



BHAGYANAGAR GAS LIMITED

(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**Procurement of Isolation Valves and Appliance
Valves for Hyderabad CGD Project**

**UNDER LIMITED DOMESTIC
COMPETITIVE BIDDING**

Bid Document No.: BGL/374/2017-18

VOLUME II OF II



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LIMITED

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SECTION – 8
MATERIAL REQUISITION



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Material Requisition

Project : Procurement of Isolation Valves & Appliance Valves for City
Gas Distribution project at Hyderabad, Vijayawada and
Kakinada

Client : M/s Bhagyanagar Gas Limited

Items : Isolation Valves & Appliance Valves Conforming to **BS EN 331**

Tender No. : **BGL/374/2017-18**

Sl. No.	Description	Unit	Quantity
	Isolation Valve & Appliance Valve Conforming to BGL's Technical Specification i.e. BS EN 331 of following sizes, grades & specifications as indicated below:		
01	½" Isolation Ball Valve	Nos.	40,000
02	½" Appliance Ball valve	Nos.	12,000
03	¾" Isolation Ball Valve	Nos.	800
04	1" Isolation Ball Valve	Nos.	200
05	1 ¼" Isolation Ball Valve	Nos.	100
06	2" Isolation Ball Valve	Nos.	100



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SECTION – 9
SPECIAL CONDITIONS OF CONTRACT (SCC)



SPECIAL CONDITIONS OF CONTRACT (SCC)

GENERAL

- 1.1 Special Conditions of Contract shall be read in Conjunction with the General Conditions of Contract, Specification of work, Drawing and any other documents forming part of this Contract wherever the context so requires.
- 1.2 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with in the Contract so far as it may be practicable to do so.
- 1.3 Where any portion of the General Conditions of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Conditions of Contract and shall be the extent of such repugnancy, or variations, prevail.
- 1.4 Wherever it is mentioned in the specification that the Contractor shall perform certain work or provide certain facilities, it is understood that the Contractor shall do so at his cost and the **Value of Contract** shall be deemed to have included cost of such performance and provisions, so mentioned.
- 1.5 The materials, design, and workmanship shall satisfy the relevant Indian Standard, the Job Specifications contained herein and Codes referred to where the job specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
- 1.6 In case of an irreconcilable conflict between Indian or other applicable standards, General Conditions of Contract, Special Conditions of Contract, Specification, Drawings or Schedule of Rates, the following shall prevail to the extent of such irreconcilable conflict in order of precedence:
 - i) Letter of Acceptance/ FOI alongwith Statement of Agreed Variations.
 - ii) Schedule of Rates as enclosures to Letter of Acceptance
 - iii) Special Conditions of Contract
 - iv) Drawings
 - v) Technical/ Material Specifications
 - vi) Instruction to Bidder
 - vii) General Conditions of Contract
 - viii) Indian Standards
 - ix) Other applicable standards



1.7 It will be the Contractor's responsibility to bring to the notice of Engineer-in-charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists.

1.8 In the absence of any Specifications covering any material, design of work(s) the same shall be performed/ supplies/ executed in accordance with Standard Engineering Practice as per the instructions/ directions of the Engineer-in-charge, which will be binding on the Contractor.

2.0 SCOPE OF SUPPLY

The Scope of SUPPLY shall be as set out at Material Requisition, Data Sheets and Technical Specifications given in Volume-II of tender document and supplemented by all stipulation in the total tender document.

3.0 CONTRACT PRICE

The contract price shall be deemed to be firm and valid for the entire duration of the contract till the completion of work, and shall not be subject to any adjustment due to increase in price of materials, utilities, or any other input for performance of work and the contract except for increase/decrease in taxes and duties on account of subsequent legislation.

4.0 DIVISION OF ORDER

BGL reserves the right to divide the quantity among more than one bidder at its sole discretion and as mentioned in BEC of Vol I of II.

