



Sl. No	Description	SUPPLY				SUPPLY				ERECTION & COMMISSIONING				TOTAL
		Qty	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	ST @ ...% Against C-form & E/IEZ or VAT @...% whichever is applicable (INR)	FREIGHT (including service tax, if any) @ ...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)	E & C PRICE (INR)	SERVICE TAX @ ...on E&C PRICE (INR)	Swachh Bahrat Cass (SBC) @0.5% on E&C PRICE	Total E & C PRICE (INR)	
1.0	Total lumpsum firm prices for equipment & Services as specified, Comprising Engineering, design, manufacture, inspection & Testing at manufacturer's/subvendor's works, Painting at manufacturer's works, duly packed for transportation, delivery to site, unloading, storage & handling at site, fabrication, erection and commissioning, performance and guarantee testing, submission of as built drawing, O&M Manual, carrying out acceptance tests at site, and final painting of complete Ventilation system on turnkey basis as per specification PE-TS-408-554-A001 including mandatory spares, special tool & tackle for maintenance, commissioning spares, all taxes, duties etc.	1							8=4+5+6+7	9	10	11	12=9+10+11	13=8+12
2.0	Break up prices for items covered in clause 1.0 above.													
2.1	Sheet metal contained type type air washer unit with centrifugal fan (D/DW) with motor, pumps with motors, air washer internals, inlet air louvers, filters, piping, valves, nozzles, instruments, back wash arrangement, drain piping, casing, insulation etc as per specification of capacity 1,00,000 CMH. Each Air washer has 1 no centrifugal fan (1 x 100% duty) of capacity 1,00,000 CMH each at min. 75 mm SP.	12	NO											
2.2	Unitary air filtration unit with centrifugal fan (SISW) with motor, pumps with motors, filters, UAF internals, piping, valves for auto start of standby equipment, nozzles, instruments, back wash arrangement, drain piping, casing, insulation etc. as per spec. of capacity 90,000 CMH. Each UAF has 1 no centrifugal fan (1 x 100% duty) of capacity 90,000 CMH at min. 60 mm SP	1	NO											
2.3*	Supply air ducting (finished) for above area complete with dampers, grills (with VCD & without VCD), supports (painted) and all accessories as specified.													
2.3.1*	Finished ductwork fabricated from GSS sheet having zinc coating of 180 gms/ m2 complete with hangers/ supports, and all other accessories to make the duct complete in all respect.													
	a)* 18 G	3000	SQM*											
	b)* 20 G	3000	SQM*											
	c)* 22 G	2000	SQM*											
	d)* 24 G	2000	SQM*											
2.3.2*	MS Duct With Epoxy paint for battery room.	200	SQM*											
2.3.3*	MS Grilles with VCD	125	SQM*											
2.3.4*	MS Grilles without VCD	5	SQM*											
2.3.5*	Volume control damper as per specification	8	SQM*											

*Signature*  
18/12/15



SLNO	DESCRIPTION OF EQUIPMENT/ ITEM	SUPPLY							ERECTION & COMMISSIONING				TOTAL	
		QTY	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED @...% for self manufactured items only (INR)	CST @...% Against C-form & EI/EZ or VAT @...% whichever any) (INR)	FREIGHT (including service tax, if any) @...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)	E & C PRICE (INR)	SERVICE TAX @...% on E&C PRICE (INR)	Swadh Bahrat Cass (SBC) @0.5% on E&C PRICE		Total E & C PRICE (INR)
2.3.6*	Exposed duct insulation as per specifications.	1	2	3	4	5	6	7	8-4-5447	9	10	11	12-9+10+11	13-8+12
2.3.7*	Wall mounted dampers (gravity operated) for different areas.	15	SQM*											
2.3.8*	Inlet Louvers	15	SQM*											
2.4*	FIRE DAMPER	10	SQM*											
	a)* Fire damper	10	SQM*											
	b)* Motorized Actuator with single phase power supply for the above Fire damper with auto resetting, limit switches, indication lamps etc	15	Nos*											
	c)* Fusible Link type Fire Damper	2	SQM*											
2.5*	Roof extractor units (axial flow type) with hood, disconnected switch and all accessories as specified. Following fan shall have 15 mmwc static pressure.	22	Nos.*											
a)*	Capacity 50,000 CMH with Motor rating 5.5 KW	22	Nos.*											
b)*	Capacity 40,000 CMH with Motor rating 5.5 KW	1	Nos.*											
c)*	Capacity 20,000 CMH with Motor rating 2.2 KW	1	Nos.*											
2.6*	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 and all other accessories (suitable for 415V/3-phase supply). Following fan shall have 30 mmwc static pressure.													
a)*	Capacity 10,000 CMH with Motor rating 2.2 KW	10	Nos.*											
b)*	Capacity 7,500 CMH with Motor rating 1.5 KW	4	Nos.*											
c)*	Capacity 6,000 CMH with Motor rating 1.1 KW	5	Nos.*											
d)*	Capacity 4,000 CMH with Motor rating 0.75 KW	2	Nos.*											
2.7*	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 and all other accessories (suitable for 415V/3-phase supply) as specified. Following fan shall have 20 mmwc static pressure.													
a)*	Capacity 10,000 CMH with Motor rating 1.5 KW	10	Nos.*											
b)*	Capacity 7,500 CMH with Motor rating 1.1 KW	3	Nos.*											
c)*	Capacity 6,000 CMH with Motor rating 1.1 KW	2	Nos.*											

