladder and platform clips must be welded before PWHT.

13.7.19 No welding of any kind to be done when the temperature of base metal is lower than 0°F (-20° C). At temperature between 32°F (0°C) and 0°F (-20°C), the surface of all area within 3 inch of the point where weld is to be started should be heated to a temperature at least warm to hand (estimated to above 60°F (15°C).

13.7.20 All welds including pressure or non-pressure parts shall be done by approved/qualified welder as per approved WPS.

13.8 Weld Repairs:

13.8.1 All repairs of welding shall be in accordance with procedure approved by the company.

13.8.2 The repaired weld shall be subjected, as a minimum requirement, to the same testing and inspection as the original weld.

13.8.3 Weld repairs shall take place before hydrostatic testing and care shall be taken to ensure that the wall thickness is not reduced below the specified minimum design thickness.

13.8.4 Surface defects and areas of weld resulting from removal of temporary attachments shall be ground smooth and the area subjected to 100% crack detection.

13.8.5 Repairs on pressure parts allowed only two times. Otherwise part shall be replaced with new one.

13.9 Post Weld Heat Treatment Requirements (PWHT):

13.9.1 Vessels shall be post weld heat treated when required by the design code, applicable specifications or required due to process reasons.

13.9.2 NDT/RT/UT will be performed after PWHT to ensure no crack is produced after PWHT.

13.9.3 Post weld heat treatment shall also be considered for vessels subjected to large amounts of welding and where pressure parts have been formed from thick plate into tight radii.

13.9.4 The contractor shall include in his material purchase specifications, how many heat treatments are likely to be carried out during fabrication, and he shall ensure that he receives a guarantee from the mill that steel supplied can be heat treated as proposed (including one

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reheat consideration of repair). Without detrimental effect on the minimum guaranteed mechanical properties.

13.9.5 For final post weld heat treatment, at least two thermocouples shall be attached to the outside and at least two thermocouples to the inside surfaces at the top, bottom, and center of the vessels shell and at each heads.

13.9.6 All heat treatments shall be recorded and documented by a temperature recording chart in the presence of TPI / Purchaser's representative.

13.9.7 Furnace heat can also be done for entire vessel after complete fabrication.

14. INSPECTION AND TESTING

14.1 General:

14.1.1 The Contractor shall submit an Inspection and Testing Plan (ITP) covering all relevant components, completed equipment and systems. ITP shall be reviewed and approved by Purchaser or its nominated 3rd Party Inspector.

14.1.2 The Contractor shall hire ASME inspector to review all hold points as per ITP.

14.1.3 The Contractor shall be liable to submit MTC(s) of all material used in fabrication of vessel.

14.1.4 All non-destructive examination shall be carried out in accordance with the approved project quality plan and approved Inspection & Test Plan (ITP).

14.1.5 All personnel involved in non-destructive testing shall be qualified to a nationally recognized standard or ASNT.

14.1.6 The Purchaser or its nominated 3rd party Inspection firm shall have the right to witness at any time the fabrication, testing and shipment of the equipment supplied in accordance with this specification and to verify compliance with terms and conditions of the Contract.

14.1.7 The responsibility for inspection rests with the contractor. However, the company reserves the right to inspect vessels at any time during fabrication to ensure that materials and workmanship are in accordance with this specification, and /or approved drawings.

14.1.8 The approval of any work by the company or their authorized representative and the release of a vessel for shipment shall in no way relieve the contractor of any responsibility for carrying out the provisions of this specifications.

14.1.9 It should be noted that review and approval of any type documents is for quality assurance

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purpose only. The contractor is responsible for checking of compliance with the documents, this specifications, and codes.

14.1.10 The contractor shall provide calibration certificates of testing instrumentation for review by the inspector prior to each test.

14.2 Radiographic Inspection:

14.2.1 100% radiographic inspection shall be required of all welds in accordance with Paragraph UW-51 ASME Sec VIII Div-1 code unless otherwise specified.

14.2.2 When 100% radiography is specified all welds, including flange butt welds and nozzle to shell connecting welds, shall be fully radiographed.

14.2.3 Where radiography is considered to be impractical, ultrasonic inspection may be substituted with prior approval of the company.

14.2.4 For vessels requiring radiography where heat treatment is required, the radiography must be carried out after Post Weld Heat Treatment (PWHT).

14.3 Ultrasonic Inspection:

14.3.1 Where external attachments are welded to base metal thickness of 50 mm and over, vessel plates shall be ultrasonically tested at the point of attachments.

14.3.2 All butt welds and vessel support attachments welds shall be ultrasonically examined after hydro test in accordance with ASME Code.

14.3.3 Where shell or head thickness is 50 mm and over, integral reinforced nozzle attachment weld to be examined by UT.

14.3.4 For vessels requiring UT examination where heat treatment is required, the examination must be carried out after heat treatment.

14.4 Magnetic Particle and Dye Penetrant Inspection:

14.4.1 Forging with wall thickness 50 mm and over shall be examined on all surfaces after final machining. All surface cracks, seams, or laps, shall be removed and repaired by welding.

14.4.2 Magnetic particle examination shall be performed, even if material is ferritic steel, in case of austenitic steel, liquid penetrant examination shall be performed.

14.4.3 All magnetic particles and dye penetrant inspection shall be performed in accordance with

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the design code.

14.4.4 As a minimum, the following applies at all nozzles, manways, and reinforcing pads:

14.4.5 Load bearing fillet welds shall be checked at root runs and finished welds by magnetic particle or dye penetrant method.

14.4.6 All full penetration attachment welds shall be magnetic particle inspected at the back – chipped surface and on all finished weld surfaces.

14.4.7 Crack detection of finished welds shall be carried out after hydrotest and PWHT (where applicable).

14.4.8 Magnetic particle inspection is preferred particularly after post weld heat treatment. Vessels of low chrome alloy with plates over 50 mm thick shall receive this inspection of all weld seams after post weld heat treatment.

14.4.9 100 % Dye Penetrations test shall be performed on the all weld joints.

14.5 **Reinforcing Pad Inspection:**

14.5.1 Welds of reinforcing pads shall be tested to 1 barg with dry air after fabrication but prior to hydrostatic test using suitable materials for detection of leaks.

14.6 **Hydrostatic Test:**

14.6.1 Hydrostatic tests shall be carried out in presence of Contractor hired ASME inspector and purchaser or its nominated 3rd Party Inspector.

14.6.2 All instruments and gauge shall be calibrated and their certification shall be made available during hydro static test. At least two gauges shall be used for pressure testing.

14.6.3 The scrubber shall be assembled with all auxiliaries hooked up and be tested to ascertain the conformance to the tender specification and then disassembled for shipment.

14.6.4 Hydrostatic testing shall be in accordance with UG-99(B) of ASME Sec-VIII Div-1 of vessels.

14.6.5 Fresh water only be used for testing. Water sample test shall be shared with TPI inspector and shall be part of final documentation.

14.6.6 Adequate support shall be provided for vertical vessels tested in horizontal position to ensure that they are not subjected to excess local loading and bending stresses.

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14.6.7 All safety measures shall be ensured before starting of Hydrostatic test such as barricading etc.

14.6.8 Hydrostatic test pressure shall be maintained for an adequate time to permit a thorough inspection in any case not less than 60 minutes.

15. PAINTING & COATINGS:

15.1 Work procedure

15.1.1 General

15.1.1.1 The Contractor shall submit for approval to the Company detailed procedures for:

- Surface cleaning
- Paint material storage and preparation procedure
- Primer application
- Intermediate and finish coat application
- Inspection and data recording procedures
- Paint repair procedure
- Painted equipment/material transportation, storage and handling procedure
- Type of abrasive to be use

15.1.1.2 The above procedure shall include the application equipment/tools. Material specification for the cleaning and painting, and mixing materials, shall be submitted to the company for approval.

15.1.1.3 Material shall not be procured prior to approval of the Company.

15.1.2 Atmospheric Condition

15.1.2.1 Contractor shall ensure the recording of ambient condition at regular intervals prior to and during of blasting/Painting/Coating application. Surface temperature, ambient temperature, dew Point and humidity shall be recorded and documented during the operation. No Blasting and painting activity shall be permitted when:

- Humidity is higher than 80%

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- Surface Temperature is 3 °C or above the dew point.
- Surface Temperature is above 50°C

15.2 Codes, Standards & Specifications.

15.2.1 The surface preparation and coatings shall be in accordance with this specification, the latest editions of the following Codes and Standard:

- "Steel Structures Painting Manual Vol. 1", Good painting practice"
- "Steel Structures Painting Manual Vol. 2", Systems and Specification"
- "Swedish Standard S.I.-05.5900"

15.3 Surface Preparation

15.3.1 All rough welds, burrs, weld spatter, indentations and all other sharp surface projections shall be ground smooth prior to further surface preparation. Any grinding done after blast cleaning to obtain proper anchor pattern, grinding is forbidden on piping systems.

15.3.2 All bolt holes shall be drilled and smoothed before blast cleaning.

15.3.3 All cleaning shall be to a NEAR-WHITE-BLAST CLEANING in accordance with and as illustrated by Swedish Standard SIS 05 5900 Grade SA 2%.

15.3.4 All surfaces shall be blast cleaned to achieve surface profile of % of total paint film thickness in microns.

15.3.5 Material used for blast cleaning shall be submitted to the Company for approval. Company will have the right to select most appropriate material. Contractor shall provide a surface profile meter at site for the inspection of achieved surface profile.

15.3.6 Any oil, grease, dust or foreign matter deposited on the surface after the surface preparation is completed shall be removed prior to painting. In the event rusting occurs after completion of surface preparation, the surfaces shall again be cleaned in accordance with the specified method.

15.3.7 Cleaning shall be discontinued each day in sufficient time to permit the surfaces cleaned to be primed before the end of the working day.

15.3.8 Dry blast cleaning operations shall not be conducted on surfaces that will be wet after blasting and before painting. If relative humidity is greater than 80%, permission to blast shall be

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obtained from Company.