5.0 QUALITY ASSURANCE/QUALITY CONTROL:

5.1. The Contractor shall "prepare a detailed quality assurance plan for the execution of Contract for various facilities, which will be mutually discussed and agreed to.

5.2. The Contractor shall establish document and maintain an effective quality assurance system outlined in recognized codes.

5.3. The Purchaser while agreeing to a quality assurance plan shall mark the stages where they would like to witness the tests; review any or all stages of work at shop/site as deemed necessary for quality assurance.

6.0 QUANTITY VARIATION

The tendered quantity may vary depending upon the project requirement. BGL reserves the right to decrease/ increase the quantity depending upon its requirement.

7.0 DISPATCH INSTRUCTIONS

7.1 Seller shall obtain dispatch clearance from the Purchaser prior to each dispatch.



- 7.2. Copy of Inspection Release Certificate, Dispatch Clearance and statement showing the name of the Vessel/Trailers description and weight of material and shipping marks etc. to be submitted along with the documents.

8.0 INSPECTION

M/s.Bhagyanagar Gas Limited (BGL), reserves the right to engage their own personnel and or BGL's Inspection agency. All the charges towards all kinds of tests shall be included in the quoted rates. No additional payment to this effect will be made. Vendor

shall inform the readiness of the materials well in advance. BGL shall arrange third party inspection/ Own inspection at the vendor shop. The detailed procedure of manufacturing sequence and production plans to be submitted to BGL.

9.0 REJECTION

- 9.1. Any materials/goods covered under scope of supply, which during the process of inspection by appointed third party, at any stage of manufacture/fabrication, and subsequent stages, prior to dispatch is found not conforming to the requirements/specifications of the Purchase Requisition /Order, shall be liable for immediate rejection.
- 9.2. Supplier shall be responsible and liable for immediate replacement of such material with acceptable material at no extra cost or impact on the delivery schedule to EMPLOYER

10.0 TERMS OF PAYMENTS

The Payment shall be made in the following manner subject to completion of all contractual requirements as per tender document.

The terms of payment shall be as follows:

- 90 % (Ninety percent) payment on receipt of goods at site and acceptance of the same along with following dispatch documents.
 - i) Cenvatable Invoice in triplicate
 - ii) Inspection Release note by Owner or his appointed or approved agency.
 - iii) GR / LR
 - iv) Packing List
 - v) Insurance cover note covering transit insurance
 - vi) A certificate from manufacturer that the all items/ equipment under supply including its component or raw material used with manufacturing are new and conform to the tender requirement. In case manufacturer is not the contractor, the contractor owning overall responsibility will duly endorse this certificate.
 - vii) Performance Bank Guarantee(s) of 10% of Contract Value. If already submitted, a copy of the same.



viii) Document related to Input Tax credit(ITC) Set off to be claimed by Owner, if applicable.

- 10% (ten percent) within 30 (thirty) days after receipt and acceptance of goods at site.
 - i. Final Acceptance Certificate
 - ii. No Claim Certificate.

ii. **MODE OF PAYMENT**

All payments payable in Indian rupees against the contract shall be released by Owner through account payee cheque payable at par.

iii. **DEDUCTION AT SOURCE**

Purchaser will release the payment to the Seller after effecting deductions as per applicable law in force.

Purchaser will release payments by F&A Dept, BGL to the Contractor after offsetting all dues to the Purchaser payable by the Contractor under the Contract.

11.0 COMPENSATION FOR DELAY (PRICE REDUCTION /LIQUIDATED DAMAGES)

- The supplier agrees that time of supply of stores/works shall be of the essence of the Contract. If the supplier fails to supply stores/works within the respective scheduled / fixed date for supply. Company may without prejudice to any other right or remedy available to the Company:
- a. Recover from the supplier as ascertained and agreed, genuine pre-estimate price reduction and not by way of penalty, a sum equivalent to 1/2 % per week or part thereof for each week's delay, prorated for part thereof beyond the scheduled supply date each subject to maximum of 5% of unsupplied items, even though the Company may accept delay in supply after the expiry of the scheduled supply date.
- b. Arrange to get supply from elsewhere on account and at the risk of the Supplier, such decision of the Company being final and binding on the supplier OR
- c. Terminate the contract or a portion or supply of the supply work thereof, and if so desired, arrange for the supply in default by the supplier to be attained from elsewhere at the risks and costs of the supplier.