18/12/15  
S. Suresh



Sl.No	Description	SUPPLY			SUPPLY							ERECTION & COMMISSIONING			TOTAL		
		Qty	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @ ...% Against C-form & E/EZ or VAT @ ...% (whichever is applicable) (INR)	FREIGHT (including service tax, if any) @ ...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)	E & C PRICE (INR)	SERVICE TAX @ ...% on E&C PRICE (INR)	Swachh Bahat Cess (SBC) @ 0.5% on E&C PRICE	Total E & C PRICE (INR)	Total Price Supply FOR site and E&C including service tax (INR)			
2.8*	Capacity 4,000 CMH with Motor rating 0.75 KW Axial flow exhaust fans (Bifurcated type, spark proof construction, wall mounted) complete with casing, frame proof motor & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified. Following fan shall have 15 mmwc static pressure.	3	Nos.*														
a)*	Capacity 15,000 CMH with Motor rating 2.2 KW	8	Nos.*														
b)*	Capacity 10,000 CMH with Motor rating 1.5 KW	8	Nos.*														
c)*	Capacity 7,500 CMH with Motor rating 1.1 KW	5	Nos.*														
d)*	Capacity 2,000 CMH with Motor rating 0.55 KW	5	Nos.*														
2.9*	Axial flow exhaust fans (Wall mounted) complete with casing, TEFC sq cage induction motor & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified. Following fan shall have 10 mmwc static pressure.																
a)*	Capacity 15,000 CMH with Motor rating 1.1 KW	10	Nos.*														
b)*	Capacity 10,000 CMH with Motor rating 0.75 KW	5	Nos.*														
c)*	Capacity 7,500 CMH with Motor rating 0.55 KW	5	Nos.*														
d)*	Capacity 6,000 CMH with Motor rating 0.55 KW	7	Nos.*														
e)*	Capacity 2,000 CMH with Motor rating 0.37 KW	7	Nos.*														
2.10*	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). Following fan shall have 5 mmwc static pressure.																
a)*	Capacity 1200 CMH with Motor rating 100 watts	50	Nos.*														
2.11	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).	1	LOT														
2.12	Total lumpsum price for commissioning spares inclusive of packing forwarding, transportation up to site, etc. (Bidder shall submit item-wise price break-up).	1	LOT														

*Signature*  
18/12/15



SI.NO	DESCRIPTION OF EQUIPMENT/ ITEM	SUPPLY			SUPPLY							ERECTION & COMMISSIONING			TOTAL
		Qty	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @ ...% Against C-form & E/E2 or VAT @...% (whichever any) @ ...% of total ex-works price (INR)	FREIGHT (including service tax, if any) @ ...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)	E & C PRICE (INR)	SERVICE TAX @ ...on E&C PRICE (INR)	Swachh Bahat Cass (SBC) @0.5% on E&C PRICE	Total E & C PRICE (INR)	Total Price Supply FOR site and E&C including service tax (INR)	
2.14	FIELD INSTRUMENTS like pressure gauge, temperature gauge, pressure switch, differential pressure switch, flow switch and other instrument required for Ventilation System etc.	1	LOT						8-44547	9	10	11	12-9-10-11	13-8-12	
2.15	Any other item not indicated above, but required to make the system complete in all respects.	1	LOT												
2.16	Total lumpsum price for Mandatory spare inclusive of packing forwarding, transportation up to site, etc. (Bidder to submit item-wise price break-up separately).	1	LOT												