15.3.9 Extreme care shall be exercised to prevent damage when blasting near nameplates, machined surfaces and factory coated items, Raised face of flanges. These surfaces shall be adequately protected.

15.3.10 Mill scales, rust scales, old paints marking, slags and sediments, weld spatter and other foreign material shall be thoroughly removed.

15.3.11 Cloth is not allowed to be used on blasted surfaces for cleaning the sand dust which accumulated due to blasting operation, soft brush shall be used for the purpose.

15.3.12 Blasted and cleaned surfaces shall be inspected and approved by the Company, prior to priming/Painting works.

15.3.13 Sand particle size and abrasive contamination shall be regularly checked.

15.3.14 The abrasive for blasting shall be dry and free from oil, grease, dust and other impurities. Re-usable abrasive shall be clean and reasonably sharp, contain no rust or noticeably worn abrasives.

15.3.15 Blast Cleaning shall not be permitted where adjacent area or equipment are not sufficiently protected from contamination by abrasive dust or debris.

15.3.16 Blast Cleaning shall not be permitted in the areas close to the painting operation to prevent contamination of wet paint film by dust and grift.

15.4 Paint Mixing, Thinning & Storage

15.4.1 All containers of coating material shall remain unopened until required for use and shall be stored under cover. Painting materials shall be stored in accordance with the instructions of the paint manufacturer

15.4.2 Painting material which has jelled or otherwise deteriorated during storage shall not be used.

15.4.3 All ingredients in any container shall be thoroughly mixed before use to a smooth and uniform consistency. Mechanical agitation during application shall be sufficient to keep pigment in solution

15.4.4 Painting material mixed in the original container shall not be transferred until all settled pigment is incorporated in the vehicle. This does not imply that part of the vehicle may not be poured off temporarily to simplify the mixing.

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15.4.5 Painting material shall not be mixed to be kept in suspension by using a bubbling air stream.

15.4.6 Where a skin has formed in the container, the skin shall be cut loose and discarded. If such skins are sufficiently thick to have a practical effect on the composition and quality, the paint shall not be used

15.4.7 All pigmented material shall be strained after mixing except where application equipment is provided with adequate strainers. strainers shall be capable of passing the pigment and removing any skin

15.4.8 Painting material which does not have a limited life or does not deteriorate on standing may be mixed any time before using and shall not remain in spray pots or buckets overnight, but shall be gathered in to a closed container and remixed before use

15.4.9 No thinner shall be added unless necessary for proper application. Thinning shall not exceed limitations established by Manufacturer

15.4.10 Type of thinner shall comply with Manufacturer's instructions.

15.4.11 When use of thinner is permissible, it shall be added during the mixing process. Painters shall not add thinner after it has been thinned to the proper consistency. All thinning shall be done under supervision of someone acquainted with the correct amount and type to be added

15.4.12 All painting materials shall have prior approval of the Company.

15.5 Coating Procedure

15.5.1 Painting System

15.5.1.1 The painting system to be applied shall be according to the system described hereunder.

15.5.1.2 The Contractor shall check the dry film thicknesses by ELKO meter in the presence of Company representative.

15.5.1.3 All epoxy paints shall bear date of manufacture and date of expiry from the manufacturer and shall not expire at the time of application.

15.5.1.4 The type of paint, number of coats and thickness shall be applied as outlined

Surface Preparation		Sa 2 ½
Primer Coat	Inorganic Zinc Silicate	50-100 microns DFT

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Intermediate coat	Polyamide Epoxy	25-175 microns DFT
Finish Coat	Aliphatic Polyurethane	50-75 microns DFT
Total Thickness		225 microns DFT minimum

15.5.1.5 Other painting materials can be used only with Company's prior approval.

15.5.1.6 Primers and finish coats for any particular system shall be from the same manufacturer to ensure material compatibility.

15.5.1.7 Manufacturer's instructions, including safety precautions, are a part of this specifications. In case of conflict, the manufacture/s mandatory instructions shall govern.

15.5.2 **Application**

15.5.2.1 Surfaces shall not be painted in rain, wind, snow, fog, and mist in areas where injurious airborne elements exist, when the surface temperature is less than 3°C above dew-point, when the relative humidity is greater than 80% or when the temperature is below 5°C.

15.5.2.2 To the maximum extent practical, each coat of material shall be applied as a continuous film of uniform thickness free of pores. Any thin spots or areas missed in the application shall be recoated and permitted to dry before the next coat is applied.

15.5.2.3 Each coat shall be in a proper state of cure or dryness before the application ofthe succeeding coat. Material shall be considered dry for re-coating when an additional coat can be applied without the development of any detrimental film irregularities such as lifting or loss of adhesion of the undercoat.

15.5.2.4 When successive coats of the same color have been specified, alternate coats shall be tinted when practical, sufficiently to produce enough contrast to indicate complete coverage of the surface.

15.5.2.5 When the material is the color of the steel or when the tinting of the final coat is objectionable, the first coat to be applied shall be tinted.

15.5.2.6 The tinting material shall be compatible with the material and not detrimental to its service life.

15.5.2.7 All blast cleaned surfaces shall be coated with the specified primer within four hours after blasting, before rusting occurs.

15.5.2.8 No acid washes or other cleaning solutions or solvents shall be used on metal surfaces after

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they are blasted

15.5.2.9 Brush application of paint shall be in accordance with the following:

15.5.2.9.1 Brush application shall be done in areas which cannot be properly sprayed and for touch up maintenance where spray application is not practical

15.5.2.9.2 Brushes shall be of a style and quality that will enable proper application of paint. Round or oval brushes are most suitable for rivets, bolts, irregular surfaces and rough or pitted steel, wide, flat brushes are suitable for large flat areas, but they shall not have a width over 125 millimeters.

15.5.2.9.3 The brushing shall be done so that a smooth coat as nearly uniform in thickness as possible is obtained.

15.5.2.9.4 Paint shall be worked into all corners.

15.5.2.9.5 Any runs or sags shall be brushed out.

15.5.2.9.6 There shall be a minimum of brush marks left in the applied paint.

15.5.2.9.7 Surfaces not accessible to brushes shall be painted by spray, daubers or sheepskin.

15.5.2.10 Roller application of paint could also be used. Rollers of different length of naps should be selected as per the requirement.

15.5.2.11 Airless spray application shall be in accordance with the following:

15.5.2.11.1 The equipment used shall be suitable for the intended purpose and shall be capable of properly atomizing the paint to be applied. The nozzles shall be those recommended by the Manufacturer of the equipment for the material being sprayed. The equipment shall be kept in satisfactory condition to permit proper paint application.

15.5.2.11.2 Most suitable spray tip and pressure should be selected and used.

15.5.2.11.3 The spray fan should be kept at right angle to the surface and the gun should be triggered off at the end of each pass.

15.5.2.11.4 Proper distance should be maintained for holding an airless spray gun from the surface being coated, in order to avoid pin holing, dry spraying and over spraying.

15.5.2.11.5 When in use, avoid placing hands or fingers in front of the gun, as contact with the pressurized point can cause serious injury

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15.5.2.11.6 Spray trigger-locking device should be in working order and only released during spraying operation.

15.5.2.11.7 Spray equipment shall be kept sufficiently clean so that dirt, dried paint and other foreign materials are not deposited in the paint film. Any solvents left in the spray equipment shall be completely removed before applying paint to the surfaces being painted.

15.5.2.11.8 Airless Paint spray equipment shall always be provided with an electric ground wire in the high pressure line between the gun and the pumping equipment. Further the pumping equipment shall be suitably grounded to avoid the buildup of any electrostatic charge on the gun. The manufacture/s recommendation should be followed regarding the proper use of the equipment

15.5.2.11.9 Paint shall be applied in a uniform layer with overlapping at the edge of the spray pattern. The spray pattern shall be adjusted so that the paint is deposited uniformly.

15.5.2.11.10 Areas inaccessible to the spray gu n shall be painted by brush; if not accessible by brush, daubers or sheepskins shall be used. Brushes shall be used to work paint into cracks, crevices and blind spots which are not adequately painted by spray.

15.5.2.11.11 Particular precautions are necessary in spraying inorganic zinc.

15.5.2.12 All nameplates, manufacturer's identification tags, machined surfaces, instrument glass, finished flange faces and similar items shall be masked to prohibit coating deposition. If these surfaces are coated, the component shall be cleaned and restored to its original condition

15.5.2.13 Edges of structural shapes and irregular coated surfaces shall be coated first and an extra full pass made later.

15.5.2.14 Contact surfaces of all components (bottom of skids, mounting surfaces of equipment etc.) are included in the scope of work to be coated.

15.5.2.15 Wet paint shall be protected against contamination from dust or other foreign matter.

15.5.2.16 Sand blasting yard and painting yard shall be appropriately apart or if close shall be segregated by a proper partition.

15.5.2.17 Second primer coat and finish coats, as specified, shall be applied after fabrication, erection and welding activities.

15.5.3 **Drying of Coated Surfaces**

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15.5.3.1 No coat shall be applied until the preceding coat has dried. The material shall be considered dry for recoating when another coat can be applied without the development of any film irregularities such as lifting or loss of adhesion to under coats and the drying time of the applied coat does not exceed the maximum specified for it as a first coat.

15.5.3.2 No paint shall be forced dried under conditions which will cause checking wrinkling, blistering formation of pores or detrimentally affect the condition of the paint

15.5.3.3 No drier shall be added to a paint on the job unless specifically called for in the manufacturer's specification for the paint.

15.5.3.4 Paint shall be protected from rain, condensation, contamination, snow and freezing until dry to the fullest extent practical.

15.5.4 **Repair of Damaged Paint Surface**

15.5.4.1 Where shop paint has been damaged in handling, all damaged and loosely adhering paint shall be removed and the surface thoroughly cleaned. Edges of the breaks shall be feathered and the designated number of prime and finish coats applied.