The value referred in PRS clause is excluding taxes & duties.

12.0 PERFORMANCE BANK GUARANTEE SECURITY DEPOSIT:



Bidder will provide Performance Guarantee @10% of order value within 30 days of receipt of FOA/ WO from the Owner. The contract performance bank guarantee shall be valid 03(three) months beyond the expiry of Warrantee/Guarantee period. The Performance Guarantee shall be in form of either Demand Draft or Banker's Cheque or irrevocable Bank Guarantee and shall be in the currency of Contract (issued by any Indian Scheduled bank or a branch of an International Bank situated in India and registered with Reserve Bank of India as Scheduled Foreign Bank).

However, in case of Bank Guarantee from banks other than the Nationalized Indian bank, the bank must be a commercial bank having net worth in excess of Rs. 100 Crores or equivalent US Dollars and a **declaration to** this effect should be made by such commercial bank either in the bank guarantee itself or separately on its letterhead.

Performance Guarantee for 10% of order value shall be excluding taxes & duties.

BGL shall not be liable to pay any bank charges, commission or interest on the same.

Failure of the successful bidder to comply with the requirement of this clause shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security and any such remedy the Owner may take under the Contract pursuant to GCC-Goods.

There is no exemption to MSEs including SSI units from submission of Security Deposit/ Contract Performance Bank Guarantee (CPBG).

13.0 REPEAT ORDER

BGL reserves the right to place a repeat order within Six (06) months from date of purchase order for upto 50% of order quantities on same rate, terms and conditions.

14.0 DELIVERY

The delivery of the items location wise is as per the Material Requisition.

The Vendor to arrange transportation of these materials from the vendor shop to designated locations of BGL yard in respective cities. No extra payment shall be made for the transportation and deemed to be included in the quoted price.

Bidder to deliver the materials at all locations as per the quantity estimated.

15.0 DELIVERY SCHEDULE

Delivery of the total order quantity will be completed within three (03) months from the date of Fax of Acceptance (FOA)/Purchase Order(PO) as mentioned in Time Schedule (Section-10).

Items are to be delivered in two lot as mentioned below.

SL.N O	MATERIAL	TOTAL QUANTITY	LOT 1	Delivery Schedule for LOT 1	LOT 2	Delivery Schedule for LOT 1
1	1/2" Isolation valve	40000	20000	Within in 1	20000	Within in 3



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2	1/2" Appliance valve	12000	6000	month from the date of P.O./F.O.I	6000	months from the date of P.O./F.O.I
3	3/4" Isolation valve	800	400		400	
4	1" Isolation valve	200	100		100	
5	1 1/4" Isolation valve	100	50		50	
6	2" Isolation valve	100	50		50	

The bidder shall confirm from BGL in writing, for supplying each consignment, the quantities of each consignment can vary depending on the requirement by BGL. No extra payment shall be made for the transportation and deemed to be included in the quoted price.

16.0 PACKING, MARKING AND SHIPMENT

The Seller, wherever applicable shall after proper painting, pack and crate all goods for sea/air/road/rail transportation in a manner suitable to tropical humid climatic region in accordance with the internationally accepted practices and in such a manner so as to protect it from damage and deterioration, in transit by sea or air or road or rail and during storage at the storehouse. The Seller shall be held responsible for all damages due to improper packing. The Seller shall ensure sizing or packing of all oversized consignments in such a way that availability of carrier and/or road/rail route is properly taken into consideration.

For MARKING & PACKAGING of the Isolation Valves & Appliance Valves shall be as Section-IV of Vol I of I.

