

Pre-Bid Clarifications: Annexure -2

S. No.	System	Technical Details
1	Central Air Handling Unit (01 No.)	<ul style="list-style-type: none"> • Total air flow volume approx. 10,000 m³/hour • Fan- Supply Air (02 No.) Type : RLM 56-355 • Fan - Exhaust Air (02 No.) Type: RLM 56-355 • Overload protection : PTC thermistor • Separate air fans for kitchen and garage exhaust.
2	Drinking & Sea Water Plant (01 No.) Waste Water Treatment Plant (01 No.) Grey Water Treatment System (01 No.)	<ul style="list-style-type: none"> • 700 mtr. seawater pipe line outdoor with trace heating • 750 mtr. drinking water pipe line indoor • The seawater and the drinking water stored in four tanks. • 3,000 ltr. seawater tank • 12,000 ltr. drinking water storage indoor • Ultra violet (UV) disinfection • Two 2,000 W drinking water pressure boosters with 10 bar • Waste Water Treatment Plant with double membrane module technology and filtration capacity of 300 ltr. per hour • 350 mtr. waste water pipe line outdoor with trace heating • 300 mtr. waste water pipe line indoor • Seven lifting plants for waste water and oily water • Special fat separator for contaminated waste water (kitchen waste water) • Oil separator for oily water in the garage • Separate container for contaminated laboratory waste water
3	Combined Heat & Power– Plants (03 No.)	<ul style="list-style-type: none"> • Engine: MAN D2876 LE202 • Generator: Stamford UCI 274 H13 • Each CHP produces electric power of ~100 kVA and approx. 150 kW thermal power • Fuel Day Tanks (03 No.) of 470 ltr. each for fuel supply • CHP cooling system with six cooler units and cooling capacity of 270 kW. • Heating system with redundant pumps, electric valves and monitoring system • 2,500 mtr. installed heating pipelines • About approx. 130 heaters
4	Low Voltage Distribution Unit (01 No.)	<ul style="list-style-type: none"> • UPS plants (02 No.) each 60 kVA • Low voltage distribution system for power supply (12 fields) • Gas warning system for CHP rooms and garage • Fire alarm system

		<ul style="list-style-type: none"> • ~230 smoke detectors • 2,500 mtr. cable for fire alarm system • Video system/ emergency call system • Security cameras (15 No.) • Loud speakers (100 No.) • 2,300 mtr. data cable with 300 pcs. network sockets • 13,000 mtr. heavy current cable for power supply • 26,000 mtr. weak current cable for measuring and controlling
5	Building Automation	<ul style="list-style-type: none"> • About 1,000 data points in three set of controls (equivalent to modern laboratory or hospital standards) • 14 switch gear cabinets with about 300 fuses • Two building management work stations inside Bharati Station (mobile) and one remote work station in Goa • 13,000 mtr. cable • About 180 field devices (sensor and actors) like heating valves and pressure sensing devices for control of plants
6	Fire Fighting System (01 No.)	<ul style="list-style-type: none"> • Fire fighting system for CHP rooms, kitchen and fuel tank room. • Smoke and fire detectors • Flame detectors • Video system for special rooms like medical room, kitchen and corridors • CO2 and foam fire extinguishers
7	Fuel Farm	<ul style="list-style-type: none"> • Fuel Storage capacity ~300 kL. • Fuel tanks 13 No. each of ~24 kL capacity • level indicator, overfill protection, leak detector, pressure vacuum relief valves • 400 mtr. Fuel pipe line outdoor with leak detection