

SUGGESTED PRICE FORMAT		Doc No:	PF-PE-445-554-A002
		Rev No:	0
		Date of issue	03.03.2022
<b>NAME OF PROJECT:</b>		1X660 MW WBPDCS SAGARDIGHI TPP EXTENSION UNIT NO. 5	
<b>NAME OF PACKAGE:</b>		VENTILATION SYSTEM	
<b>TECHNICAL SPECIFICATION No:</b>		PE-TS-445-554-A002	
S. No.	DESCRIPTION	UNIT	QTY
1	Total lump sum firm price inclusive of all prevailing taxes, duties and other levies for <b>Supply part, Services part and Mandatory spares</b> comprising of design (i.e. preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles (as applicable) fill of lubricants & consumables, mandatory spares alongwith spares for erection, startup and commissioning as required, forwarding, proper packing, shipment and delivery at site, unloading, handling, in-site transportation, assembly, erection & commissioning, final painting at site, minor civil work, trial run at site and carrying out Performance guarantee / Functional / Demonstration tests at site (As applicable), training of customer/client O&M staff and handover in flawless condition of the package to the end customer complete with all accessories, for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order.	Lot	1
2	<b>MAJOR BREAK-UP OF PRICES GIVEN IN 1.0 ABOVE.</b>		
2.1	Total lumpsum firm price inclusive of all prevailing taxes, duties and other levies for <b>Design</b> (i.e. Preparation and submission of drawing /documents including "As Built" drawings and O&M manuals) and engineering as per tender technical specification above, amendment & agreements till placement of order. (Refer Note-4 below)	LOT	1
2.2	Total lump sum firm price inclusive of all prevailing taxes, duties and other levies for <b>Supply part</b> comprising of manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles (as applicable), fill of lubricants & consumables along with spares for erection as required, start-up and commissioning spares as required, forwarding, proper packing, shipment and delivery at site for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order. <b>(Break-up as per Annexure-I)</b>	Lot	1
2.3	Total lumpsum firm prices inclusive of all prevailing taxes, duties and other levies for <b>Services part</b> comprising for unloading, handling, transportation to site, in-site transportation, assembly, erection & commissioning, final painting at site, minor civil work, trial run at site and carrying out Performance guarantee / Functional / Demonstration tests at site (As applicable), training of customer/client O&M staff and handover in flawless condition of the package to the end customer complete with all accessories, for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order. <b>(Break-up as per Annexure-I)</b>	Lot	1
2.4	Total lumpsum firm price inclusive of all prevailing taxes, duties and other levies for <b>Mandatory Spares</b> comprising of manufacture, fabrication, assembly, inspection / testing (as applicable) at vendor's & sub-vendor's works, painting, forwarding, proper packing, shipment, delivery at site & guarantee as per tender technical specification above, amendment & agreements till placement of order. <b>(Price break up of mandatory spares is to be furnished as per Annexure- II)</b>	Lot	1
Note: 1) BOP to consider and suitably incorporate taxes, duties and other commercial aspects. 2) Bidder to quote the Prices in 'figures' along with corresponding 'words'. 3) Lumpsum price quoted at Sl.no 1.0 shall be considered for evaluation. 4) The Design and Engineering charges as mentioned above in S.No. 2.1* shall be 2% of the contract value for Ventilation System (including main supply, E&C, Mandatory Spares Etc. i.e Total of Sl.no.2.2, 2.3 & 2.4 only). Further, out of this total 2% amount for Design and Engineering, 1% shall be payable after submission of basic engineering drawings / documents (as mentioned in relevant chapter of technical specification) whereas remaining 1% shall be payable after approval of basic engineering drawings / documents as per tender specification. In case Design and Engineering prices quoted by bidder are less than 2% of total contract value, Design and Engineering prices shall be adjusted from supply prices quoted by bidder, to make the same as 2% of total contract value.			
<b>Particulars of bidder / authorised representative</b>			
	<b>Name</b>	<b>Designation</b>	<b>Signature</b>
			<b>Date</b>