Seller shall comply with the Packing, Marking and Shipping Instructions and Special Packaging Requirement as per Attachment II of this Bidding Document.

17.0 INDEPENDENT SELLER

It is expressly understood and agreed that Seller is an independent party and that neither the Seller/ its personnel are servants, agents or employees of Purchaser nor the Seller has any kind of interest in other sellers.

18.0 LIEN

Seller shall ensure that the Scope of Supply supplied under the Agreement shall be free from any claims of title/liens from any third party. In the event of such claims by any party, Seller shall at his own cost defend, indemnify and hold harmless Purchaser or its authorised representative from such disputes of title/liens, costs, consequences etc.

19.0 LIMITATION OF LIABILITY

Notwithstanding anything contrary contained herein, the aggregate total liability of Supplier under the Contract or otherwise shall be limited to 100% of contract value. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

20.0 GOVERNING LAW



Laws of India will govern the Agreement and Hyderabad courts will have exclusive jurisdiction on all matters related to Agreement.

21.0 OWNER'S RIGHTS AND REMEDIES

Without prejudice to Owner's right and remedies under Agreement, if SUPPLIER fails to commence delivery as per agreed schedule and/or in reasonable opinion of the OWNER, CONTRACTOR is not in a position to makeup the delay to meet the intended purpose, the OWNER may terminate the AGREEMENT in full or part at SUPPLIER's default and may get supplies from other sources at SUPPLIER's risk and cost.

22.0 Clause no. 16.0 of GCC shall be appended with the following :

Bidder shall arrange Transit Insurance and the cost of which shall be borne by bidder. Quoted price shall be inclusive of the same.

23.0 Clause no. 30.4 of GCC shall be appended with the following :

SETTLEMENT OF COMMERCIAL DISPUTES BETWEEN PUBLIC SECTOR ENTERPRISE(S) INTER-SE AND PUBLIC SECTOR ENTERPRISE(S) AND GOVERNMENT DEPARTMENT(S) THROUGH PERMANENT MACHINERY OF ARBITRATION (PMA) IN THE DEPARTMENT OF PUBLIC ENTERPRISES

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitrator under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary. When so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

24.0 FAILURE & TERMINATION CLAUSE

Time and date of delivery shall be the essence of the contract. If the vendor/contractor fails to deliver the entire quantity of materials ordered/ complete the work or a part thereof within the contractual delivery/ completion period agreed to for such part or total quantity as per the delivery / time schedule or at any time repudiates the contract before the expiry of such period, BGL may without prejudice to any other right or remedy available to it recover damages for breach of the contract in any manner stipulated hereunder:-



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(a) Recover from the vendor/ contractor an agreed amount towards Price Reduction Schedule and not by way of penalty a sum equivalent to 1/2% (half per cent) of the contract price of the whole unit per week for such delay or part thereof (this is a genuine pre-estimate of damages duly agreed by the parties) which the vendor/ contractor has failed to deliver within the period fixed for delivery in the schedule, where delivery thereof is accepted after expiry of the aforesaid period.

It may be noted that such recovery of PRS may be up to 5% of the contract price / of the total quantity of items of materials / equipment which the contractor has failed to deliver within the period fixed for delivery; or

(b) Purchase or authorise the purchase elsewhere on the account and at the risk of the contractor, of the materials not so delivered or others of a similar description, by serving prior notice to the contractor / supplier without canceling the contract in respect of the installment not yet due for delivery;

or

(c) Cancel the contract or a portion thereof by serving prior notice to the contractor and if so desired, purchase or authorise the purchase of the materials not so delivered or others of a similar description (where such materials exactly complying with particulars are not, in the opinion of the purchaser, which shall be final, readily procurable) at the risk and cost of the contractor. If the contractor had defaulted in the performance of the original contract, the purchaser shall have the right to ignore his tender for risk purchases even through the lowest. Where the contract is terminated at the risk and cost of the firm under the provisions of this clause, it shall be solely upto the purchaser to exercise his discretion to collect or not, the security deposit from the firm, on whom the contract is placed, at the risk and expense of the defaulting firm.