15.6 **Inspection**

15.6.1 The Contractor shall deploy a qualified team for the Quality Control of the painting works.

15.6.2 Detailed QC procedures shall be developed by the Contractor and submitted to the Company for approval.

15.6.3 All painting Works shall be carried out only in accordance with the approved procedure.

15.6.4 All materials supplied and Works performed under this specification shall be subject to inspection by inspectors nominated by the Company.

15.6.5 All parts of the work shall be readily accessible to the inspector.

15.6.6 Approval of each of the following shall be obtained before proceeding with any subsequent phase:

- Weather Conditions
- Location of Work
- Surface preparation and Painting of Equipment and Material
- First coat

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- Each Subsequent coat

15.6.7 The Company shall have the authority to reject any Work that does not conform to the specifications.

15.6.8 Applicator shall correct work found defective under this specification.

15.6.9 The painting work inspection shall be undertaken in five (5) steps according to the hereunder sequence:

15.6.9.1 The blast cleaning required grade shall be checked by means of a surface preparation tester, elcometer dial gauge model 123 or equivalent.

15.6.9.2 The surface cleanliness, result of the surface preparation step, will be checked by means of the elcometer model 153 "Surclean".

15.6.9.3 An in-process checking will be given to check the wet film thickness by means of the wet film thickness gauge

15.6.9.4 After coating, the dry film thickness shall be measured by means of an elcometer dial gauge model 126

15.6.9.5 In case minimum dry film thickness as specified in this specification are not achieved due to whatever reasons, the number of coats will be increased accordingly to achieve the only specified DFT

15.6.9.6 The coating integrity testing will be achieved by the use of a holiday detector. In case of lack of paint detection, the Contractor shall mark the holiday to indicate the location of repair work to be performed.

15.6.10 All equipment necessary to measure the performance of painting shall be provided by The Contractor.

15.6.11 Contractor shall perform adhesion test as per ISO-2409 by cross cut test method to determine the bonding strength between applied paint / Coating and substrates where the paint was applied.

15.6.12 Contractor to examine the cut area of the test coating in good lighting using normal or corrected vision or, if agreed between the interested parties, using a viewing lens. Classify the test area in accordance with the Table below

Classification	Description	Appearance of Surface of Cross-cut area from

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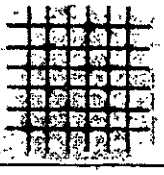
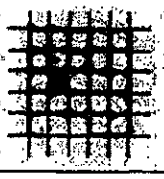
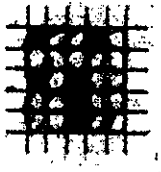
		which flaking has occurred **(Example for six parallel cuts)**
0	The edges of the cuts are completely smooth; none of the squares of the lattice is detached.	
1	Detachment of small flakes of the coating at the intersections of the cuts. A cross-cut area not greater than 5% is affected.	
2	The coating has flaked along the edges and/or at the intersections of the cuts. A cross-cut area greater than 5%, but not greater than 15%, is affected	
3	The coating has flaked along the edges of the cuts partly or wholly in large ribbons, and/or it has flaked partly or wholly on different parts of the squares. A cross cut area greater 15% but not greater than 35% is affected.	
4	The coating has flaked along the edges of the cuts in large ribbons and/or some squares have detached partly or wholly. A cross-cut area greater than 35%, but not greater than 55%, is affected.	
5	Any degree of flaking that cannot even be classified by classification 4.	

15.6.12.1 The first three steps are satisfactory for general purposes and are to be used when a pass/fail assessment is required.

15.7 **Color Schedule**

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

21/05/14

15.7.1 Final colors scheme shall be selected by the Company prior to painting of the equipment/system.

16. NAME PLATE STAMPING / MARKING:

16.1 The Scrubber under this specification shall be fitted with a readily visible welded marking plate of 316 stainless steel carrying an identification label.

16.2 Said label shall show the following details as minimum:

- Name of Manufacturer.
- Manufacturer's Serial Number.
- Purchase Order Number.
- Shell & Head Material Specification.
- Shell & Head Thickness.
- Corrosion Allowance.
- Maximum Allowable Working Pressure.
- Maximum Allowable Temperature.
- Minimum Design Metal Temperature.
- RT Marking & PWHT Marking.
- Design Flow Range.
- Design Pressure Range.
- Inspector's Stamp.
- Test Pressure & Its Date.
- Vessel Weight (Empty/Full)
- Vessel Height.
- Years of Manufacturing.
- ASME stamp mark will be provided separately.

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM - P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

21/05/26

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16.3 Name plate shall be placed at proper location and shall be readable from ground installation.

17. PREPARATION OF SHIPMENT:

17.1 The vessel shall be dried and cleaned thoroughly of all grease, loose scale, rust, flux and weld spatter, both internally & externally after hydrostatic test.

17.2 All machined surfaces and threaded connections shall be protected by coating with rust preventatives.

17.3 All flanged opening shall be protected with steel plate covers or Blind Flanges (for spare connection) attached by proper bolting or strapping and sealed with plastic compound.

17.4 Screwed connections shall be protected with threaded forged steel plugs.

17.5 For internal parts suitable supports shall be provided to avoid any damage during shipment.

17.6 The contractor shall be responsible for loading and anchoring vessels to prevent any damage during shipment.

17.7 When shipped loose, all instruments and valves, parts etc. of vessel shall be tagged with identification number to facilitate match up with appropriate vessels. Tags and wire shall be of stainless steel. All such items shall be boxed and where possible attached to the inside of skirt.

17.8 Contractor shall confirm in proposals for long term storage of vessel for both indoor and open environment considering marine environment.

18. SALES TRACK RECORD:

18.1. The Bidder shall submit the supporting documents of sales track record for the offered Un-fired Pressure Vessel (Vertical Scrubber including copies of purchase order & satisfactory certificate of operation of five (5) different end users related to Oil & Gas sector with similar requirement along with their email (email address of end user's company domain and not the commercial domain like yahoo, Gmail, or Hotmail, etc), fax, telephone, address and name of persons to contact to whom they have supplied the offered Un-Fired Pressure Vessel (Vertical Scrubber) within the last five (05) years and have been successfully installed and operated.

18.2. Simply submitting a list of customers, to whom the Manufacturer has been supplying the Un-Fired Pressure Vessel (Vertical Scrubber), will not meet the intent and purpose of this requirement. Failure to comply with this requirement may result in rejection of the bid.

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

21/05/26

19. RESERVATIONS:

19.1. The purchaser shall have the right to witness at any time the fabrication, testing and shipment of the separation equipments supplied in accordance with this specification..

19.2. The Supplier shall give proper notice of the commencements of separation equipment fabrication and testing under this Specification to the Purchaser/third party inspector appointed by SSGC.

19.3. The Vertical Scrubber shall be assembled with all auxiliaries hooked up and be tested to ascertain the conformance to the tender specification and then disassembled for shipment.

20. FINAL DOSSIER:

Contractor shall furnish six copies of the following Final Reports and data sheets prior to delivery of vessels:

- Material Test Certificates.
- Reports of Material Test.
- Proposed Test Procedure.
- Inspection & Test Plan signed by QC & TPI.
- Design Calculations & Data Sheet, including strength calculation of vessels, external clips, lifting lugs, internal supports, baffles etc.
- Detail Fabrication Drawings.
- General Arrangement Drawings.
- Name Plate Drawings (Vessel & Safety Relief Valve).
- Foundation Details Drawings.
- Welding Procedure Specification.

Reviewed By	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By	SGM (Transmission)	SGM (Technical Services)

21/05/22

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- Welder Qualification Report.
- Procedure Qualification Record.
- Non-Destructive Tests Record.
- Hydrostatic Test Certificate.
- Report on Heat Treatment.
- All Inspection Reports.
- Calibration Certificate of Equipment.
- Transportation Procedure.
- Data Sheets & Drawings and spare part list along with supplier identification of Safety Relieve Valve, Control Valves, all associated equipment.
- Operation / Maintenance & Repairs / Installation Manuals of Vessels and associated equipment.
- Price list of Spare Parts for two years' operation.
- Separate price list for all auxiliaries and instruments.
- Any other documents etc.

Reviewed By:	Mr. Mehboob Ali DCM - Transmission	Mr. Faiz Ahmed DCM – P&D Transmission
Approved By:	SGM (Transmission)	SGM (Technical Services)

21/05/26

Sui Southern Gas Co. Ltd.
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TERMS OF REFERENCE

INSPECTION OF VERTICAL SCRUBBER

Third party inspection will be carried out as per attached Specification compliance sheet & Inspection Test Plan ITP submitted by the vendor and inspect the manufacturing process including following test/ points mentioned below, are mandatory and TPI to submit report.

1. Reference applicable Code/Standards/ documents as per specifications:
2. Review of detailed listing of equipment, materials, tools, internals, accessories and spares parts etc.
3. Verify the completeness of whole unit based on the final packing list.
4. All the connections whether piping, component or electrical have to be thoroughly inspected for their integrity.
5. All equipment shall be inspected and tested for the following items as minimum requirement and in accordance with latest edition of applicable codes/standards, drawings and specifications.

- Appearance inspection
- Visual inspection to be carried out before Hydro test.
- Dimensional Inspection
- Marking/ Stamping Inspection
- Functional/operational test

6. All inspection/testing equipment shall be calibrated and their certificate should be available.
7. All valves and pressure relief devices to be inspected as per applicable code/standard.
8. Material test certificates MTC's in accordance with EN 10204 3.1 to be confirmed with the standards/specifications.
9. All parts of vertical scrubber should be brand new, rust free and weld deposit material is not acceptable.
10. Welding and Nondestructive testing and their reports to be checked/witnessed as specified in the specifications/ datasheet/ drawings.
11. Preservation & Packing checks to be performed as per specifications.
12. Upon completion of satisfactory testing all components to be thoroughly drained and dried prior to preparation for packing.
13. Third Part Inspector should check and verify NB marks and ASME U-stamp on every individual Vertical Scrubber. The registration number must be traceable with NBBI records.

