

Appendix-I

Sr. No.	Name of the item with Specifications	Qty.
1	<p>Liquid Nitrogen Pressurized Cylinder</p> <p>Capacity : 200 liters Configuration : Vertical Inner material of cylinder : Austenitic stainless steel (SS 304L) Outer material of cylinder : Carbon Steel Outlet port dimension for liquid : ½ inch and 3/8 inch Outlet port dimension for vapor : ½ inch and 3/8 inch Transfer line fitting type : Standard Insulation : Super insulation material or perlite Construction : It should be double walled and vacuum jacketed Max allowable pressure : 24 bar Liquid nitrogen storage pressure : 15 bar minimum Liquid nitrogen set pressure at outlet : 3 bar Design temperature : 77 K to 324 K Outlet temperature of liquid : 77 K Liquid flow rate : 0.1 liter / min to 4 liter /min Static evaporation rate : 0.5 liter/day maximum</p> <p>It must containing following:</p> <p>Safety valve Vent valve Liquid fill & withdrawal Valve Pressurizing valve : (There should be a vaporizer with appropriate pressure regulation for auto pressurization of the tank.) Gas withdrawal valve Bursting disc Level gauge : (Should be provided to see the level of liquid nitrogen inside the Storage Tank) Combined pressure regulator & economizer Pressure gauge : (Pressure gauges should be provided to see the pressure inside the LN2 chamber) Evacuation port cum safety device Support Structure : Heavy-duty footring and large diameter with supports. Caster base (wheeled) with temperature resistant handles for easy movement Safety of Vacuum chamber : There should be provision of automatic safety of vacuum chamber through safety valve or some other way in case of sudden pressure rise in the chamber Safety of inner liquid nitrogen chamber : There should be provision of three way Pressure Relief Valves (PRV) Warranty : 2 year minimum</p>	01 No.

Tentative tests to be carried out at Vendor site:

- Liquid Storage capacity - As per specification
- Configurations- As per specification
- Transfer Line Fittings and Fitting type as per standard available.
- Safety of Vacuum chamber - As per specification
- Safety of inner liquid nitrogen chamber - As per specification
- Pressure gauges - As per specification
- Level Indicator - As per specification
- Valve - As per specification
- Vent Line - As per specification
- Filling Lines - As per specification
- Pressurization of the tank - As per specification