(d) Where action is taken under sub-clause (b) or sub-clause(c) above, the contractor shall be liable for any loss which the purchaser may sustain on that account, provided the purchase or if there is an agreement to purchase, such agreement is made, in case of failure to deliver the materials within six months from the date of such failure and in case repudiation of the contract within six months from the date of cancellation of contract. The contractor shall not be entitled to any gain on such purchase and the manner and method of such purchase shall be at the entire discretion of the purchaser. It shall be necessary for the purchaser to give a notice of such purchase on the contractor.

(e) It may further be noted that clause (a) above provides for recovery of PRS on the cost of contract price of delayed supplies (whole unit) at the rate of 1/2% (half per cent) of the contract price of the whole unit per week for such delay or part thereof upto a ceiling of 5% of the contract price of delayed supplies thus accrued will be recovered by the paying authorities of the purchaser specified in the supply order, from the bill for payment of the cost of the material submitted by the vendor/ contractor in accordance with terms of supply order, or otherwise.



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(f) Notwithstanding any thing stated above equipment and materials will be deemed to have been delivered only when all its components, parts are also delivered. If certain components are not delivered in time the equipment and material will be considered as delayed until such time all the missing parts are also delivered.

25.0 General Conditions

- (i) When the materials are dispatched to the consignee intimation must also be given to this effect. Reference to the supply order should invariably be given in all the relevant correspondence.
- (ii) The tender is liable to be rejected in case the tender does not comply with tender stipulations or the goods, works and services offered do not conform to the required specifications indicated there in.
- (iii) Any other terms and conditions offered by the firm and not included in the order/contract, are not acceptable to BGL.



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SECTION – 10
TIME SCHEDULE



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TIME SCHEDULE

Isolation Valves

Design, Engineering, Testing, Supply
(FOT Site basis) including packaging
Forwarding, transportation, etc.

03 month from date of Fax of Intent/PO

Note: 1.Price Reduction Schedule (PRS) will be based on contract value for the items covered under this schedule.

2.Out of the total quantity 1st Lot (50% of the total quantity) has to be delivered within 1 month from the date of P.O. and 2nd Lot (remaining 50% of the total quantity) has to be delivered within 3 months from the date of P.O.



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SECTION – 11

TECHNICAL SPECIFICATIONS FOR

ISOLATION BALL VALVE & APPLIANCE

VALVES



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5.0	INSPECTION & TESTING
6.0	MATERIAL SPECIFICATION FOR APPLIANCE VALVES
7.0	INSPECTION & TESTING



1.0 INTENT OF SPECIFICATION

The intent of this specification is to establish minimum requirements to manufacture and supply of Isolation & Appliance Ball Valves used for supply of natural gas.

2.0 SCOPE OF SUPPLY

- 2.1 The scope of the tenderer will include manufacture/ supply, inspection/ testing/ marking/ packaging/ handling and despatch of Isolation & Appliance Ball Valves, as indicated in the Material Requisition & Schedule of Rates, meeting all the requirements as laid down in manufacturing standard ASME B16.33 or conforming to specifications laid in BS EN331 and should be UL listed or approved by any certified agency for Gas application.
- 2.2 All codes and standards for manufacture, testing, inspection etc. shall be of latest edition.
- 2.3 This specification defines the requirements which must be met by Isolation and Appliance Valve used to construct aboveground networks for natural gas distribution.