Sui Southern Gas Co. Ltd. Procurement Dept.

Annexure - IV

Natural Gas Composition

Sr. No.	Contents	Units	Range
1.	Sulfur(max)	Grains / 100scf	3.5
2.	Hydrogen Sulfide (max)	Grains / 100scf	0.24
3.	Carbon Dioxide(max)	Mol%age	3
4.	Nitrogen (max)	Mol%age	7
5.	Calorific Value (min)	Btu/scf	900
6.	Wobbe Index (min)		1180
7.	Water Contents(max)	Lbs/MMscf	7

Annexure-

Note: Detailed gas composition sheet will be shared at latter stage.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

SSGC

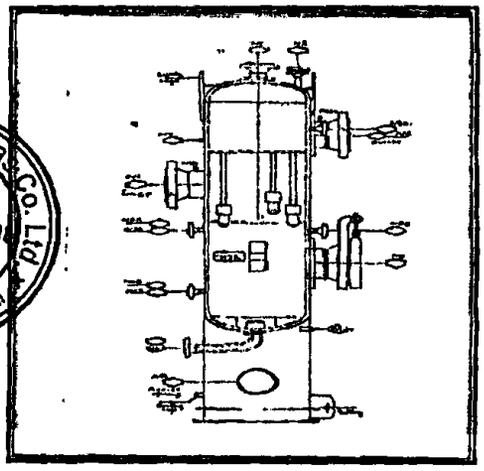
PROCESS DATA SHEET FOR VERTICAL SCRUBBER

Doc No :
Prep: Check: APP:
Date:
Sheet Rev.

Client. Sui Southern Gas Company Limited
Plant :-
Unit.
Project:-"A 2.5 KM PIPELINE FROM HATRI GAS TO RIVA LUNDO

Job No:
Service :
No req.
Tag/Item Code: Model No
Quantity :

1	**DESIGN PARAMETERS**	**Unit**		6.	**Nozzal Data**		**Qty specify by Bidder**	**Size**	**Rating**	**Type**	**Standard**	
1.1	Pressure	Psig	1440 Psig	6.1	Inspection Opening (Manhole)	(M1)		18"-20"	CL-600	RTJ	ANSI B 16.5.	STS
1.2	Temperture	Deg °F	120-125	6.2	Inspection/Access Opening	(A0)						VTS
1.3	Rating (CL-600 / CL-800/ CL-150)	ANSI	600	6.3	Gas Inlet Connection	(N1)		08"	CL-600	RTJ	ANSI B 16.5.	STS
1.4	Code		ASME Section VIII Div 1,2015	6.4	Gas Outlet Connection	(N2)		08"	CL 600	RTJ	ANSI B 16.5.	STS
1.5	Stress Relved (Yes/No) As per Code		VTS	6.5	Vent with Blind	(N3)						VTS
1.6	ASME U stamp Marking Required		YES	6.6	Drain (Manual & Auto) / Liquid out let	(N4)		2"	CL 600	RTJ	ANSI B 16.5.	STS
1.7	NB Registration		YES	6.7	Liquid Level Guage connections	(N5A-N5B)						VTS
1.8	MDMT Temperature	°C	VTS (Note 6)	6.8	Liquid Level Controller connections	(N6A-N6B)						VTS
1.9	Earthquake /Seismic code		VTS (Note-6)	6.9	PSV	(N7)						VTS
1.10	Joint Efficiency (Shell /Head)	%	VTS (Note 6) As per Code	6.10	Differential Pressure Gauge	(N8A N8B)						VTS
1.11	Corro. Allowance (Shell /Head)	mm	VTS	6.11	Instrument Gas connection (Threaded NPT)	(N9)						VTS
1.12	Wind Speed OR Wind code	KM/HR	VTS	6.12	Skirt Vent /Opening	(S.V 1 - 4)						VTS
1.13	Insulation . Protective /Consevative / None	Th (inches)	VTS	6.13	Pressure Gauge Point	N1a & N1b						VTS
1.14	Mounting (Skid/ Unskid)		Skid	7.	**EXTERNALS (VENDOR TO CONFIRM)**							
1.15	Impact Test		VTS	7.1	Supports (Skirt Type)		Yes /No					VTS
2.	**OPERATING PARAMETERS**			7.2	Lifting Lugs		Yes/No					VTS
2.1	Operating Pressure	Psig	700-1300	7.3	Insulating Rings & Clip		Yes / No					VTS
2.2	Operating Temperature	°F	40-120	7.4	Anchor Bolts		Yes / No					VTS
2.3	Pressure Drop (3 Psi at Max. Condition)	Psig	3 Psi at max	7.5	Earthing Lugs		Yes/No					VTS
2.4	Gas Flow Rate	MMSCFD	25-60	7.6	Ladder / Platefform		Yes /No					VTS
2.5	Type of Fluid (Natural Gas Composition Attached)	As per Annexure -1\		7.7	Eye Bolt		Yes /No					VTS
3	**VESSEL DIMENSIONS (Approx)**			7.8	Davit arm pipe		Yes /No					VTS
3.1	Shell Dameter (OD)	Inches	24	7.7	Instrument Tubing		Yes					VTS
3.2	Shell Length (SM-FOF)	Inches	VTS	7.8	Auto matic Liquid control system		Yes					VTS
3.3	Skirt Length	Inches	VTS	7.9	• Snap Acting Type Level Controller		Yes					VTS
3.4	Head Type (Ellipsodial)		VTS	7.10	• Liquid Level Control Valves		Yes					VTS
3.5	Weight of V.S (Full With Water)	Kg	VTS	7.11	• Isolating Valves & Fittings		Yes					VTS
3.6	Empty Weight	Kg	VTs	7.12	• Pressure Gauges with Isolation valves		Yes					VTS
3.7	Shell Nominal Thickness	Inches	VTS	7.13	• Differential Pressure Gauges with 3-valve Manifold		Yes					VTS
3.8	Head Nominal Thickness	Inches	VTS	7.14	• Safty Relief Valves		Yes					VTS
4.	**TESTING**			8	**INTERNAL (VENDOR TO CONFIRM)**							
4.1	Hydrotest (Required as per ASME Code)	Psig / barg	VTS	a.	• Cycolne Tube Boundary (OTL)							VTS
4.2	Radiograph (Yes)		VTS	b	• Cycolne Tube Material							VTS
4.3	Ultrasonic (Yes)		VTS	c.	• No of Cyclone tubes							VTS
4.4	Mag.Partical (Yes)		VTS	d	• Dia of Cyclone Tube							VTS
4.5	Dye Penetrant (Yes)		VTS	e	• Distance of Cyclone Tubes							VTS
4.6	X Ray (Yes)		VTS	f	• Tubes sheet Plates up & Down							VTS
4.7	Hardness test of material (Yes)		VTS	g.	• Bottom Plates							VTS
4.8	Charpy Impact Test (Yes/No)		VTS	h	• Tubes patterns							VTS
4.9	Pneumatic Test Pressure for Reinforced Nozzle	Psig	VTS	8.2	**PAINTING SPECIFICATION**							
5.	**MATERIALS**			a	• Sand Blasting							VTS
5.1	Shell Material		SA Grade 70 Gr-II	b.	• Primer Coat						DFT	VTS
5.2	Head Material		SA Grade 70 Gr-II	c.	• Intermediate Coat						DFT	VTS
5.3	Shell & Head Material Thickness	Th (inches)	VTS	d	• Finsh Coat						DFT	VTS
5.4	Internal		VTS		Total Thickness (Micron)						DFT	VTS
5.5	Flanges & Blind Flanges		VTS	9.	**PERFORMANCE (Removal Efficiency)**		For 6 Micron		For 6 Micron		Below 6 Micron	
5.6	Nozzel Neck (pipe /Plate)		VTS		• Gas dust Partical							VTS
5.7	Weld Fittings (WOL & TOL)		VTS		• Liquid Drop Particals							VTS
5.8	Screwed Weld Fattings (WOL & TOL for bust.)		VTS		• Removal Efficiency for 6 Micron							VTS
5.9	Skirt Base Plate		VTS									
5.10	Support Skirt		VTS									
6	Earting Lugs		VTS									
6.1	Bolts & Nuts		VTS									
6.2	Gasket for CI-600		VTS									
6.3	Reinforcement PAD		VTS									
6.4	Fittings (Internal & External)		VTS									
6.5	Nozzle Plate / Bracket		VTS									
6.6	Pipe (Davit arm)		VTS									
6.7	Handle (Davit)		VTS									
6.8	Specitical Blinds		VTS									
7.9	Anchor Bolts		VTS									
6.10	Instrument Gas Connection		VTS									



Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

FAIZ AHMED
Dy. Chief Manager
(Projects)-P&D
Sui Southern Gas Co. Ltd

Note.

1. Refer design basis .
2. The contractor shall do the detailed mechanical design, prepare detailed fabrication drawings and get approval from the SSGC.
3. For detail requirement, refer scope and specification.
4. Painting, packing and steel structures shall be as per standard as per specs .
5. Contractor to specify MDMT temperature of vessel being selected on the basis of De-pressurizing of vessel & associated piping.
6. VTS = Vendor to specify.
7. STS = SSGC to specify.
8. Mandatory: Manufacturer's signed and stamped document must be submitted with the bid.
9. Every vessel must be registered with National Board of Boiler and Pressure vessel Inspectors and have its own respective manufacturing number against which it should be found traceable with NBBI.
10. National Board number marks & ASME U-Stamp should be existent on each Vertical Scrubber with traceable data record in NBBI.

