

GUJARAT GAS

**TECHNICAL SPECIFICATION – PROCUREMENT OF BRASS METER
ADAPTOR**

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1.0 INTRODUCTION AND SCOPE

Gujarat Gas Ltd., is a Group Company of Gujarat State Petroleum Corporation Ltd., (State Government undertaking) is supplying natural gas to automobile, industrial, commercial and domestic consumers including CNG stations in various cities of Gujarat.

This specification covers the requirements for materials of Brass and it's fittings. Unless modified by this specification, requirement of IS 559 / IS 319: 2007/ BS 864 / EN 1254 Part 1 shall be valid. However, Latest Edition of IS/BS/EN shall be governing for Specification, if applicable.

2.0 DEFINITIONS

OWNER / CLIENT	Gujarat Gas Ltd., (GGL)
PNG	Natural Gas produced from Gas wells, Gas condensate wells or Oil wells and the residue Gas remaining after conditioning being metered, regulated / controlled, odorized & distributed through pipelines for various applications, i.e. for industrial, commercial and domestic.
Manufacturer	Manufacturer of the Brass Fittings with Head Chrome Plating
Vendor	The person(s), firm, company, organization from whom Client/Contractor procures materials.
TPA	Third Party Inspection Agency
EIC	Engineer In Charge
PNGRB	Petroleum and Natural Gas Regulatory Board
T4S	Technical Standard and Specification including Safety Standards

3.0 MATERIAL

- i. The material used for the manufacturer of Brass fittings shall conform to IS 319 :2007 (Latest edition)
- ii. Material used for Brass Fitting shall be Clean, Smooth, and free from the surface defects like blisters, Silvers, Scales, Fins, Spills, Cracks etc. and Free From internal defects like Porosity, Piping etc.
- iii. Threading on the Brass fittings shall be done as per BS 21 / IS554.

4.0 CHEMICAL PROPERTIES

Chemical composition of free cutting brass rods of Brass and it's fittings shall be as mentioned in IS 319 : 2007 with Head Chrome Plating.

Copper (Cu)	:	56.0 % to 59.0 %
Lead (Pb)	:	2.0 % to 3.5 %
Iron (Fe)	:	0.35 % Max
Other Impurities (Excluding Iron)	:	0.70 % Max
Zinc (Zn)	:	Remaining

5.0 HYDROSTATIC / PNEUMATIC PRESSURE TEST

All Brass fittings shall be sustaining the pressure of 3.5 bars for 30 minutes holding time during testing at site after installation and no leakage is permitted.

The test shall be performed on each size of the fittings at site after installation.

6.0 DIMENSIONAL TOLERANCES OF FREE CUTTING BRASS BARS, RODS AND SECTION

Sizes

The materials of Brass Fitting (Free Cutting Brass Rods) shall be supplied in sizes as specified in IS 319: 2007 or IS 2826 or as per Purchaser requirement.

Tolerances

The tolerances on sizes of bars/rods shall be as specified in IS 2826.

7.0 DIMENSION, WALL THICKNESS & TOLERANCE OF BRASS FITTINGS

Dimensions tolerances of various types of brass shall be as per drawing enclosed with tender.

The minimum wall thickness of a fitting shall be in accordance with Table 3 of EN 1254 Part 1

8.0 END CONNECTION

End connection of the brass fitting must be capable of end feeding to the BSPT and as per drawing enclosed with tender

Internal solder ring type fitting is not acceptable.

9.0 FREEDOM FROM DEFECT

The fittings shall be free from internal fins, blow holes, skin defects etc. or other irregularities which might restrict the free flow of fluid, and shall be designed that resistance to the flow of fluid through the fittings is minimized.

10.0 QUALITY ASSURANCE (QA)

The Contractor/Manufacturer /Vendor shall manufacture, supply, inspection, testing, marking, packaging, handling and dispatch of Fittings as per GGL Technical Specification and GGL QAP.

11.0 INSPECTION / DOCUMENTS

Inspection shall be carried out as per design codes/standards, OWNER Technical Specification and approved QAP.

- i. Contractor / manufacturer / Supplier / Vendor shall furnish all the material test certificates, proof of approval/ license from specified authority as per specified standard, if relevant, internal test/ inspection reports as per OWNER Technical Specification, at the time of final inspection of each supply lot of material.
- ii. OWNER reserves the right to select a sample of items randomly from each manufacturing batch/ lot and have these independently tested. If the results of these tests fall outside the limits specified in OWNER Technical specification, then OWNER reserves the rights to reject all production supplied from the batch.
- iii. Vendor Representative shall carry out final inspection at his premise prior to dispatching of materials as per GGL QAP provided with the tender document.
- iv. For inspection at contractor premises by TPA/ GGL Representative, latter shall be informed in writing one (1) week in advance by contractor about inspection date & place along with inspection schedule.

Each fittings shall be embossed with manufacturers name / trade mark

Each packing containing fittings shall carry the following stamped or written in indelible ink.

- a) Manufacturer's name or trade mark.
- b) Designation of fittings.
- c) Month and year of manufacturing

12.0 PACKAGING

Packing size to be mentioned to ensure uniformity in delivery conditions of the material being procured.

Contractor / manufacturer / Supplier / Vendor shall submit the packaging details and also complied with at the time of delivery.

13.0 DOCUMENTS OF PRECEDENCE

In case of conflict between the requirements of this specification and that of the referred codes, standards and specifications, the requirements of the referred codes, standards and specifications shall govern.

14.0 QUALITY ASSURANCE PLAN

Sr. No.	Characteristics	Referred Standard	Inspection Methodology	Inspection by TPA
1	Material (Chemical and Mechanical Properties)	IS 319 : 2007	Manufacturers test certificate of Raw material	R
2	Thread	IS 554	Test Certificate	R
3	Dimensions & Thread	Approved drawing of GUJARAT GAS	Dimension verification- ("GO" – "NO GO" Gauge)	Rv
4	Marking	Manufacturers name or trade mark	Visual	Rv

R- Review of Documents

Rv- Random Verification

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