3.0 REFERENCE STANDARDS AND SPECIFICATIONS :

EN 682	Air-tight rubber seals-specification for air tight seal materials for gas and hydrocarbon fluid transfer piping.
EN 1555-1	Plastic piping systems for combustible gas distribution. Polyethylene (PE). Part 1. General Information.
EN 1555-3	Plastic piping systems for combustible gas distribution. Polyethylene (PE). Part 3. Accessories.
EN 1555-7	Plastic piping systems for combustible gas distribution. Polyethylene (PE). Part 7. Conformity evaluation.
ISO DIS 11413	Preparation of test assemblies between a polyethylene (PE) pipe and an electro fusion fitting.
EN 728: 1997	Plastics piping and ducting systems-Polyolefin pipes and fittings- Determination of oxidation induction time.
PrEN 1555-1	Fuels-Polyethylene (PE)-Part 1: General
EN 1555-3 prEN 1555-7	Plastic piping systems for the supply of gaseous fuels-Polyethylene (PE)-Part 7: Assessment of conformity.
PrEN 12099	Plastic piping systems – Polyethylene piping materials and components -Determination of volatile content.
PrEN 12118	Plastic piping systems- Determination of moisture content in plastics by coulometry.



4.0 **MATERIAL SPECIFICATION FOR ISOLATION VALVES**

Technical Data Sheet

4.1.1 **Item**

Isolation Ball Valve with Full Bore, NTP Female (Conforming to ANSI B1.20.1) end for natural gas application.

4.1.2 **Sizes:** 1/2", 3/4", 1", 1 1/4", 2" ONLY

4.1.3 **Body:** Hot Pressed/Forged Brass, Nickel/Chromium Plated.

4.1.4 **Ball**

Hard Chrome/ Nickel Plated Hot Pressed/ Machined Brass Bar with Teflon Seat.

4.1.5 With operating Knob and locking arrangement with sealing wire and lead seal (Without Key). Valve full open/ close position shall be at 90°.

4.1.6 Maximum Operating Pressure : 6.0 Bar (g)

4.1.7 Hydrostatic Test Pressure : 9.0 Bar (g)

4.1.8 **Markings**

Markings shall be provided & shall include:

- i) Manufacturer's name or trade mark Model designation.
- ii) Rate working pressure in Bar.
- iii) Direction of flow.

4.1.9 **Leakage**

The permissible external/ internal leakage shall be specified by the vendor, with reference to relevant code. However, in no case the leakage in both the cases shall exceed 1 ml/ min at maximum working pressure specified.

4.1.10 **Leak Tightness**

All Valves shall be leak tightness tested at 1.5x 4bars for a period of 15 seconds and no leakage is permitted. This test shall be performed as per clause no. 4.2 of ASME B 16.33.

4.1.11 **Temperature Resistance test**

This test shall be carried out as per 4.3 clause of ASME B 16.33.

4.1.12 **Mechanical Strength**

- i) The body of the valves shall be capable of withstanding without deformation or leakage at 125 Nm torques, as applied to a pipe being connected to the valve.
- ii) Valve shall be capable of withstanding without deformation or leakage 105 Nm bending moment or an angular displacement of 10° whichever occurs first, if applied to a pipe



connected to the valve

- iii) The valves shall be capable of withstanding 25 Nm impact without breakage or leakage.
- iv) Vendor shall submit Model number along with catalogues in English along with un-price bids.
- v) Maximum turning torque to operate the valve as per table 5 of ASME B 16.33.

5. INSPECTION

- i) SUPPLIER shall submit to CLIENT/CLIENTS representative for approval and also provide required certification as mention in MR.
- ii) Inspection shall be carried out as per Technical Specifications and approved Inspection Test Plan.
- iii) SUPPLIER shall furnish all the material test certificates, proof of approval/license from specified authority as per specified standard, at the time of final inspection of each supply lot of material. Also, all above mentioned certification to be furnished in soft copy to M/S BGL.
- iv) Every after third party inspection, owner reserve to right to select a sample randomly from each manufacturing batch and have these independently tested should the results of these tests fall outside the limit specified in BGL technical specification, then BGL reserve to right to reject all production supplied from the batch.

5.1 TESTING

The Isolation valves shall be tested as per EN331/ASME B 16.33 only. Supplier shall submit detailed data sheet and QCT for approval by owner/owner’s representative before commence the production. Testing shall be carried out as per approved QCT.