(STRS/F/004/2002)

SECTION-4

SSGC SUI SOUTHERN GAS COMPANY LIMITED

STATEMENT OF REQUIREMENTS

Annexure-I

REF. NO:			
DATE	23	10	2026

DEPATRTMENT: Planning & Development

DESCRIPTION OF JOB / PROJECT: 8" dia x 2.5 km pipeline from Hatim-Faiz field to mva lundo

JOB / PROJECT EXPECTED DATE OF COMMENCEMENT: Oct, 2026

JOB NUMBER: 51270003

SCHEDULE & PLACE OF DELIVERY: 20 weeks from the date of opening of Letter of Credit (For C&F Contracts)-16 weeks from the date of opening of LC (For FOB)/ Khadeji Store.

SR. NO:	DESCRIPTION OF MATERIAL REQUIRED	INDEX NO:	UOM	QUANTITY
Weld Pipe Fittings (Weld Neck Flanges)				
Weld Neck Flanges / Blind Flanges in Forged Steel ASTM A 105 Class 900/600 rating and dimension to ANSI B 16.5. Ring Type Joint and Raised Face to ANSI 16.20. Bevel on ends 30° + 5° -0° to perpendicular from axis of elbow leaving and land of 1/16" ± 1/32".				
01	10" Nominal Bore /9.750" ID ,RTJ, Class 600, ASTM A105	09-18-357-3	Nos	08
02	8" Nominal Bore /7.625" ID ,RTJ, Class 600, ASTM A105	09-18-353-3	Nos	45
03	4" Nominal Bore /3.826" ID ,RTJ, Class 600, ASTM A105	09-18-341-3	Nos	04
Weld Pipe Fittings (Gasket)				
Soft Iron Oval Ring Gaskets, ANSI B 16.20 for ANSI Class 600. RTJ, Flanges to ANSI B 16.5.				
01	Soft Iron Oval Ring Joint Gasket R-49 For 8" RTJ Flanges Cl- 600	09-27-049-3	Nos	45

INDENTOR

HEAD OF DEPARTMENT
(WITH STAMP)
ENGR. AATIR SALMAN
Dy General Manager-I
Planning & Development
Sui Southern Gas Co. Ltd

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

SECTION-4

SSGC

SUI SOUTHERN GAS COMPANY LIMITED (SSGC)

TECHNICAL SPECIFICATION FOR FLANGES

(ITEM WISE BASIS)

RECEIVED
07 FEB 2024
DGM COORDINATE
HSE & CA

RECEIVED
07 FEB 2024
DGM I/C OFFICE
HSE & CA

RECEIVED ASGM (TS)
23 JAN 2024
6059
Sui Southern Gas Co. Ltd.

RECEIVED
08 JAN 2024
381
ASGM (T) Office-KT

Sui Southern Gas Co. Ltd.
Procurement Dept.
H.O. Gulshan-e-Iqbal

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12 PACKING 11

Reviewed By	Atiqe Ur Rehman AE (P&D Transmission)	Mr. Mehboob Ali Manager (Transmission)
Approved By	A/SGM (TS)	A/SGM (Transmission)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

1 GENERAL

1.1 Scope

The purpose of this specification is to describe the minimum functional and technical requirements for flanges suitable for natural gas transportation.

1.2 Definitions

PURCHASER means OWNER and MANUFACTURER means CONTRACTOR / SUPPLIER / BIDDER. This definition shall apply throughout this specification.

1.3 Errors or Omissions

Any errors or omissions noted by the Manufacturer in this Specification shall be immediately brought to the attention of the Purchaser.

1.4 Deviations

All deviations to this Specification shall be brought to the knowledge of the Purchaser in the bid. All deviations made during the procurement, design, manufacturing, testing and inspection shall be with written approval of the Purchaser prior to execution of the work. Such deviations shall be shown in the documentation prepared by the Manufacturer.

1.5 Conflicting Requirements

1.5.1 In the event of conflict, inconsistency or ambiguity between the contract's scope of work, this Specification, and National Codes & Standards referenced in this Specification, the Purchaser shall be consulted and a ruling, in writing, shall be obtained before any work is started.

1.5.2 Some requirements in this specification may be modified by specific requirements in the Schedule of Requirements. In case of conflict, the specific requirements supersede this specification.

Reviewed By	Atique Ur Rehman AE (P&D Transmission)	Mr. Mehboob Ali Manager (Transmission)
Approved By	A/SGM (TS)	A/SGM (Transmission)

Date:

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

2 ABBREVIATIONS/SYMBOLS

For the purpose of this document, the words and expressions listed below shall have the meanings assigned to them as follows:

ABBREVIATION	NAME
ANSI	American National Standard Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
MTC	Material Test Certificate
SOR	Schedule of Requirements

3 CODES, REGULATIONS AND STANDARDS

Manufacturer shall meet or exceed the requirements of the latest edition of the following applicable codes, regulations and standards, except as superseded herein.

- ASME B31.8, Gas Transmission and Distribution Piping Systems
- ASME B1.1, Unified Screw Threads
- ASME B1.20.1, Pipe Threads General Purpose (Inch)
- ASME B16.47, Large Diameter Steel Flanges (NPS 26 through NPS 60)
- ASME B16.5, Steel Pipe Flanges and Flanged Fittings
- ASME B36.10, Welded and Seamless Wrought Steel Pipe
- ASME Section V, Non-Destructive Examination
- ASME Section VIII, ASME Boiler and Pressure Vessel Code
- ASTM Standards (as applicable)
- API 5L, Specification for Line Pipe
- MSS SP-25, Standard Marking System for Valves, Fittings, Flanges and Unions
- MSS SP-44, Steel Pipeline Flanges

Reviewed By	Atique Ur Rehman AE (P&D Transmission)	Mr. Mehboob Ali Manager (Transmission)
Approved By	A/SGM (TS)	A/SGM (Transmission)

Sui Southern Gas Co. Ltd.
Procurement Dept.
H.O. Gulshan-e-Iqbal

4 GENERAL REQUIREMENTS

4.1 This specification covers the supply of flanges for both above-ground installations and buried pipelines in natural gas pipelines, designed for a maximum operating pressure/ANSI class rating as specified in the Schedule of Requirements and a maximum temperature of 60°C.

4.2 The Supplier shall submit six certified copies of inspection and testing certificates (pertaining to the physical properties and chemical composition/properties) to the Purchaser and Purchaser appointed Third Party Inspector prior to delivery or with delivery of material, each (such) certificate shall show the results of tests made under this specification (such as yield strength, ultimate strength, elongation, toughness, correct dimensions and chemical composition), date of inspection and the Purchase Order number. The Purchaser or Third Party Inspector has the right to reject the consignment if bidder has failed to provide MTC.

4.3 Inspection and testing shall be carried out by the manufacturer at the manufacturing plant. All flanges shall be visually examined for conformity to Purchaser's specifications and tested under the applicable codes and standards to make sure they conform to their intended use.

4.4 The Purchaser shall have the right to witness or deploy Third Party inspection service at anytime during the fabrication, testing and shipment of flanges supplied in accordance with these specifications and to verify compliance with the Terms and conditions of the contract and Terms of references (TOR) attached with the bid document.

4.5 The Supplier shall give due and proper notice of commencements of flange fabrication and test under these specifications to the Purchaser/Third party inspector appointed by SSGC.

4.6 The Purchaser reserves the right to increase, decrease and delete the quantity of all the items given herein the Schedule of Requirements.

5 MANDATORY REQUIREMENTS

5.1 Bids are invited directly from the Manufacturer or their authorized local agents in Pakistan. Beside local agent, principle involvement would be acceptable as regional Sales Representative, if applicable. However, in any case, Bids from stockiest and Brokers will be rejected.

5.2 The suppliers/local agents are required to submit valid authorization letter from the

Procurement Dept. Southern Gas Co. Ltd. H.O Gulshan-e-Iqbal

manufacturer failing which will make bid non-compliant.

5.3 The bidder shall provide a clear and concise, clause by clause, compliance or exception (with detail) commentary to these technical specification duly signed and stamped by Manufacturer on each page which is mandatory for technical evaluation, failing to submit this document may be considered non responsive.

5.4 Offered items shall comply with the requirement of this Specification. Quoted items which do not strictly comply with the requirements of this specification are liable for rejection. However, if there is any deviation with the specification for the offered item. The bidder may submit the deviation sheet covering details of respective clause and bidder's offer against the clause. Acceptance of such deviation does not guarantee of approval and this would depend on discretion of purchaser.

5.5 Printed Literature.

Original printed technical literature/catalogue of the manufacturer must be submitted with the bid, showing technical details of all the quoted items, meeting SSGC's specified requirement.

5.6 Sales Track Record

5.6.1 The Bidder shall submit the supporting documents of sales track record for the offered flanges, including copies of purchase order & satisfactory certificate of operations of five (5) different end users related to Oil & Gas Sector with similar requirement along with their email (email address of end user's company domain and not the commercial domain like Yahoo, Gmail, or Hotmail, etc.), fax, telephone, address and name of persons to contact to whom they have supplied the offered flanges within the last five (05) years and have been successfully installed and operated.

5.6.2 Simply submitting a list of customers to whom the Manufacturer has been supplying the offered flanges will not meet the intent and purpose of this requirement. Failure to comply with this requirement may result in rejection of the bid.

5.7 Quality Certificate

5.7.1 The manufacturer shall provide documentation with the bidding documents for the in-house quality control program which is strictly adhered to for the products of all manufactured items. This program must adhere to an internationally accepted quality control standard such as ISO 9000/9001 series or API Spec Q1. Failure to provide certification of proof of compliance may result in rejection of the bid.

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5.8 **Inspection**
SSGC or its authorized inspector reserves the right to inspect the flanges at the manufacturer's premises/warehouse.

6. SPECIFIC REQUIREMENTS

6.1 **Flange Type**
The flanges shall be weld neck or blind type as specified in the SOR.

6.2 **Pressure Rating**
The flanges shall be of ANSI Class as specified in the Schedule of Requirements.

6.3 **Internal Diameter (I.D)**
Internal diameter of flanges shall be as per Schedule of Requirements.

