

PART-II (PRICE BID)

SCHEDULE OF QUANTITIES (QUOTATION FORMAT)

(Bidders are requested to offer their price bid in the following format)

ANNEXURE -II

NOTES:

- All the prices should be in Indian rupees.
- The rate mentioned in the Schedule of quantities shall include cost of all materials, accessories, operation, tools, loading, transport, unloading, handling, labour and any other expenditure incurred during supply, fixing, execution, testing, balancing, commissioning and completion of the work, etc.
- All equipments, quantities and technical data indicated in this Schedule (SOQ) are based on the engineering by IPR. These quantities shall be adjusted / amended after detail engineering and in accordance with the actual requirement. Contractor shall be paid for the actual quantity of work executed by him based on joint measurements.
- There will not be any payment for wastage of material / labour.
- The contractor is encouraged to visit the site before submitting the offer, as the actual pipe routing at site may have important bearing on preparation of the offer.
- Any deviation from the scope of job, will lead to the rejection of the offer.

Sr. No	Item Description	Qty	Unit	Supply Part			Installation part		Total amount (Rs.)
				Rate (Rs.)	Amount (Rs.)	GST (%)	Rate (Rs.)	Amount (Rs.)	
		(A)		(B)	C=AxB		D	E=AxD	F=C+E
1.	MS CLASS 'C' PIPING : Providing and fixing in position the following MS class 'C' (heavy class) pipes , cut to required lengths and installed with all welded joints, necessary fittings like flanges, elbows, tees, reducers, fasteners, gasket, purge tapings, drain points etc. Including necessary supports complete as per instruction of Engineer-in-Charge.								
	(i) 200 NB, MS, Class 'C' pipes	80	RMT						
	(ii) 150 NB, MS, Class 'C' pipes	3	RMT						
	(iii) 100 NB, MS, Class 'C' pipes	175	RMT						
	(iv) 80 NB, MS, Class 'C' pipes	340	RMT						
	(v) 65 NB, MS, Class 'C' pipes	125	RMT						
	(vi) 50 NB, MS, Class 'C' pipes	40	RMT						

	(vii) 40 NB, MS, Class 'C' pipes	25	RMT						
2.	<p><u>BUTTERFLY VALVE (CI/CS) FOR BRANCH LINES:</u></p> <p>Supply and installation in position of following PN-10 class Wafer type butterfly valves center disc type, with slim seal, CS/ CI body, all SS-316/ SS-304 wetted parts, centering lugs, locking lever handle, bubble tight shut off class-VI, replaceable EPDM/ Neoprene Rubber seat, high Cv values including required qty. of 150 class (B16.5) matching SORF flanges and metric thread nut-studs fasteners sets.</p>								
	(i) 200 NB, CI/CS, Class 150 for air separator	2	Nos.						
	(ii) 150 NB, CI/CS, Class 150 for header	1	Nos.						
	(iii) 100 NB, CI/CS, Class 150 for Aditya branch	2	Nos.						
	(iv) 80 NB, CI/CS, Class 150 for Lib. and Beta lab. branch	4	Nos.						
	(v) 65 NB, CI/CS, Class 150 for seminar hall branch	2	Nos.						
	(vi) 50 NB, CI/CS, Class 150 for make-up tank	2	Nos.						
3.	<p><u>BALL/ NEEDLE/ AUTO AIR PURGE VALVES:</u></p> <p>Providing and fixing in position of following full bore Ball/ Needle/ Auto air purge valves of MOC as specified below, Class 150 construction including body with bubble tight shut off and Teflon seat. This also includes matching flanges, metric thread SS nut-studs fasteners sets and PTFE gaskets for flanged end valves.</p>								
	(i) 40 NB, Class 150, Flanged end, 3-piece for small AHU and make-up tank soft water lines.	4	Nos.						
	(ii) 25 NB, Class 150, Flanged end, 3-piece for make-up tank float valve.	1	Nos.						
	(iii) 20 NB, Class 150, Screw end, 3/4" BSP female, Single/two/three piece for drain.	10	Nos.						
	(iv) 15 / 20 NB, Class 150, Screw end, 1/2" BSP female ball valves for vent.	10	Nos.						
	(v) 15 / 20 NB Auto air purge valves of brass/ bronze/SS	7	Nos.						