Note:

- 1. Minimum Nickel/Chromium plated on the ball & body of appliance valve shall be 25 Micron.
- 2. The above satisfied test in PTS/Data sheet are minimum. However, the other remaining/specified tests shall be done as per ASME B 16.33 (latest amendments).
- 3. IS 319 material to be as per T4S Standard,.
- 4. Lever with PVC coating is required
- 5. Brass material as per IS 319 or as per T4S
- 6. QAP shall cover critical parameters as minimum, to be checked by TPIA before despatch.

TECHICAL DATA SHEET FOR ISOLATION VALVES:

S.NO.	DESCRIPTION	DATA
1.00	PROCESS DATA	
1.01	Fluid	Natural gas
2.00	OPERATING CONDITION	
2.01	Minimum Pressure	0.1 bar (g)
2.02	Minimum temperature (°C)	0-45
3.00	DESIGN CONDITION	



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3.01	Pressure	4 bar (g)
3.02	Temperature (°C)	0-50
4.00	VALVE DATA	
4.01	Size	1/2" & 3/4"
4.02	Type	Isolation Ball Valve with full Bore, NPT Female (Confirming to ANSI B1.20.1) ends for natural gas application with operating Leaver arrangement. Valve full open/close position shall be at 90°.
4.03	Rating	-
4.04	End Condition	End Condition should be NPT Female (Conforming to ANSI B1.20.1)
4.05	Body Material	Forged Brass (ASTM B 283, Alloy UNSC37700) with Nickel/ Chrome Plated.
4.06	Ball Material	Hard Chrome/Nickel Plated, Forged Brass Bar (ASTM B 283, Alloy UNSC37700) with Teflon Seat.
4.07	Stem	-
4.08	Seat & Seal	-
4.09	Fire Safe	-
4.10	Anti blow out	-
4.11	Antistatic	-
4.12	Extension Stem	-
4.13	Operator	Leaver arrangement with PVC coating is required.
5.00	PAINTING	
5.01	Surface Preparation	-
5.02	Primer	-
5.03	Finish	-
5.4	Insulation	-
6.00	TEST	-
6.01	Hydrostatic shell test	
6.02	Test Pressure	9.0 bar (g)
6.03	Test medium	-
6.04	Hydrostatic seat test	9.0 bar (g)
6.05	Test Pressure	-
6.06	Test medium	-
6.07	Functional test	-
6.08	Test pressure	-
6.09	Leak test	-
6.10	Impact test	As per PTS
6.11	Bending test	As per ASME B 16.33/PTS
6.12	Torque test	As per PTS
6.13	Turning torque test	As per ASME B 16.33
6.14	Antistatic test	-
6.15	Fire test	-
6.16	Visual and dimensional examination	-
Note	Unless otherwise stated all tests will be witnessed by the purchaser	



7.00	QUALITY CONTROL	-
7.01	Material Certificates	EN-10204, 3.1 Certificate
7.02	All testing certificates	-

6.0 MATERIAL SPECIFICATION FOR APPLIANCE VALVES

6.1 Technical Data Sheet

6.1.1 Item

Application Ball Valve of Full Bore with ½” NPT (Confirming to ANSI B1.20.1) Female as an inlet and the outlet shall be having Ni/ Cr plated brass or steel a nozzle (Serrated to suit ¼” rubber tubing/ hose connection) and the material is required for Domestic Natural Gas Service.

6.1.2 **Body** : Total body including the nozzle shall be of Hot Pressed/ Forged Brass, Nickel/ Chrome Plated.

6.1.3 **Ball**

Hard Chrome/ Nickel Plated Hot Pressed/ Machined Brass Bar with Teflon Seat.

