

## Annexure-1

### Specification to procurement of Hydrogen gas for Sriharikota

1. Hydrogen gas for filling weather balloons with purity not less than 99.6% for weather balloon purpose. Confirming to IS1090-1983 with suitable lock system.
2. The gas should be supplied in 7Cu.m cylinders.
3. All cylinders should be of uniform purity, volume, uniform material of construction, color code, valve outlet, pressure, valve material and screw thread outlet. Any variations from the above mentioned specifications shall result in rejection of the consignment.
4. All cylinders should be of uniform size "ISI" marked, conforming to IS:7285 (PART-2):2004
5. Delivery Schedule:  
2 years duration from the date of release of Purchase order. The Gas should be supplied to Sriharikota, as and when the requirement is intimated by the consignee. Supply should be within 3 to 4 days from the date of intimation of requirement from our side.
6. DELIVERY Location:  
Supply to Sriharikota
7. CYLINDERS HOLDING CHARGES:  
No Cylinder Holding charges will be payable extra.
8. CYLINDER SERVICE CHARGES:  
We undertake safe return of your cylinders. In the event of any loss or damages to your cylinder or its fittings, replacement cost/service cost extra shall be paid extra and the damages should be intimated to us and the service may be carried out against over written confirmation only.
9. In case of loss or damage of spares of your cylinders, Replacement cost/Service charges for the following will be applicable extra. Supplier has to provide the cost for each, separately in the offer as per the following, if applicable any.
  - a) Replacement cost of cylinder valve
  - b) Replacement cost of valve cap lost/damaged
  - c) Replacement cost of valve gland nut
  - d) Changing of worn-out valve spindle

- e) Painting & Stenciling
- f) Degreasing of cylinder received with Oil/paint contamination
- g) Hydraulic testing charge of your Own cylinder
- h) Purging charges
- i) If a cylinder is returned with a damaged valve or worn-out spindle.

10. PAYMENT:

Payment shall be made within 30 days after receipt and acceptance of each of cylinders at our site.

11. CYLINDER DEPOSITE:

Our's being a Government of India Department, we are waived from payment of cylinder deposit for your cylinders. We undertake safe return of your cylinders as per clause 10 above

12. It should be ensured that the cylinders are provided with protective caps

13. Wherever hydraulic testing and painting of cylinders are requiring, the same shall be done by you with our written confirmation for which charges will be paid extra as per the rates under clause 9 of above.

14. The supplier shall provide Test Certificate for purity level, preparation tolerance and certification of accuracy, stability pressure and quantity against each lot/or each cylinder whichever is applicable.

15. Supplier shall ensure that Hydrogen Gas Cylinders are inspected and certified for use once in five years

16. Every cylinder shall bear markings to indicate validity of certification and due date for next certification.

17. All gas cylinders before filling shall be thoroughly cleaned and subjected to visual inspection of all surfaces including the bottom side detect the damages, if any damages usually met with are:

- a) Dents
- b) Cuts, Gouges or digs
- c) Dents & cuts
- d) Dents & line marks

- e) Bulges
- f) Stab marks
- g) Fusion marks & fire damage
- h) General Distortion
- i) Corrosions or pitting
- j) Neck defect

- 18. General certification of compliance with the above clauses shall be provided with every supply.
- 19. The supply of cylinders, placing of cylinders at requested location and taking back of empty cylinders is fully under the scope of the supplier.