4.	<p><u>GI CLASS 'B' PIPING WITH PAINTING:</u> <u>For soft water make-up for Expansion Tank:</u> Supply and installation in position the following GI class 'B' pipes cut to required lengths and installed with all welded joints with necessary fittings, like elbows, union, metric thread stud-nut fasteners sets, gaskets (Sch-10) etc. and painting complete as per instruction of Engineer-in-Charge. Painting shall be of one coat of zinc chrome/ red oxide with two coats of enamel paint. All painting colour code shall be approved by Engineer-in-Charge before execution.</p>								
	(i) 40 NB, Class-B, GI pipes	55	RMT						
5.	<p><u>EXPANSION TANK :</u> <u>MS Chilled water expansion tank:</u> Design, fabrication, supply, installation and testing of MS chilled water expansion tank of 1000 ltrs. water storage capacity with PUF/ TF quality EPS insulation entirely covered with black polyethylene sheet (Vapour Barrier), GI chicken wire-mesh for proper holding of vapour barrier and entirely covered with 22G Aluminium cladding with proper drain, vent, overflow, inlet / outlet water connections with openings for quick fill, float valve and air tight covers on top, Cold Galvanizing coating inside as per the specifications with necessary floating PCC / RCC / MS foundation. Submit drawing for the tank with all details for approval. This tank shall be installed on terrace of approx. 20 mtr. height. Lifting shifting and insulation cost are all included in the cost of tank. - Material of construction- MS plate, angle and/or channel, with MS supports. Thickness of wall/side/top/bottom- 6mm. - Capacity 1000 ltrs. (size: 1 x 1 x 1 m) • Chilled water Expansion Tank with all accessories as described above.</p>	1	Job						
6.	<p><u>THERMAL INSULATION OF CHILLED WATER PIPING:</u> Insulation of Chilled water piping within plants, at terrace and on existing pipes. Insulated with 75/50 mm thick 16kg/m3 density TF quality expanded polystyrene (EPS, Thermocole) insulation entirely covered with black polyethylene sheet (Vapour Barrier), GI chicken wire-mesh for proper holding of vapour barrier and entirely covered with sand cement of 20 mm thick (exposed pipes out side of building)/ 26G Aluminium cladding (inside the building and AHUs rooms) installed with best workmanship. Brush & clean pipe surface before applying insulation. MS pipes shall be provided with one coat of bituminous paint / two coats of zinc chromate/ red oxide</p>								

	primer. Stick insulation material using a thin film of manufacturer-recommended adhesive. Seal all joints air-tight. Provide minimum 50mm thick insulation up to 100mm dia piping, and minimum 75mm thick insulation for 150mm and larger dia. All fittings/valves shall be insulated with the same thickness of insulation material. Sand cement covering shall be painted with two coats of primer for prepare base and two coats of enamel paints as per IPR approved shade.								
	(i) 200 mm dia pipe (75 mm thick EPS Insulation)	80	RMT						
	(ii) 150 mm dia pipe (75 mm thick EPS Insulation)	10	RMT						
	(iii) 100 mm dia pipe (50 mm thick EPS Insulation)	185	RMT						
	(iv) 80 mm dia pipe (50 mm thick EPS Insulation)	350	RMT						
	(v) 65 mm dia pipe (50 mm thick EPS Insulation)	135	RMT						
	(vi) 50 mm dia pipe (50 mm thick EPS Insulation)	50	RMT						
	(vii) 40 mm dia pipe (50 mm thick EPS Insulation)	35	RMT						
	(viii) Insulation of existing installed make-up tank with 50 mm thick TF quality EPS insulation, entirely covered with black polyethylene sheet (Vapour Barrier) and 22G aluminium cladding. It includes removing/cleaning of existing insulation.	6	SQMT						
7.	<u>AIR SEPARATOR:</u> Supply, installation, testing and commissioning of 200 NB centrifugal Air Separator (tangential in/out connection) in CHW return header, complete with tank insulated with 50 mm thick EPDM/ Nitrile insulation & 26 gauge aluminium cladding, flanged inlet & outlet connections, auto air vent at the top, clean-up point at bottom with nipple & ball valve for drain.	1	No.						
8.	<u>GI DUCTING:</u> Supply, fabrication and installation of sheet metal ducts of 22/24 SWG as per IS 655 and IS 277 according to the approved drawing, including necessary supports, angle frames, suspenders, anchor fasteners, nut & bolts, rubber gaskets for supply air duct. All nut bolts should be hot dip galvanized/ zinc coated.	5	SQMT						
9.	<u>SA GRILLS / DIFFUSER:</u> Supply and Installation of powder coated extruded Aluminium of suitable size supply air grilles/ diffuser as per the approved shop drawings and the specifications. Note: SA & RA air grills / diffusers will be selected in	0.3	SQMT						