6.1.4 With a metallic operating/ knob/ lever for full open/ close at 90° position.

6.1.5 Maximum Operating Pressure : 35 mBar (g)

6.1.6 Hydrostatic Test Pressure : 1.0 Bar (g)

6.1.7 **Markings**

Markings shall be provided & shall include :

- i) Manufacturer's name or trade mark
- ii) Model designation
- iii) Rate working pressure in Bar
- iv) Direction of flow, if necessary

6.1.8 **Leakage**

The permissible external/ internal leakage shall be specified by the vendor, with reference to relevant code. However, in no case the leakage in both the cases shall exceed 1 ml/ min at maximum working pressure specified.

6.1.9 **Leak Tightness**

All Valves shall be leak tightness tested at 1.5x 4bars for a period of 15 seconds and no leakage is permitted. This test shall be performed as per clause no. 4.2 of ASME B 16.33.

6.1.10 **Temperature Resistance test**



This test shall be carried out as per 4.3 clause of ASME B 16.33.

6.1.13 Mechanical Strength

- a. The body of the valves shall be capable of withstanding without deformation or leakage at 125 Nm torques, as applied to a pipe being connected to the valve.
- b. Valve shall be capable of withstanding without deformation or leakage 105 Nm bending moment or an angular displacement of 10° whichever occurs first, if applied to a pipe connected to the valve
- c. The valves shall be capable of withstanding 25 Nm impact without breakage or leakage.

7. INSPECTION

- i) SUPPLIER shall submit to CLIENT/CLIENTS representative for approval and also provide required certification as mention in MR.
- ii) Inspection shall be carried out as per Technical Specifications and approved Inspection Test Plan.
- iii) SUPPLIER shall furnish all the material test certificates, proof of approval/license from specified authority as per specified standard, at the time of final inspection of each supply lot of material. Also, all above mentioned certification to be furnished in soft copy to M/S BGL.
- iv) Every after third party inspection, owner reserve to right to select a sample randomly from each manufacturing batch and have these independently tested should the results of these tests fall outside the limit specified in BGL technical specification, then BGL reserve to right to reject all production supplied from the batch.

7.1 TESTING

The Appliance valves shall be tested as per EN331/ASME B 16.33 only. Supplier shall submit detailed data sheet and QCT for approval by owner/owner's representative before commence the production. Testing shall be carried out as per approved QCT.

Note:

1. Minimum Nickel/Chromium plated on the ball & body of appliance valve shall be 25 Micron.
2. The above satisfied test in PTS/Data sheet are minimum. However, the other remaining/specified tests shall be done as per ASME B 16.33 (latest amendments).
3. IS 319 material to be as per T4S Standard,.
4. Lever with PVC coating is required
5. Brass material as per IS 319 or as per T4S
6. QAP shall cover critical parameters as minimum, to be checked by TPIA before despatch.

8.0 PACKING:

Packing size to be mentioned to ensure uniformity in delivery condition of the material being procured. Bidder shall submit the packaging details during QAP and also compiled with at the time delivery.



Bhagyanagar Gas Ltd.

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**SECTION 12
SCHEDULE OF RATES (SOR)**



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LIMITED

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Sl. No	Description	Quantity (Nos) (a)	Unit Price Ex works including cost of raw material/components, TPI charges, packaging, forwarding, (Rs.) (b)	Per unit freight charges, transit insurance including loading at vendor's works and un-loading at BGL's site & any other taxes & duties but excluding GST, upto FOR Project site (c)	Per unit GST (Rs.) -----% (d)	Per unit FOT Site (Rs.) (e) = (b) + (c) + (d)	Total FOT project Site inclusive of all taxes and duties (Rs.) (f) = (a) x (e)
	Supply of Isolation Valve, Conforming to BGL's Technical Specification and BSEN: 331 for Isolation Valve & Appliance Valves of following sizes, grades & specifications as indicated below:						
1	½" Isolation Valve	40,000					
2	½" Appliance Valve	12,000					
3	¾" Isolation Valve	800					
4	1" Isolation Valve	200					
5	1 1/4" Isolation Valve	100					
6	2" Isolation Valve	100					
	Grand Total amount inclusive of all taxes & duties and inclusive of GST. , Rs. (in Words)						

Sign & Seal of Bidder: