

Annexure B

Specification of Nitrogen gas and cylinders

1. The requirements of the Nitrogen gas is detailed below:

Table – 1: Nitrogen Purity requirements: Purity – Grade 5

Sl. No.:	Parameter	Grade 5 values	Values at M/s BAPL, Hyderabad
1.	Purity of Nitrogen	99.999% min.	99.999% min.
2.	Oxygen content	<5PPM	≤2PPM
3.	Water vapour content	<3PPM	≤2PPM
4.	Total Hydro Carbons (THC) content	--	≤0.5PPM
5.	Dew point	Better than -60°C	Between -70°C to -80°C

2. The requirements of Nitrogen cylinder is detailed below:

Table 2 – Nitrogen cylinder specifications

Sl. No.	Description	At M/s BAPL, Hyderabad
1.	Standard for Cylinder manufacturing	IS 7285 (Part 2) – 2004
2.	Water Capacity	47L + 5%
3.	Gas Volume	7 Cubic meters
4.	Filling pressure	150kgf/cm ² (2150psig)
5.	Colour coding as per IS 4379-1981 or equivalent	Body (French Grey - 630), Neck band (Black)
6.	Threading on Valve (External)	Outlet No. 20 (G3/4" EXT - RH) as per IS 3224:2002
7.	Marking on cylinders	As per point 13 of IS 7285

3. The requirements of Nitrogen cylinder mandatory tests is detailed below

Table – 3: Mandatory tests on Nitrogen cylinders to be carried out by manufacturer

Test / Certification	Point No. of IS 7285	Value
Hydraulic proof pressure test	11.2.1	5/3 times working pressure
Hardness test	11.3	As per IS 1500 (Brinell) or IS 1586 (Rockwell) and IS 4258
Leakage test	11.4	0.6 times proof pressure test
Water capacity check	7.11	47L + 5%
Ultrasonic examination	7.4	As per Annex. B of IS 7285

4. All the cylinders are to be sourced with the safety cap to ensure safe storage of cylinders.

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