	consultation with IPR Engineers in charge.								
10.	<p>MS STRUCTURE WORK FOR PIPE SUPPORT ETC.: Supply and fabrication of MS structural steel (Channel, angles, chequer plates, plain plates etc.) for support structure of Chilled water pipes, air separator, make-up tank, preparation of suitable sizes safety walkway/ steps over laid pipes on roof etc. MS structural steels cut to required sizes and installed with all welded joints with necessary anchor bolts, Nut-bolts, fasteners, MS support structure, MS chequer plates, rubber pad etc. and painting complete as per instruction of Engineer-in-Charge. Painting shall be of one coat of zinc chrome/ red oxide with two coats of enamel paint. All painting colour shade shall be approved by Engineer-in-Charge before execution. The approximate weight and lengths of structure steel as following:</p>								
	(i) MS Structural steel work for support.	2400	Kgs.						
11.	<p>RE-INSTALLATION WORK OF EXISTING ITEMS: Re-installation of following dismantled valves and pipes required by removing of insulation, proper cleaning and supply of matching flanges, gaskets and metric thread fasteners etc.</p>								
	(i) 150 NB, CI body, Class 150 balancing valves.	1	Nos.						
	(ii) 150 NB, Class 150, wafer type butterfly valves.	3	Nos.						
	(iii) 80 NB, Class 150, wafer type butterfly valves.	4	Nos.						
	(iv) 65 NB, Class 150, wafer type butterfly valves.	6	Nos.						
	(v) 50 NB, Class 150, wafer type butterfly valves.	2	Nos.						
	(viii) 150 NB, MS, Class 'C' pipes	4	RMT						
	(ix) 80 NB, MS, Class 'C' pipes	20	RMT						
	(x) 65 NB, MS, Class 'C' pipes	15	RMT						
	(xi) 50 NB, MS, Class 'C' pipes	5	RMT						
	(xii) 40 NB, MS, Class 'C' pipes	5	RMT						
12.	<p>Minor civil and dismantling work:</p> <ul style="list-style-type: none"> All piping shall be supported at specified/ suitable interval of PCC block with minor/ major MS support/ fully MS support and proper anchoring/ grouting/ clamping work. After that the PCC blocks shall be fixed to the terrace floor by proper cementing work. Vertical risers shall be fixed by means of heavy MS channels. MS items shall be measured and payment will made as per rates of "MS 	1	Job						

	<p>STRUCTURE WORK FOR PIPE SUPPORT ETC.”. PCC blocks casting for pipes support wherever required in vendors scope.</p> <ul style="list-style-type: none"> • Arrangement of required sizes and quantity of blind flanges on temporary basis to isolate the part of piping and execute the piping work without shut down of whole integrated system. • Other necessary civil work like making slots/hole in the wall/RCC to run the pipe at desired location. After that remaining space around the pipe will be properly sealed. • During the work execution all necessary civil work/structure work/ Digging work/refilling work will be carried out by contractor. After completion of the work, site should be properly cleaned. • Small part of GI ducting & cable tray needs to be shifted to run the chilled water pipes. After laying pipes, proper finishing of GI ducting and cable tray shall be done. • Dismantling work of existing old pipes, valves etc. at terrace and AHUs rooms/ KBAC plant for re-routing/ re-installation of pipes, valves with/ without insulation. It also includes dismantling, shifting & storing of approx. 75 mtrs. existing 150 NB insulated pipes and unused items to suitable place as directed by Engineer-in-Charge, IPR. <p>Whole minor civil and dismantling work must be carried out to IPR satisfaction and as per the instructions of Engineer in-Charge, IPR.</p>													
Total Price, in Rs. (In Figures)														

Total Price in words (Sum of 'F' mentioned above)

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	<u>Indicate percentage except Freight</u>			
	<u>Percentage</u>	<u>Amount (Rs.)</u>	<u>Included*</u>	<u>Excluded*</u>
Packing and forwarding (for supply portion)				
Applicable GST on supply part				
Applicable GST on installation part				
Insurance (for supply portion)				
Freight (Rs.) (for supply portion)	Rs.			

* Filling of tick marks (√) either in included or in excluded column for each in above table is mandatory.

Important Note:

- IPR reserves the right to add / delete any or all of the items mentioned in SOQ.
- Bidder must understand all the specifications, terms & conditions of this tender thoroughly, visit the site and contact the Engineer-in-Charge for any clarification if necessary.
- **Deviations if any shall be clearly specified on separate sheet with all details.**
- **The bidder should sign all pages in token of acceptance of the terms and condition, scope of work and all the specifications and return the same to us.**

Place:

Name & Signature of Bidders

Date:

(Office Seal)