- 1 Bidder to note that total price indicated above at 1 shall be considered for evaluation (EXCLUDING SERVICE TAX ON E&C & P.G Test & Handling over the Plant) and hence should be complete in all respect for the full scope defined and considering all terms and conditions agreed.
- 2 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 and no separate unit rates shall be quoted. Unit rates shall be valid throughout the contract.
- 3 Bidder must submit prices in the Pro Forma duly filled in signed and stamped on every page without any ambiguity. The price shall be written against each item. Term such as "refer covering letter" etc. are not acceptable. Extra sheet may be attached if the space provided is not sufficient.
- 4 Price format shall not be changed by the bidder as the bidder may get disqualified by doing so.
- 5 For limitation on payment, percentages of individual items/equipments, as specified in the Appendix-A shall be applicable

*Shravya*  
18/12/15



SI. NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @ ...% Against C-form & E1/E2 or VAT @...% Which ever is applicable (INR)	FREIGHT (including service tax, if any) @ ...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)
1	MANDATORY SPARE LIST	1	2	3	4	5	6	7	8=4+5+6+7
1	Centrifugal Fans								
1.1	Set of bearings for Air washer fans	1Set for each Type of Fan							
1.2	Set of bearings for U.A.F. fans	1Set for each Type of Fan							
1.3	Impeller for the Fan	1Set for each Type of Fan							
2	Centrifugal pumps								
2.1	Set of bearings for Air washer pumps	1Set for each Type and rating of Pump							
2.2	Set of bearings for U.A.F. pumps	1Set for each Type and rating of Pump							
2.3	Gland packing, shaft sleeve & casing wearing ring	1Set for each Type and rating of Pump							
2.4	Impeller for the Pump	1Set for each Type and rating of Pump							
3	Spray Nozzles								
3.1	Spray nozzles for air washer unit	5%							
3.2	Spray nozzles for U.A.F. unit	5%							
4	SS Filters								
4.1	SS Filters for Air washer	10%							
4.2	SS Filter for Unitary air filtration unit	10%							
5	Flow Regulating Valve								
5.1	For Air Washer	10% or Minimum 1 No. Whichever is higher							
5.2	For Unitary Air Filtration Unit	10% or Minimum 1 No. Whichever is higher							
6	moisture eliminators								
6.1	For Air Washer	1 no. for each type and rating of Air washer							
6.2	For UAF	1 no. for each type and rating of UAF							
7	Basket for POT Strainer								
7.1	Strainer Basket for Air Washer	1No. for each type and size							
7.2	Strainer Basket for Unitary Air Filtration unit	1No. for each type and size							
8	Valves								

*S. Nagaraj*  
 18/12/15


ENQUIRY No. PE/PG/WAN/E-5128/2015 Dt. 18.12.2015

	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @ ....% Against C-form & E3/E2 or VAT @....% whichever is applicable (INR)	FREIGHT (including service tax, if any ) @ ....% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)
8.1	Gate valve for Air washer	10% or Minimum 1No. Whichever is higher							
8.2	NR Valve for Air Washer	10% or Minimum 1No. Whichever is higher							
8.3	Gate valve for Unitary Air Filtration Unit	10% or Minimum 1No. Whichever is higher							
8.4	NR valve for Unitary Air Filtration Unit	10% or Minimum 1No. Whichever is higher							
8.5	Gate Valve for Make-up Drain of Air washer	10% or Minimum 1No. Whichever is higher							
8.6	Gate valve for UAF	20% or Minimum 2Nos. Whichever is higher							
9.	Electrical Spares as applicable as per the Electrical List	Item & Quantity applicable as per Electrical list							
9.1	415 V motor (above 30 KW rating up to 160 KW)								
9.1.1	End shield cover Driving & Non – Driving End	1 set for each type and rating of motor							
9.1.2	Driving & Non – Driving End bearing	1 set for each type and rating of motor							
9.1.3	Cooling Fan	1 No. for each type and rating of motor							
9.1.4	Motor space heater	1 No. for each type and rating of motor							
9.1.5	Motor terminal block	1 No. for each type and rating of motor							
9.1.6	Complete set of coupling	1 set for each application							
9.2	415 V motor (up to 30 KW rating)								
9.2.1	Driving & Non – Driving End bearing	3 set for each type and rating of motor							
9.2.3	Cooling Fan	2 No. for each type and rating of motor							
9.2.4	Motor terminal block	5 No. for each type and rating of motor							
9.2.5	Complete set of coupling	1 set for each application							
10.	Field Instruments & Others as applicable as per the C&I List								

*Shri...*

18/12/15

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	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @ ....% Against C-form & E1/E2 or VAT @....% Whichever is applicable (INR)	FREIGHT (including service tax, if any) @ ....% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)
									
10.1	Field Instruments (Transmitters/ temperature element ( TC / RTD) / gauge / Switches etc. along with relevant accessories)	10 (ten) percent of total of each type or at least one (whichever is higher ) of each type along with accessories							
10.2	Valves, actuators & Accessories								
10.2.1	Control valves								
10.2.1.1	spare control valve stem packing	2 (two) sets for each of the control valves							
10.2.1.2	spare valve trim (including cage, plug, stem, seat rings, guide bushings etc.) for both the units for each of the control valves as offered	1 (one) set							
10.2.2	Control valve Actuators								
10.2.2.1	spare actuators with drive	1 (one) set of each type and rating							
10.2.2.2	valve positioners	10 (ten) percent of each type							
10.2.2.3	position transmitters	10 (ten) percent of each type							
10.2.2.4	limit switches	10 (ten) percent of each type or 2 nos. of each type and rating whichever is higher							
10.2.2.5	torque switches	10 (ten) percent of each type or 2 nos. of each type and rating whichever is higher							
10.2.2.6	Auxiliary contact	1 no. of each type and rating							
10.2.2.7	motor	1 no. of each type and rating							
10.2.2.8	complete seal kit	1 set for each type and rating							
10.2.2.9	complete O ring set	1 set for each type and rating							
11.	Fan-Filter Units								
11.1	Filter	1 set for each FFU							
11.2	Fan-motor Bearing	1 set for each rating of FFU							
11.3	Vibration Isolators	1 set for each FFU							

*Srinivasan*  
18/12/15

PROJECT : 1 x 800 MW WANAKBORI

PACKAGE : VENTILATION SYSTEM (MANDATORY SPARE) ----- BOQ CUM PRICE FORMAT

ENQUIRY No. PE/PG/WANE-5128/2015 Dt. 18.12.2015

	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @ ...% Against C-form & E1/E2 or VAT @ ...% Whichever is applicable (INR)	FREIGHT (including service tax, if any) @ ...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)
11.4	Back Draft Dampers	1 no. of each size							
11.5	Any other spare parts recommended by the Manufacturer	As recommended by the Manufacturer							
12.	Wall mounted supply/ Exhaust fan								
12.1	Fan-motor Bearing	1 set for each rating of fan							
12.2	Vibration Isolators	1 set for each fan							
12.3	Fan Motor	1 set for each rating of fan							
13.	Electrical Spares for panels								
13.1	Control Supply Transformer	2 Nos. of each type and rating							
13.2	Contactors	2 Nos. of each type and rating							
13.3	Coils for contactor & aux. Contactor	5 Nos. for each contactor							
13.4	Main & Aux. Contacts sets for contactor and Aux. Contactor	5 Sets. for each contactor							
13.5	Air Break Switch	1 No. for each rating							
13.6	Control, Isolating and selector switches	5% of each type and rating							
13.7	Fuses	6 Nos. of each type and rating or 10% whichever is higher							
13.8	Fuse Bases	3 Nos. of each type and rating or 5% whichever is higher							
13.9	Circuit Breaker	1 No. for each rating							
13.10	Indicating Lamps	10% of installed quantity							
13.11	Indicating lamps cover of different colour and holders	5% of installed quantity							
13.12	Push Buttons of various colours	10 nos. of each type and colour							
13.13	Terminal Blocks	5% of installed quantity							
14.	Electrical Spares for Motors								
14.1	Terminal plates	10 Nos. each for small motors up to 30KW and 4 Nos. each for motors above 30 KW							
14.2	Heaters	1 Set for each motor of rating above 30 KW							
14.3	Greasing arrangements	4 sets for each type of motors							