6.4 **Weld Ends**

6.4.1 Suitable for welding with line-pipes conforming to API 5L having standard thickness as per ASME B36.10 or as mentioned in the Schedule of Requirements.

6.4.2 All finished ends of such flanges shall be free from laminations or other defects and shall be inspected by ultrasonic methods over a length of 25 mm (1") from the ends.

6.5 **Material**

6.5.1 All flanges under this specification shall be forged or die forged and shall be hot worked.

6.5.2 The material used for flanges covered by this specification shall be ASTM A 105 for size less than or equal to 12" or ASTM A 694 (Grade F 70/F 60/F 52/F 46/F42) for sizes 12" or larger as specified in the Schedule of Requirements. The composition of said material (ladle analysis) shall meet the following requirements:

Maximum Carbon Content	0.24%
Maximum Silicon Content	0.40%
Maximum Manganese Content	1.50%
Maximum Sulphur Content	0.04%
Maximum Phosphorus Content	0.04%

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6.6 Facing

6.6.1 Flanges shall have a raised face (RF) or flat face (FF) or ring type joint (RTJ) or as specified in the SOR. The surface shall be free of defects such as cuts, dents, etc.

6.6.2 For flanges with raised face, the raised face height shall be as per ASME B16.5 or ASME B16.47 according to the respective ANSI Classes.

6.7 Finish

Flanges shall be coated with rust inhibiting paints.

7 HEAT TREATMENT

7.1 Flanges shall be furnished in the heat-treated condition when specified in the Schedule of Requirements.

7.2 Heat treatment shall be annealing, normalizing, or normalizing and tempering or quenching and tempering in accordance with ASTM A961/A961M.

7.3 Details of the heat treatment employed shall be reported on the manufacturer's MTCs.

8 DIMENSIONS

The dimensional standards and tolerances of all flanges covered by this specification shall conform to the latest editions of ASME B16.5 for sizes ≤24" and ASME B16.47 (Series A) for sizes larger than 24".

9 MARKING

9.1 Flanges shall be marked as required in MSS SP-25, except as noted in para. 4.2 of ASME B16.5 or para. 4.1 of ASME B16.47.

9.2 Flanges supplied under this specification shall be marked as follows:

- Manufacturer's Name or Trademark
- Material Designation (Material Grade)
- Rating Designation (Pressure Rating Class)
- Temperature (With Corresponding Limiting Pressure For Material)
- Size (NPS)
- Ring-Joint Flange Ring Number, when applicable
- Indication of Conformance to ASME B16 Standards (if applicable)

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9.3 The identification marks listed above shall be die stamped, using rounded dies with type at least 4 mm high. The marked area shall be covered with weather resistant clear lacquer and surrounded with a frame of reflection with paint.

10 INSPECTION AND TESTS

10.1 **Visual Inspection**
Flanges shall be free from injurious defects (cuts, dents, etc.) and have workmanlike finish.

10.2 **Tensile Testing**

10.2.1 Tensile testing shall be as per written procedures mentioned in ASTM A370.

10.2.2 The tensile strength shall not exceed the ASTM minimum specified tensile strength by more than 15%, the ratio of yield strength to tensile strength shall not exceed 0.90.

10.2.3 The following test specimens shall be taken from one flange forging of each heat of base material used in the manufacture. Purchaser or inspector shall select the flange forging for testing purposes.

10.2.4 Two tensile specimens shall be taken from the disc of the flange, one shall have its lengthwise axis normal to the base of the flange, the second shall have its lengthwise axis at right angles to the first specimen.

10.3 **Impact Testing**

10.3.1 Three Charpy impact test specimens of size as mentioned in ASTM E23 shall be taken from the hub with their lengthwise axis tangential to the flange bore and three specimens equally spaced around the hub.

10.3.2 Impact testing shall be as per written procedures mentioned in ASTM A370.

10.4 **Hardness Testing**
Hardness testing shall be as per written procedures mentioned in ASTM A370.

10.5 **Non Destructive Testing**
All weld ends shall be examined by radiographic or ultrasonic methods in accordance with ASME Section V.

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11 FINAL DOCUMENTATION

11.1 A dossier shall be compiled concurrently with full record of the fabrication, materials, inspection and testing.

11.2 All items in the dossier shall be numbered and bound in an A4 four post binder, contents shall include but not be limited to the following (as applicable):

- Front cover sheet detailing:
  - P.O. No.
  - Project Title
  - Equipment Title
  - Equipment Item No.
- Index
- Purchaser Release Note
- Purchase Order
- A list of all applicable codes, standards and specifications
- All drawings "As-built" - wherever legibility can be preserved, reduced to A3 and folded, where legibility cannot be preserved, drawings to be folded to A4 size and inserted into pre-punched plastic wallets.
- NDT procedures
- All NDT/PWHT/Hydrostatic/Performance test reports
- Photocopy of Nameplate
- Material chemical analysis and mechanical test certification
- Final signed quality plan
- Material test certificates
- Mechanical design calculations
- Procedure Qualification Records
- Welding qualification tests
- Painting inspection certificates
- Manufacturing Data Records (MDR)
- Installation Drawings and Procedures
- Operation and Maintenance Manual
- Schedules of commissioning spare parts

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11.3 For all above documents, six (06) sets shall be submitted in clearly labeled 4 ring white hard cover binders. All documents smaller and larger than A4 shall be inserted into A4 pre-punched, top-opening plastic wallets with the project document number/title block clearly visible to the front.

12. PACKING

12.1 After inspection and test, all items shall be completely freed of water, dried and prepared for shipment.

12.2 Flanges shall be prepared for shipment in a manner that damage or atmospheric corrosion of internal or external surfaces is avoided during storage and transport.

12.3 Exposed finished and machined surfaces shall be given a heavy coating of rust inhibition compound. Application of rust prevention is generally not required for alloy and non-corrodible materials.

12.4 Flange facings and butt-welding ends shall be protected with wood, plastic or metal covers. These covers shall protect facing and ends. When butt-welding bevels are protected with metal covers, a layer of nonmetallic material shall also be provided between the butt-welding bevel and metal cover. Tape shall not be used as the sole covering method.

12.5 All items after necessary preparation shall be packed in the sea worthy crates. Crates shall be constructed of well-seasoned sound lumber that has no splits or rotted sections. All items shall be secured to the base of the container and braced or blocked within the container. The supplier shall consider that the material can be involved in several loading and unloading operations; that the shipment may involve truck, rail, ship, and barge or air transportation; and that there may be prolonged periods of storage or idleness before these items are put into service.

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Section- 4

Spec. No. GKT-SPE-GE-1200	
Page 1 of 11	Rev. 00

SSGC **SUI SOUTHERN GAS COMPANY LIMITED (SSGC)**

TECHNICAL SPECIFICATION FOR GASKETS

(ITEM-WISE BASIS)

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal
RECEIVED 09 JAN 2024 ASGM (T) Office-KT
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1 GENERAL

1.1 Scope

The purpose of this specification is to describe the minimum functional and technical requirements for Gaskets suitable for natural gas transportation.

1.2 Definitions

PURCHASER means OWNER and MANUFACTURER means CONTRACTOR/SUPPLIER/ BIDDER. This definition shall apply throughout this specification.

1.3. Errors or Omissions

Any errors or omissions noted by the Manufacturer in this Specification shall be immediately brought to the attention of the Purchaser.

1.4 Deviations

All deviations to this Specification shall be brought to the knowledge of the Purchaser in the bid. All deviations made during the procurement, design, manufacturing, testing and inspection shall be with written approval of the Purchaser prior to execution of the work. Such deviations shall be shown in the documentation prepared by the Manufacturer.

1.5 Conflicting Requirements.

1.5.1 In the event of conflict, inconsistency or ambiguity between the contract's scope of work, this Specification, and National Codes & Standards referenced in this Specification, the Purchaser shall be consulted and a ruling, in writing, shall be obtained before any work is started.

1.5.2 Some requirements in this specification may be modified by specific requirements in the Schedule of Requirements. In case of conflict, the specific requirements supersede this specification.

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2 ABBREVIATIONS/SYMBOLS

For the purpose of this document, the words and expressions listed below shall have the meanings assigned to them as follows:

ABBREVIATION	NAME
ANSI	American National Standard Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
MTC	Material Test Certificate
NPS	Nominal Pipe Size
PTFE	Polytetrafluoroethylene
RF	Raised Face
RTJ	Ring Type Joint

3 CODES, REGULATIONS AND STANDARDS

Manufacturer shall meet or exceed the requirements of the latest edition of the following applicable codes, regulations and standards, except as superseded herein.

- ASME B31.8, Gas Transmission and Distribution Piping Systems
- ASME B16.5, Pipe Flanges and Flanged Fittings (NPS ½ Through NPS 24)
- ASME B16.20, Metallic Gaskets for Pipe Flanges
- ASME B16.21, Nonmetallic Flat Gaskets for Pipe Flanges
- ASTM F36, Standard Test Method for Compressibility and Recovery of Gasket Materials
- ASTM F37, Standard Test Methods for Sealability of Gasket Materials
- ASTM F38, Standard Test Methods for Creep Relaxation of a Gasket Material

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- ASTM F147, Standard Test Method for Flexibility of Non-Metallic Gasket Materials
- ASTM F152, Standard Test Methods for Tension Testing of Nonmetallic Gasket Materials
- ASTM F433, Standard Practice for Evaluating Thermal Conductivity of Gasket Materials
- ASTM F1315, Standard Test Method for Density of a Sheet Gasket Material

4 GENERAL REQUIREMENTS

4.1 This specification covers the supply of gaskets designed for a maximum operating pressure/ANSI class rating as specified in the Schedule of Requirements.

4.2 Gasket suitable for use as a sealant between valves or fitting and as specified in the Schedule of Requirements, Generally applicable for service related to Natural Gas.

4.3 The gasket material shall be as per the Schedule of Requirements.

4.4 The gasket material should be resistant to corrosion and capable of withstanding chemical reactions when in contact with natural gas or exposed to environmental conditions.

4.5 The gasket must not cause corrosion on the flange faces it seals against.

4.6 The gasket must be capable of withstanding any movements that may occur due to temperature and pressure changes.

4.7 The gasket should be able to withstand the effects of the maximum and minimum temperatures within the process and the external atmospheric temperatures.

4.8 The gasket should not be porous to the fluid being sealed.

4.9 The gasket should compress into the imperfections on the flange sealing faces to create the initial seal.

4.10 The Supplier shall submit six certified copies of inspection and testing certificates to the Purchaser and/or Third Party Inspector prior to delivery or with delivery of material. Each (such) certificate shall show the results of tests made under this specification, date of inspection and the Purchase Order number. The Purchaser or Third Party Inspector has the right to reject the consignment if the bidder fails to provide MTC.

4.11 Inspection and testing shall be carried out by the manufacturer at the manufacturing plant. All gaskets shall be visually examined for conformity to Purchaser's specifications and tested under the applicable codes and standards to make sure they conform to their intended use.

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4.12 The Purchaser shall have the right to witness or deploy Third Party Inspection service at any time during the fabrication, testing and shipment of gaskets supplied in accordance with these specifications and to verify compliance with the Terms and conditions of the contract and Terms of references (TOR) attached with the bid document.

4.13 The Supplier shall give due and proper notice of commencements of gasket fabrication and test under these specifications to the Purchaser/Third party inspector appointed by SSGC.

4.14 The Purchaser reserves the right to increase, decrease and delete the quantity of all the gaskets given herein the Schedule of Requirements.

5 MANDATORY REQUIREMENTS

5.1 Bids are invited directly from the Manufacturer or their authorized local agents in Pakistan. Beside local agent, principle involvement would be acceptable as regional Sales Representative, if applicable. However, in any case, Bids from stockiest and Brokers will be rejected.

5.2 The suppliers/local agents are required to submit valid authorization letter from the manufacturer failing which will make bid non-compliant.

5.3 The bidder shall provide a clear and concise, clause by clause, compliance or exception (with detail) commentary to these technical specification duly signed and stamped by Manufacturer on each page which is mandatory for technical evaluation, failing to submit this document may be considered non responsive.

5.4 Offered items shall comply with the requirement of this Specification. Quoted items which do not strictly comply with the requirements of this specification are liable for rejection. However, if there is any deviation with the specification for the offered item. The bidder may submit the deviation sheet covering details of respective clause and bidder's offer against the clause. Acceptance of such deviation does not guarantee of approval and this would depend on discretion of purchaser.

5.5 **Printed Literature**

Original printed technical literature/catalogue of the manufacturer must be submitted with the bid, showing technical details of the offered model, meeting SSGC's specified requirement.

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5.6 Sales Track Record

5.6.1 The Bidder shall submit the supporting documents of sales track record for the offered gaskets, including copies of purchase order & satisfactory certificate of operations of five (5) different end users related to Oil & Gas Sector with similar requirement along with their email (email address of end user's company domain and not the commercial domain like Yahoo, Gmail, or Hotmail, etc.), fax, telephone, address and name of persons to contact to whom they have supplied the offered gaskets within the last five [05] years and have been successfully installed and operated.

5.6.2 Simply submitting a list of customers to whom the Manufacturer has been supplying the offered gaskets will not meet the intent and purpose of this requirement. Failure to comply with this requirement may result in rejection of the bid.

5.7 Quality Certificate

The manufacturer shall provide documentation with the bidding documents for the in-house quality control program which is strictly adhered to for the products of all manufactured gaskets. This program must adhere to an internationally accepted quality control standard such as ISO 9000/9001 series or API Spec Q1. Failure to provide certification of proof of compliance may result in rejection of the bid.

5.8 Sample

If required by SSGC, the bidder shall have to provide sample of about 8" x 12" gasket sheet free of cost for testing/technical evaluation, preferably along with bid or within ten days after bid opening.

5.9 Inspection

SSGC or its authorized inspector reserves the right to inspect the gaskets at the warehouse of stockiest/agents.

6 SPECIFIC REQUIREMENTS

6.1 Compressed Non-Asbestos Sheet (Gasket)

6.1.1 Gasket sheet must fulfill the following characteristic/standards:

- Excellent compressibility and recovery as per ASTM F36.
- Excellent sealability as per ASTM F37.
- Creep relaxation as per ASTM F38.

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- Tensile strength as per ASTM F152.
- Density as per ASTM F1315.
- Thermal conductivity as per ASTM F433.
- Min. Temperature: -100°F / -73°C.
- Max. Temperature: 700°F / 371°C.
- Continuous Max: 400°F / 205°C.
- Max Pressure: 1300 PSI / 90 Bar.
- Maximum P x T 1/16: 350,000°F x PSIG / 12,000 Bar x °C.
- Maximum P x T 1/8: 250,000°F x PSIG / 8,600 Bar x °C.

6.1.2 Size shall be as specified in the Schedule of Requirements.

6.1.3 Color shall be Blue/Red/Brown.

6.1.4 Gasket sheet should contain high strength heat resistant and strong synthetic fibers bonded with high-grade nitrile (NBR) rubber.

6.1.5 **Flat Cut Gaskets**

Flat cut compressed non-asbestos gaskets for ANSI Class 150 raised face flanges to ASME B16.5 and shall conform to ASME B16.21 for raised face smooth finish flanges.

6.2 **Oval Ring Gaskets**

Oval ring joint gaskets for ANSI Class 600 flanges to ASME B16.5. Dimensional standards and tolerances of rings shall conform to ASME B16.20 with soft iron material for high pressure natural gas services as per the Schedule of Requirements.

6.3 **Spiral Wound Gaskets**

Stainless steel spiral wound Gaskets with inner and outer rings and PTFE as filler material for raised face flanges to ASME B16.5 for high pressure natural gas service and rating of ANSI Class 150/300/600/900 or as specified in the Schedule of Requirements.

6.4 **Insulating Cathodic Gaskets**

6.4.1 Gasket complete with sleeves and washers shall be of an insulating material so as to provide an electrically insulated flanged joint.

6.4.2 Washer shall be of an insulating material, able to withstand the pressure applied to it by tightening the nut on the alloy steel stud bolt.

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6.4.3 The internal diameter of the sleeve shall be such that the sleeve slides smoothly over the stud bolt.

6.4.4 The external diameter of the sleeve shall be such that the sleeve slides smoothly into the bolt holes of the flange. The length of the sleeve shall be such as to equal the inner distance between the inner faces of an assembled flange assembly.

6.4.5 The inner diameter of the washer shall be such as to slide smoothly over the stud bolt and its outer diameter such as to cover the extremities of the nut.

6.4.6 The electrically insulating gaskets for ANSI Class 600/300/150, RTJ/RF flanges as specified in the Schedule of Requirements shall have the dimensional standards and tolerances conforming to ASME B16.20.

6.4.7 Dielectric strength of insulating material shall be 20,000 volts/mm (minimum).

6.4.8 Each set comprising of electrically insulating Gasket, sleeves and washers for standard bolt of RTJ/RF, ANSI Class 600/300/150 flanges as specified in the Schedule of Requirements.

7 DIMENSIONS

The dimensional standards and tolerances of all gaskets covered by this specification shall conform to the latest edition of ASME B16.20 (metallic gaskets) and ASME B16.21 (nonmetallic flat gaskets).

8 MARKING

Gaskets supplied under this specification shall be marked as per the requirements in the latest edition of ASME B16.20 (metallic gaskets) and ASME B16.21 (nonmetallic flat gaskets).

9 INSPECTION AND TESTS

9.1 Gasket material shall be tested as per the following applicable standards and the test results shall be shared with the Purchaser.

- ASTM F36 – Standard Test Method for Compressibility and Recovery of Gasket Materials.
- ASTM F37 – Standard Test Methods for Sealability of Gasket Materials
- ASTM F38 – Standard Test Methods for Creep Relaxation of a Gasket Material

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- ASTM F147 – Standard Test Method for Flexibility of Non-Metallic Gasket Materials
- ASTM F152 – Standard Test Methods for Tension Testing of Nonmetallic Gasket Materials
- ASTM F1315 – Standard Test Method for Density of a Sheet Gasket Material
- ASTM F433 – Standard Practice for Evaluating Thermal Conductivity of Gasket Materials

9.2 Gasket shall be free from injurious defects (cuts, dents, etc.) and have workmanlike finish.

10 FINAL DOCUMENTATION

10.1 A dossier shall be compiled concurrently with full record of the fabrication, materials, inspection and testing.

10.2 All items in the dossier shall be numbered and bound in an A4 four post binder; contents shall include but not be limited to the following (as applicable):

- Front cover sheet detailing:
  - P.O. No.
  - Project Title
  - Equipment Title
  - Equipment Item No.
- Index
- Purchaser Release Note
- Purchase Order
- A list of all applicable codes, standards and specifications
- All drawings "As-built" - wherever legibility can be preserved, reduced to A3 and folded, where legibility cannot be preserved, drawings to be folded to A4 size and inserted into pre-punched plastic wallets.
- NDT procedures
- All NDT/PWHT/Hydrostatic/Performance test reports
- Photocopy of Nameplate
- Material chemical analysis and mechanical test certification
- Final signed quality plan
- Material test certificates
- Mechanical design calculations

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- Procedure Qualification Records
- Welding qualification Tests
- Painting inspection certificates
- Manufacturing Data Records (MDR)
- Installation Drawings and Procedures
- Operation and Maintenance Manual
- Schedules of commissioning spare parts

10.3 For all above documents, six (06) sets shall be submitted in clearly labeled 4 ring white hard cover binders. All documents smaller and larger than A4 shall be inserted into A4 pre-punched, top-opening plastic wallets with the project document number/title block clearly visible to the front.

11 PACKING

All gaskets after necessary preparation shall be packed in the sea worthy crates. Crates shall be constructed of well-seasoned sound lumber that has no splits or rotted sections. All gaskets shall be secured to the base of the container and braced or blocked within the container. The supplier shall consider that the material can be involved in several loading and unloading operations; that the shipment may involve truck, rail, ship and barge or air transportation; and that there may be prolonged periods of storage or idleness before these gaskets are put into service.

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SSGC PLANNING & DEVELOPMENT DEPARTMENT	**SUI SOUTHERN GAS COMPANY LIMITED**	**ANNEXURE-IV**
	TERMS OF REFERENCE FOR WELD PIPE FITTINGS (FLANGES, GASKET, STUD BOLT WITH NUTS & WASHERS)	
	TENDER ENQUIRY NO.	

Annexu

INSPECTION OF WELD PIPE FITTINGS:

Third party inspection will be carried out as per attached Specification compliance sheet to witness the manufacturing process including following:

TPI will monitor/testing the process as well as inspection fabrication / manufacturering process at manufacturer premises.

The following test / points mentioned below, are mandatory for TPI and submit report.

1. The butt welding ends of welding fittings shall be machined, consistent with the ends of adjacent pipes and shall be beveled for welding in accordance with figure 14 or 15 Appendix-1 of ASME B31.8.
2. Finished ends of fittings shall be free from laminations or other defects and shall be inspected by ultrasonic methods over a length of 25mm from the ends.
3. Radiographic Inspection of all welds and repair welds.
4. Surfaces of weld shall be free from notches, dents, pits, laminations, electrode burns and other defects.
5. All hot forming operations shall be made at a temperature between 860°C and 1050°C.
6. The mechanical properties of all fittings supplied under this specification shall be tested using specimens taken after the last heat treatment operation.
7. A tensile test of any weld shall be made on transverse specimens to determine ultimate tensile strength and elongation which shall not be less than 18%.
8. A set of three impact resistance tests of the parent material and any weld shall be made.
9. The minimum acceptable toughness measure by said tests, which shall be ISO V-notch 1/1 tests at 20°C, shall be as mentioned in Technical Specification Sheet.
10. Where steel stamps are used, care shall be taken so that the marking is not deep enough or sharp enough to cause cracks or to reduce the wall thickness of the fitting below the minimum allowed.

Flanges/ Blind Flanges:

1. Dimensions as per Table-1 of ASME B16.5 to be verified.
2. Flanges above NPS 24" shall be procured according to ASME B16.47 Series A.
3. Flange facing, bolting & gaskets requirements must be in compliance with clause 831.2 of ASME B31.8.
4. MTC's according to heat numbers shall be provided for each flange.

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5. It is imperative that the gasket and groove sealing faces are free from indentations, score marks, tool/chatter marks and other imperfections. The surface finish of the gasket and groove sealing faces is also critical and should not exceed the following: Style R and RX 63 microinches Ra maximum (1.6 micrometer Ra) Style BX 32 microinches Ra maximum (0.8 micrometer Ra).
6. Flange facing shall be as follows:
   - Class 150lb to 400lb – Raised face serrated finish Ra 3.2 to 6.3um.
   - Class 600lb to 2500lb – Ring type joint.
7. For austenitic and duplex stainless steel ring joint flanges, spectacle blinds, spades and
   - spacers, the ring groove shall have a minimum hardness as follows:
   - Austenitic SS: 160HB
   - Duplex SS: 200HB

Butt Weld Reducers, Elbows, Caps & Tees:

1. MTC's according to heat numbers shall be provided for each fittings.
2. Fittings shall be dimensionally in accordance with ASME B16.9, ASME B16.11, and MSS SP-97 and BS 3799 as applicable.
3. The surface of any extruded outlet of any Tee shall be tested for crack by magnetic particle inspection or Dye penetration method.
4. Fitting dimensions, End preparation and Test procedure shall be accordance with clause 6, 8 & 9.3 of ASME B16.9.
5. Butt weld fittings shall have ends bevelled in accordance with ASME B16.25 Fig 2a or 3a.
6. Threaded fittings shall be supplied with ends threaded NPT in accordance with ASME B1.20.1.

Butt Welded Induction Bends:

1. Inspection of Bends shall be conducted according to section 13 of ASME B16.49.
2. Certified Material Test reports shall be furnished with the requirement mentioned/stated in Section 14 of ASME B16.49.
3. Supplementary requirements as per section SR.15 of ASME B16.49 may be applied as required.

Weldolets/Threadolet:

1. Forged branch fitting shall meet the requirement of MSS-SP-97 and ASME B31.3 and have applicable burst test certification.

Swage Nipples shall comply with BS 3799.

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

SECTION-5

SUI SOUTHERN GAS COMPANY LIMITED

UNDERTAKING OF COMPLIANCE WITH INTEGRATED MANAGEMENT SYSTEM (IMS) MANUAL AND BLACKLISTING MECHANISM

I, _____ [Supplier's Authorized Representative Full Name], of _____ [Supplier Company Name], with principal office located at _____ [Full Address], do hereby solemnly affirm and declare as follows:

1. That I am the duly authorized representative of _____ [Supplier Company Name], and have the legal authority to make this declaration on behalf of the company.
2. That I confirm having accessed, read, and fully understood the **Integrated Management System (IMS) Manual** provided by **Sui Southern Gas Company Limited (SSGC)**, available at the official website: https://www.ssgc.com.pk/web/wp-content/uploads/2025/06/IMS-Mannual-1-1.pdf
3. That _____ [Supplier Company Name] agrees to comply fully with all the policies, procedures, and responsibilities outlined in the IMS Manual, and will ensure that all relevant employees, contractors, and agents are made aware of and comply with the same.
4. That _____ [Supplier Company Name] acknowledges that failure to comply with the IMS Manual may result in corrective action, including but not limited to financial penalties as per SSGC policy and suspension or termination of business with Sui Southern Gas Company Limited (SSGC).
5. That the bidder has also read, understood, and accepted the **Blacklisting Mechanism of Sui Southern Gas Company Limited (SSGC)**, available at: https://www.ssgc.com.pk/web/wp-content/uploads/2024/09/blacklisting_mechanism_2024.pdf
6. Any type of violation of the tender terms and non-performance will result in the enforcement of the Blacklisting Mechanism, which will be dealt with in accordance with the Blacklisting Rules/Mechanism.
7. This affidavit is made in good faith and for the purpose of affirming our commitment to health, safety, environmental standards, and compliance with the **Integrated Management System (IMS) Manual** and the **Blacklisting Mechanism** of Sui Southern Gas Company Limited (SSGC), as well as all other applicable policies and procedures of SSGC.

Signed at _____ [City] on this _____ day of _____, *20* .

Signature: _____
Name: _____
Designation: _____
Company Name: _____
Contact Details: _____

(Company Stamp / Seal Mandatory)

Witnessed by:

Signature of Witness: _____
Name of Witness: _____
Date: _____

Signature of Witness: _____
Name of Witness: _____
Date: _____

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

Sui Southern Gas Co. Ltd. Procurement Dept. H.O. Gulshan-e-Iqbal

SUI SOUTHERN GAS COMPANY LIMITED

UNDERTAKING OF ELIGIBILITY, LEGAL CAPACITY, NON-BANKRUPTCY, NON-CONVICTION, NON-BLACKLISTING, AND NO CONFLICT OF INTEREST FOR PROCUREMENT PARTICIPATION

I, _____ [Authorized Representative's Full Name], holding CNIC No. _____, duly authorized vide Board Resolution / Power of Attorney dated _____ (copy attached), on behalf of _____ [Bidder's Company Name], having its principal office at _____ [Full Address] (the "Bidder"), do hereby solemnly affirm and declare that:

The Bidder hereby declares and undertakes that it:

(a) possesses the technical competence, financial resources, equipment and other physical facilities, personnel, managerial capability, experience and past performance necessary to complete the procurement contract;

(b) has the legal capacity to enter into a procurement contract;

(c) has not been declared bankrupt or, in the case of a company or firm, insolvent or being wound up, and its activities or affairs are not suspended by a Competent Authority or by a Court of Law;

(d) is not under any legal proceedings which may result in bankruptcy or any other situation entailing the total or partial loss of the right to administer and dispose of its property;

(e) confirms that, at the time of submission of the bid:

  (i) it is not blacklisted by SSGC or cross-debarred by the Authority, and is not debarred from any procurement process in Pakistan; and

  (ii) in the case of a company, none of its owners, beneficial owners, directors or officers is debarred from any procurement process in Pakistan;

(f) is not blacklisted or debarred at the time of submission of the bid by an international financial institution, international organization, foreign country, or other multilateral development bank for the period defined by them;

(g) has not been convicted by a final judgment of a Court of Law;

(h) has not been convicted, and, in the case of a company, none of its owners, beneficial owners, directors or officers has been convicted, of a criminal offence related to—

  (i) its professional conduct; or

  (ii) prohibited practices within the period specified in the tender documents; and

(i) has no conflict of interest in this procurement and, to the best of its knowledge, neither it nor its owners, beneficial owners, directors or officers has any interest in or relationship with any SSGC director, officer or employee involved in this procurement, nor does any such person or his or her spouse, parent, child or sibling hold any interest in the Bidder; it shall disclose any conflict arising before award.

I hereby affirm that the above declarations are true and correct and that this Undertaking forms part of the Bidder's bid, and acknowledge that any false declaration, misrepresentation or non-disclosure shall entitle SSGC, at any stage including after award, to disqualify the Bidder, forfeit the bid security / performance guarantee, terminate any contract awarded, and initiate blacklisting proceedings under the PP Rules, in addition to any other remedy available under the tender conditions and applicable law.

Signed at _____ [City] on this _____ day of _____, 20____.

Signature: _____

Name: _____

CNIC No.: _____

Designation: _____

Company Name: _____

Contact Details: _____

(Company Stamp / Seal Mandatory)

Sui Southern Gas Co. Ltd. ★ H.O. Gulshan-e-Iqbal ★ Procurement Dept.