SUGGESTED PRICE FORMAT ANNEXURE - I : PRICE BREAKUP FOR SUPPLY PART		Doc No:		PF-PE-445-554-A002	
		Rev No:		0	
		Date of issue		03.03.2022	
NAME OF PROJECT:		1X660 MW WBPDCS SAGARDIGHI TPP EXTENSION UNIT NO. 5			
NAME OF PACKAGE:		VENTILATION SYSTEM			
TECHNICAL SPECIFICATION No:		PE-TS-445-554-A002			
	ITEM DESCRIPTION	QTY.	UNIT	SUPPLY	ERECTION AND COMMISSIONING
<b>BREAK-UP OF ITEMS MENTIONED AT S. NO. 2.2 OF MAIN SHEET</b>					
1*	Sheet metal containerized type air washer unit with centrifugal fan (DIDW) with motor, pumps with motors, air washer internals, inlet air louvers, filters, piping as per IS:1239, Part-I (heavy class galvanised), valves, nozzles, back wash arrangement, galvanised drain piping, etc along with support structure for suction and discharge plenum as per specification of capacity <b>2,80,000 CMH</b> . Each air washer has 2no centrifugal fan (2 x 50% duty) of capacity <b>1,40,000 CMH at min. 85 mm SP.</b>	4	NO*		
2*	Sheet metal containerized type Unitary air filtration unit with centrifugal fan (DIDW) with motor, pumps with motors, UAF internals, inlet air louvers, filters, piping as per IS:1239, Part-I (heavy class galvanised), valves, nozzles, back wash arrangement, galvanised drain piping, etc along with support structure for suction and discharge plenum as per specification of capacity <b>1,50,000 CMH</b> . Each air washer has 1 no centrifugal fan ( 1x 100% duty) of capacity <b>1,50,000 CMH at min. 60 mm SP.</b>	2	NO*		
3	GI ducting (finished), dampers, grills (with VCD & without VCD), supports (painted), volume control dampers etc. complete with all accessories as required to complete ducting system.				
3.1*	Galvanised steel sheets (finished) having zinc coating of atleast <b>180 gms/ sqm</b> ducting complete with accessories like flanges, bracings, nuts, bolts, washers, gasket, locknut, hilti, threaded hanging rods, supports, vanes, splitter dampers, sealant, adhesive etc. required to make the installation complete in all respect.				
a)*	18 G	4000	SQM*		
b)*	20 G	6000	SQM*		
3.2*	MS Duct With Epoxy paint for battery room.	150	SQM*		
3.3*	MS Grilles with VCD complete with fixing frames, nuts, bolts, gaskets, washers etc	150	SQM*		
3.4*	MS Grilles without VCD complete with fixing frames, nuts, bolts, gaskets, washers etc	15	SQM*		
3.5*	Insulation as specified for supply air duct exposed to atmosphere	1000	SQM*		
3.6*	Wall mounted dampers (gravity operated) for different areas.	75	SQM*		
3.7*	Inlet Louvres	215	SQM*		
3.8*	VOLUME CONTROL DAMPERS in GI construction complete with fixing arrangement.	40	SQM*		
4*	FIRE DAMPER				
a)*	Fire damper	55	SQM*		
b)*	Motorized Actuator with single phase power supply with auto resetting, limit switches, indication lamps etc for the above fire damper / MD / VCD.	75	SQM*		
c)*	Fusible Link type Fire Damper	15	SQM*		
5*	Roof extractor units (axial flow type) with hood, disconnect switch, support structure and all accessories as specified. <b>Following fan shall have 15 mmwc static pressure.</b>				
a)*	Capacity 50,000 CMH	20	Nos.*		
b)*	Capacity 40,000 CMH	2	Nos.*		
c)*	Capacity 20,000 CMH	2	Nos.*		
6*	Axial flow supply fans with pre and fine filter (wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl, bird screen, support structure and all other accessories (suitable for 415V/3-phase supply). <b>Following fan shall have 30 mmwc static pressure.</b>				
a)*	Capacity 10,000 CMH	8	Nos.*		
b)*	Capacity 7,500 CMH	2	Nos.*		
c)*	Capacity 6,000 CMH	8	Nos.*		
d)*	Capacity 4,000 CMH	2	Nos.*		
7*	Axial flow supply fans with pre filter (wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl, bird screen, support structure and all other accessories (suitable for 415V/3-phase supply) as specified. <b>Following fan shall have 20 mmwc static pressure.</b>				
a)*	Capacity 10,000 CMH	32	Nos.*		
b)*	Capacity 7,500 CMH	2	Nos.*		