*Smugan*

18/12/15

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	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	Unit Price (INR)	Total ex-works price (INR)	ED@...% (for self manufactured items only) (INR)	CST @...% Against C-form & E1/E2 or VAT @...% Whichever is applicable (INR)	FREIGHT (including service tax, if any) @...% of total ex-works price	TOTAL F.O.R SITE PRICE (INR)
14.4	Motors below 0.75 KW	10% of the installed quantity or minimum 1 no. whichever is higher							
14.5	Bearings (DE & NDE)	4 sets of each type and rating							
15	Control panel/ desk mounted items								
15.1	Push Button	5 Nos for each colour							
15.1.1	Complete assembly	20 Nos.							
15.1.2	Contact Element (1NO + 1NC) Block	10Nos. for each type and rating							
15.2	Selector Switch								
15.3	Meter (Analog or Digital)								
15.3.1	Ammeter	10% for each type and range or minimum one (1) no. whichever is more							
15.3.2	Voltmeter	10% for each type and range or minimum one (1) no. whichever is more							
15.3.3	Frequency	10% for each type and range or minimum one (1) no. whichever is more							
15.3.4	MW	10% for each type and range or minimum one (1) no. whichever is more							
15.3.5	MVAR	10% for each type and range or minimum one (1) no. whichever is more							
15.3.6	Power Factor	10% for each type and range or minimum one (1) no. whichever is more							
15.3.7	Synchroscope	10% for each type and range or minimum one (1) no. whichever is more							
15.4	Indicating Lamps complete assembly	10 Nos. for each Colour and type							
15.5	Mirinic Lamps	10 Nos. for each Colour and type							
15.6	MCB	2 Nos. for each type and rating							
15.7	Door Limit Switch	2 Nos.							

*S. Suresh*  
 18/12/15



SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	Percentage of total price
1	Total lumpsum firm prices for equipment & Services as specified. Comprising Engineering, design, manufacture, inspection & Testing at manufacturer's/subvendor's works, Painting at manufacturers works, duly packed for transportation, delivery to site, unloading, storage & handling at site, fabrication, erection and commissioning, performance and guarantee testing, submission of as built drawing, carrying out acceptance tests at site, and final painting of complete Ventilation system on turnkey basis as per specification PE-TS-408-554-A001 including special tool & tackles for maintenance, commissioning spares, all taxes, duties etc. (Without mandatory spare - Sr. No. 2.16 of BOQ cum Price Format)	100%
2.0	<b>BREAK-UP OF PRICES GIVEN IN 1.0 ABOVE (To be used during contract execution for payment)</b>	
2.1	Total lumpsum firm price for <b>EQUIPMENT (SUPPLY)</b> for Engineering, design, manufacture, inspection & Testing at manufacturer's/subvendor's works, Painting at manufacturers works, duly packed for transportation, delivery to site, unloading, storage & handling at site, fabrication, erection and commissioning, performance and guarantee testing, submission of as built drawing, carrying out acceptance tests at site, and final painting of complete Ventilation system on turnkey basis as per specification PE-TS-408-554-A001 including special tool & tackles for maintenance, commissioning spares, all taxes, duties etc. (Without mandatory spare - Sr. No. 2.16 of BOQ cum Price Format)	80%
2.2	<b>Erection &amp; commissioning</b> , carrying out acceptance tests at site, final painting and handling over to customer the complete ventilation system on turnkey basis as per specification PE-TS-408-554-A001 including special tool & tackles for maintenance, commissioning spares, all taxes, duties etc.	20%
3.0	<b>Break-up (%) of prices given at SI No-2.1 above (To be used during contract execution for payment)</b>	
3.1	Air washer - (Item no 2.1 of BOQ cum Price Format)	35%
3.2	UAF - (Item no 2.2 of BOQ cum Price Format)	5%
3.3	GSS Duct work - (Item no 2.3.1 of BOQ cum Price Format)	18%
3.4	MS duct and grills (Item no 2.3.2, 2.3.3, 2.3.4 & 2.3.5 of BOQ cum Price Format)	2%
3.5	Thermal Insulation (Item no 2.3.6 of BOQ cum Price Format)	1%
3.6	Gravity damper, Inlet louver, Fire damper, VCD, (Item no 2.3.7, 2.3.8 & 2.4 of BOQ cum Price Format)	1%
3.7	RE units (Item no 2.5 of BOQ cum Price Format)	5%
3.8	Supply air fans (Item no 2.6 and 2.7 of BOQ cum Price Format)	14%
3.9	Exhaust fans (Item no 2.8 to 2.10 of BOQ cum Price Format)	16%
3.10	Tools and tackles & Commissioning Spares (Item no 2.11 to 2.12 of BOQ cum Price Format)	1%
3.11	Field Instruments and any other accessories/Item (Item no 2.14 to 2.15 of BOQ cum Price Format)	2%

PROJECT : 1X800 MW WANAKBORI

PACKAGE : VENTILATION SYSTEM

ENQUIRY No. PE/P/G/WAN/E-5128/2015 Dt. 18.12.2015

APPENDIX - A

8/12/15  
Munish 2