	ITEM DESCRIPTION	QTY.	UNIT	SUPPLY	ERECTION AND COMMISSIONING
c)*	Capacity 6,000 CMH	2	Nos.*		
d)*	Capacity 4,000 CMH	2	Nos.*		
8*	Axial flow exhaust fans (Bifurcated type, spark proof construction, wall mounted) complete with casing, flame proof motor & mounting frame, MS rain protection cowl, bird screen, support structure and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified. <b>Following fan shall have 15 mmwc static pressure.</b>				
a)*	Capacity 15,000 CMH	12	Nos.*		
b)*	Capacity 10,000 CMH	4	Nos.*		
c)*	Capacity 7,500 CMH	4	Nos.*		
d)*	Capacity 4,000 CMH	4	Nos.*		
e)*	Capacity 2,000 CMH	6	Nos.*		
9*	Axial flow exhaust fans (Wall mounted) complete with casing, TEFC sq cage induction motor & mounting frame, MS rain protection cowl, bird screen, support structure and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified. <b>Following fan shall have 10 mmwc static pressure.</b>				
a)*	Capacity 15,000 CMH	10	Nos.*		
b)*	Capacity 10,000 CMH	2	Nos.*		
c)*	Capacity 7,500 CMH	4	Nos.*		
d)*	Capacity 6,000 CMH	2	Nos.*		
e)*	Capacity 4,000 CMH	2	Nos.*		
f)*	Capacity 2,000 CMH	2	Nos.*		
10*	Exhaust fan (propeller type) completes with induction motor & mounting frame MS rain protection cowl, bird screen and all other accessories as specified (suitable for 240V/ 1 phase). <b>Following fan shall have 5 mmwc static pressure.</b>				
a)*	Capacity 1200 CMH	30	Nos.*		
11*	Handling arrangement for Ventilation system.				
a)*	1 Ton Chain Pulley Block with tripod stand (without Travelling trolley.	2	Nos.*		
b)*	Manual operated trolley, platform trolley of 1 ton capacity with base area 2mx1.5m.	2	Nos.*		
12	<b>FIELD INSTRUMENTS</b> like gauges, switches, transmitters for measurement of pressure , temperature, pressure, differential pressure, level, flow etc. and other instruments as required for completeness of Ventilation System.	1	LOT		
13*	Local control Panel along with fixing arrangement for the operation of pumps, fans etc, for each AWU along with its accessories inline with technical specification for hooking up with DCS.	2	NOS*		
14*	Local control Panel along with fixing arrangement for the operation of pumps, fans etc, for each UAF along with its accessories inline with technical specification for hooking up with DCS.	1	NOS*		
15	Electrical items like Cable tray, cable tray support system, conduits, cable glands, lugs, junction box along with fixing arrangement and any other item etc. required for completeness of System	1	LOT		
16*	Providing full support during FAT of DDCMIS, preparation of control scheme, and commissioning of DDCMIS as per relevant specification.	10	Mandays*	NA	
17	Total lumpsum price for special tools & tackles for maintenance inclusive of packing forwarding, transportation up to site, etc. (Bidder shall submit item-wise price break-up-As per <b>Appendix A</b> )	1	LOT		NA
18	Total lumpsum price for commissioning spares inclusive of packing forwarding, transportation up to site, etc. (Bidder shall submit item-wise price break-up-As per <b>Appendix B</b> )	1	LOT		NA
19	Any other item not indicated above, but required to make the system complete in all respects as per specification and system requirement.	1	LOT		
<b>NOTES</b>					
1	The bidder shall furnish unit rates for variable item (marked *) for necessary adjustment (plus or minus) variation during detailed engg. stage. The unit rates quoted above shall be considered for adjustment and no separate unit rates shall be quoted. Unit rates shall be valid throughout the contract. Final qty. shall be paid as per actual measurement at site for erection for all the variable items.				
2	Price format shall not be changed by the bidder as the bidder may get disqualified by doing so.				
3	Any cell left blank in the unpriced schedule shall be treated as "Quoted" and is included in total price.				
4	The BOQ mentioned above shall be read in conjunction with technical specification requirement. Any item required as per technical specification but not specifically indicated in above BOQ, shall deemed to be included in total prices quoted by bidder. No additional price shall be payable against such items.				
<b>Particulars of bidder / authorised representative</b>					
	<b>Name</b>		<b>Designation</b>		

SUGGESTED PRICE FORMAT APPENDIX-A Special tools & tackles for maintenance			
NAME OF PROJECT:			1X660 MW WBPDCS SAGARDIGHI TPP
NAME OF PACKAGE:			VENTILATION SYSTEM
TECHNICAL SPECIFICATION No:			PE-TS-445-554-A002
SL NO	DESCRIPTION	UNIT	Qty
1	MEASURING TAPE	NO.	1
2	TECHOMETER	NO.	1
3	DOUBLE ENDED SPANNER	SET	1
4	RING SPANNERS	SET	1
5	GASKET PUNCH	NO.	1
6	CENTRE PUNCH	NO.	1
7	HAMMER WITH WOODEN HANDLES	NO.	1
8	SCISSORS FOR SHEET METAL CUTTING	NO.	1
9	TORCH WITH 2 DRY CELLS	NO.	1
10	MULTIMETER	NO.	1
11	ANIMOMETER	NO.	1
12	COMPOUND PRESSURE GAUGE	NO.	1
13	SLIDE WRENCH 6"	NO.	1
14	SLIDE WRENCH 8"	NO.	1
15	SLIDE WRENCH 10"	NO.	1
16	BOX SPANNER SET	SET	1
17	SCREW DRIVER SET	SET	1
18	ALIGN KEY SET	SET	1
19	MS TOOL BOX	NO.	1
NOTES			
1	Above is the minimum list. Any other Tools and tackles required for AC system w.r.t. Mechanical, Electrical and C&I part shall also be provided by the Bidder as per system / customer requirement without any commercial & Delivery		
2	Supply of special tools and tackle including toolbox required for operation, maintenance and overhauling of the system is in the scope of the bidder.		
Particulars of bidder / authorised representative			
	Name	Designation	Signature

**SUGGESTED PRICE FORMAT**  
**APPENDIX-B**  
**Commissioning spares**

<b>NAME OF PROJECT:</b>		1X660 MW WBPDCL	
<b>NAME OF PACKAGE:</b>		VENTILATION SYSTEM	
<b>TECHNICAL SPECIFICATION No:</b>		PE-TS-445-554-A002	
<b>SL NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>Qty</b>
1	Fan Belts (for each type & size)	Set	1
2	Pressure Gauge (for each type and range)	No.	1
3	Temperature Gauge (for each type and range)	No.	1
4	Filter for axial fan (each size)	Set	1
<b>NOTES</b>			
1	Above is the minimum list. Any other commissioning spare required for AC system w.r.t. Mechanical, Electrical and C&I part shall also be provided by the Bidder as per system / customer requirement without any commercial & Delivery implication to BHEL.		
<b>Particulars of bidder / authorised representative</b>			
	<b>Name</b>	<b>Designation</b>	<b>Signature</b>

SUGGESTED PRICE FORMAT ANNEXURE - II LIST OF MANDATORY SPARES		Doc No:	PF-PE-445-554-A002
		Rev No:	0
		Date of issue	03.03.2022
<b>NAME OF PROJECT:</b>		<b>1X660 MW WBPDCS SAGARDIGHI TPP EXTENSION UNIT</b>	
<b>NAME OF PACKAGE:</b>		<b>VENTILATION SYSTEM</b>	
<b>TECHNICAL SPECIFICATION No:</b>		<b>PE-TS-445-554-A002</b>	
S. No.	Description	QTY	
<b>6.06.00</b>	<b>Ventilation System</b>		
6.06.01	Centrifugal Fans		
(i)	Set of Bearings for Air Washer Fans	1Set for each Type of Fan	
(ii)	Set of Bearings for U.A.F. Fans	1Set for each Type of Fan	
(iii)	Impeller for the Fan	1Set for each Type of Fan	
(iv)	Drive Motor	1No. for each Type of Fan	
(v)	Electrical Spares as applicable as per the Electrical List	Applicable Item & Quantity same as indicated in Electrical list Sl. No. 7.21.00	
6.06.02	Centrifugal Pumps		
(i)	Set of Bearings for Air Washer Pumps	1Set for each Type and rating of Pump	
(ii)	Set of Bearings for U.A.F. Pumps	1Set for each Type and rating of Pump	
(iii)	Gland Packing, Shaft Sleeve & Casing Wearing Ring	1Set for each Type and rating of Pump	
(iv)	Impeller for the Pump	1Set for each Type and rating of Pump	
(v)	Electrical Spares as applicable as per the Electrical List	Applicable Item & Quantity same as indicated in Electrical list Sl. No. 7.21.00	
6.06.03	Spray Nozzles		
(i)	Spray nozzles for air washer unit	1Set (one set means complete replacement for one air washer)	
(ii)	Spray nozzles for U.A.F. unit	1Set (one set means complete replacement for one UAF)	
6.06.04	SS Filters		
(i)	SS Filters for Air washer	1Sets (one set means complete replacement for one air washer)	
(ii)	SS Filter for Unitary air filtration unit	1Sets (one set means complete replacement for one UAF)	
6.06.05	Flow Regulating Valve		
(i)	For Air Washer	1No. each type & size	
(ii)	For Unitary Air Filtration Unit	1No. each type & size	
6.06.06	Basket for POT Strainer		
(i)	Strainer Basket for Air Washer	1No. for each type and size	

S. No.	Description	QTY
(ii)	Strainer Basket for Unitary Air Filtration unit	1No. for each type and size
6.06.07	Valves	
(i)	Gate valve for Air washer	2Nos. each type & size
(ii)	NR Valve for Air Washer	2Nos. each type & size
(iii)	Gate valve for Unitary Air Filtration Unit	2Nos. each type & size
(iv)	NR valve for Unitary Air Filtration Unit	1No. each type & size
(v)	Gate Valve for Make-up Drain of Air washer	1No. each type & size
(vi)	Gate valve for UAF	2Nos. each type & size
6.06.08	Electrical Spares as applicable as per the Electrical List	Applicable Item & Quantity same as indicated in Electrical list Sl. No. 7.12.00, 7.13.00.
6.06.09	Field Instruments & Others as applicable as per the C&I List	Applicable Item & Quantity same as indicated in C&I list Sl. No. 8.04.00, 8.07.00 & 8.10.00
<b>B</b>	<b>Electrical spares</b>	
7.12.00	Control Panel/Desk Mounted Items	
7.12.01	Push Button Complete assembly	10Nos for each colour
7.12.02	Push Button Contact Element (1NO + 1NC) Block	20Nos.
7.12.03	Selector Switch	10Nos. for each type and rating
7.12.04	Meter (Analog and Digital)	
(i)	Ammeter	2Nos. for each type and range
(ii)	Voltmeter	2Nos. for each type and range
(iii)	Frequency	2Nos. for each type and range
(iv)	MW	2Nos. for each type and range
(v)	MVAR	2Nos. for each type and range
(vi)	Power Factor	2Nos. for each type and range
(vii)	Synchroscope	1No. for each type and range
(viii)	Synchrocheck Relay complete set	1No. for each type and range
(ix)	Transducer	1No. for each type and range
7.12.05	Indicating Lamps complete assembly	20Nos. for each Colour and type
7.12.06	Mimic Lamps	10Nos. for each Colour and type
7.12.07	MCB	5Nos. for each type and rating
7.12.08	Door Limit Switch	5Nos.
7.12.09	Annunciation system	
(i)	Lamp Box with Facia & Lamps (LED type)	25Nos.
(ii)	Hooter	1No.
(iii)	Each type of PCB (for non-PLC driven system)	1(one) no.
7.13.00	Actuator	
7.13.01	Complete set of Actuator	2Nos. for each type, make and rating, 1 no. for H2 cooler Temperature controller and 1 no. for stator water temperature controller
7.13.02	Power Unit for Modulating Actuator	4Nos. of each type
7.13.03	DC-DC Power Pack Unit	4Nos. of each type
7.13.04	Electronic cards	4Nos. of each type
7.13.05	Position Feed Back Transmitters	4Nos. of each type
7.13.06	Control Unit	4Nos. of each type

S. No.	Description	QTY
7.13.07	Limit Switch Assembly	2 Nos each type and rating
7.13.08	Torque Switch Assembly	2 Nos each type and rating
7.13.09	Power Contactor	5Nos. for each type and rating
7.13.10	Auxiliary Contactor	5Nos. for each type and rating
7.13.11	Thermal Over Load Relay	2Nos. for each type and rating
7.13.12	Motor	1No. each type and rating
7.13.13	Complete Seal kit	2Sets for each type and rating
7.13.14	Complete O-Ring Set	2Sets for each type and rating
7.21.00	Motor	
7.21.02	415 Volt Motor	
(i)	Motor of each type and rating (Note : motors covered in mechanical spare items need not to be included here again) 10% of the installed quantity or minimum 1 number whichever be higher	10% of the installed quantity or minimum 1 number whichever be higher
(ii)	End Shield Cover Driving & Non-Driving End	1 set for each type and rating of Motor
(iii)	Heaters	2 sets for each type and rating of motor
(iv)	Bearings (DE and NDE) for each type and rating of motor	2 sets
(v)	Cooling Fan for all type and rating of LT motors	One (1) set
(vi)	Dust seals and gaskets for each type of motors	1 Set
(vii)	Motor Terminal Block	1 no. for each type and rating of Motor
(viii)	Complete Set of Coupling	1 set for each type and rating
7.21.04	DC Motor	
(i)	Motor of each type and rating (Note : motors covered in mechanical spare items need not to be included here again)	10% of the installed quantity or minimum 1 number whichever be higher
(ii)	Carbon brushes	2 sets for each type and rating of Motor
(iii)	Brush assemblies	2 sets for each type and rating of Motor
(iv)	Terminal blocks	1 set for each type and rating of Motor
(v)	Heaters	1 set for each type and rating of Motor
(vi)	Complete Set of Coupling	1 set for each type and rating of Motor
(vii)	Bearings (DE and NDE) for each type and rating of motor	1 set for each type and rating of Motor
(viii)	Cooling Fan	1 set for each type and rating of Motor
<b>C</b>	<b>C&amp;I Spares</b>	
8.04.00	Field Instrument	
8.04.01	Electronic Transmitters	
(i)	Pressure	1(One) no. complete set for each type and model/range used in the system
(ii)	Differential Pressure	1(One) no. complete set for each type and model/range used in the system
(iii)	Level	1(One) no. complete set for each type and model/range used in the system
(iv)	Speed	1(One) no. complete set for each type and model/range used in the system

S. No.	Description	QTY
(v)	FlowTransmitter	1(One) no. complete set for each type and model/range used in the system
(vi)	3-D Ultrasonic level Transmitter	1(One) no. complete set for each type and model/range used in the system
8.04.02	Different type of Switches	
(i)	Pressure Switch	2(two)no. of each type & model/range used in the system
(ii)	Differential Pressure Switch	2(two)no. of each type & model/range used in the system
(iii)	Level Switch	2(two)no. of each type & model/range used in the system
(iv)	Flow Switch	2(two)no. of each type & model/range used in the system
(v)	Temperature Switch	2(two)no. of each type & model/range used in the system
(vi)	Dust Detector	1(one)no. of each type & model used in the system
8.04.03	Thermocouple	10% of each type and length used in one unit
8.04.04	RTD	10% of each type and length used in one unit
8.04.05	Thermo-well for both TC and RTD	2(Two) nos. for each type and rating/length used in the system
8.04.06	Solenoid Valve	
(i)	Complete Solenoid Valve Assembly	2Nos. for each type and rating used in the system
(ii)	Coil (single or double coil type)	10% of total nos. used in the system or minimum 5(five) Nos. whichever is more for each type and rating.
8.04.07	Different types of Gauge	
(i)	Pressure Gauge	10% of total nos. used in the system or minimum 1(one) no. whichever is more for each type and range.
(ii)	Differential Pressure Gauge	10% of total nos. used in the system or minimum 1(one) no. whichever is more for each type and range.
(iii)	Temperature Gauge	10% of total nos. used in the system or minimum 1(one) no. whichever is more for each type and range.
(iv)	Magnetic Level Gauge	10% of total nos. used in the system or minimum 1(one) no. whichever is more for each type and range.
8.04.08	Air Filter Regulator including moisture separator complete set with pressure gauges	10Nos.

S. No.	Description	QTY
8.04.09	Rotameter	10% of total nos. used in the system or minimum 2(Two) nos. whichever is more for each type, rating,/model and size used in the system.
8.04.10	Gauge Glass	1No. for each type and size
8.04.11	Erection Hardware	
(i)	Transmitter's Manifold	10% of total nos. used in the system or minimum 2(Two) nos. whichever is more for each type, rating,/model and size used in the system.
(ii)	Impulse Line Root/Source valve	10% of total nos. used in the system or minimum 4(four) nos. whichever is more for each type, rating,/model and size used in the system.
(iii)	Impulse Line Isolation valve	10% of total nos. used in the system or minimum 4(four) nos. whichever is more for each type, rating,/model and size used in the system.
(iv)	Impulse Line Drain valve	10% of total nos. used in the system or minimum 4(four) nos. whichever is more for each type, rating,/model and size used in the system.
(v)	Impulse Line fittings	Each type/size 25Nos.
(vi)	Impulse Pipe	Each type/size 100Mtrs.
(vii)	Copper/SS Tube	Each type/size 100Mtrs.
(viii)	Fittings for Copper/SS Tube	Each type/size 100Nos.
8.04.13	Conductivity Type Level Switch	
(i)	Conductivity Ttype level Probes	10% of total nos. used in the system or minimum 4(four) nos. whichever is more.
(ii)	Complete Electronics unit	1Set
(iii)	Isolating/Root Valve	2Nos.
8.04.14	Cable This particulat items shall be common for BTG , CHP and AHP areas.	
(i)	Thermocouple Cable	3(three)Kms. of each type, size & rating of Cables
(ii)	Control & Instrumentation Cable	3(three)Kms. of each type, size & rating of Cables
8.04.15	Cold Junction Compensation Boxes	10% of total nos. used in the system or minimum 2(two) nos. for each type/size whichever is more.
8.04.16	Current/Voltage Transducers	1(one) no. each type/rating used in the system
8.04.17	MWatt/MVAR Transducer	1(one) no. each type/rating used in the system
8.04.18	Chlorine Leak Detector System	
(i)	Sensor Unit (complete )	2No.
(ii)	Transmitter/Processing Unit (complete)	2No.
8.10.00	Control Panel And Local/Remote Control Desk	

S. No.	Description	QTY
8.10.01	Mosaic/Conventional Type Push button Station	10% of total quantity used in the system or minimum 2(two) nos. whichever is more for each type and model.
8.10.02	Mosaic Type Push button Station with LED Indication	10% of total quantity used in the system or minimum 2(two) nos. whichever is more for each type and model.
8.10.03	Mosaic Type LED Indication Station	10% of total quantity used in the system or minimum 2(two) nos. whichever is more for each type and model.
8.10.04	Simaphore Indicator	2(two)Nos. each type
8.10.05	Annunciation System	
(i)	Each type of PCB (for non-PLC driven system)	1(one) No. each
(ii)	Lamp Box with Facia & Lamps (LED type)	10(ten)Nos.
(iii)	Hooter	1(one) No.
	<b>TOTAL</b>	

**Notes:**

a)	Mandatory spares listed in Price Schedule are bare minimum requirement. In case any additional mandatory spares requirement is covered elsewhere in the tender specification apart from specified above, same shall be deemed to have been covered in bidder's scope of supply.
b)	Wherever "set" is indicated, it shall mean complete replacement for one main equipment of similar size & capacity.
c)	All Spares shall be supplied as per the requirement of the specifications. In case any spare indicated in the specification is "not applicable" for particular equipment, then suitable applicable alternate spare has been offered / shall be supplied by the bidder without any financial implication."
d)	Bidder to write "Quoted / Not Applicable" against all items. Any item which is quoted as "not applicable" by the bidder in the above list and is found to be "applicable" at a later date shall be supplied by the bidder without any commercial and delivery implication.
e)	For quantities indicated in percentage, fractions are to be rounded-off to next higher integer.
f)	Any cell left blank in the unpriced schedule shall be treated as "Quoted" and is included in total price.
g)	Bidder to note that even though there may be some spares which are repetitive at various sl.no mentioned above, bidder to ensure that prices are quoted against each sl.no. In case any cell is left blank in the unpriced schedule shall be treated as "quoted" and included in total price.

**Particulars of bidder / authorised representative**

Name	Designation	Signature