



**AMENDMENT ON TECHNICAL SPECIFICATION
FOR OZONE GENERATION PLANT**

1x370 MW YELAHANKA CCPP

SPECIFICATION NO.: PE-TS-409-174-14000A-A001

AMENDMENT NO # 2

REV. NO. 00

DATE: 08.07.16

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The following modifications with respect to Technical Specification for **OZONE GENERATION PLANT**, BHEL's Technical specification number PE-TS-409-174-14000A-A001 Rev 00 shall apply.

MODIFIED CLAUSES/PAGE NUMBERS.

Sl no	Vol. No.	Section/ Description	Clause no	Page no	Existing	Modified to				
1.	IIB	SECTION – C1-A	8.5	Page 18 of 245	Motive water line for dosing at Condenser at 5 meter distance from Ozone generation plant Building -1 area. Piping inside Ozone generation plant Building -1 area for mentioned services will also be in bidder's scope.	Motive water line for dosing at Condenser at 5 meter distance from Ozone generation plant Building -1 area. Piping inside Ozone generation plant Building -1 area for mentioned services will also be in bidder's scope. Working pressure at this terminal point shall be 3.2 Kg/cm2 (g) and working temperature shall be 32 degree Celsius.				
2.	IIB	SECTION – C1-A	8.6	Page 18 of 245	Motive water line for dosing at RO + CW MAKEUP at 5 meter distance from Ozone generation plant Building -1 area. Piping inside Ozone generation plant Building -1 area for mentioned services will also be in bidder's scope.	Motive water line for dosing at RO + CW MAKEUP at 5 meter distance from Ozone generation plant Building -1 area. Piping inside Ozone generation plant Building -1 area for mentioned services will also be in bidder's scope. Working pressure at this terminal point shall be 0.8 Kg/cm2 (g) and working temperature shall be under ambient condition.				
3.	IIB	SECTION – C1-A	8.7	Page 18 of 245	The Ozone dosing pumps for Raw water reservoir ozonisation system (dosing in each compartment of raw water reservoir & inlet line to raw water reservoir) shall be housed near Raw water storage tank. The inlet line from the common Raw water reservoir pit to ozone dosing pumps shall also be in bidder's scope. The piping distance between ozone dosing pumps and common Raw water reservoir pit shall be 50 meters.	The Ozone dosing pumps for Raw water reservoir ozonisation system (dosing in each compartment of raw water reservoir & inlet line to raw water reservoir) shall be housed at Raw water pump house . The total height of common suction compartment of raw water reservoir is 5.0 meters from FGL. The total reserved space for two numbers Raw water reservoir ozone dosing pumps (2X100%) is 2750MM X 5500 MM. The inlet line from the common Raw water reservoir pit to Raw water reservoir ozone dosing pumps shall also be in bidder's scope. The piping distance between Raw water reservoir ozone dosing pumps and common Raw water reservoir pit shall be 2 meters. The ozone line from Ozone generators for raw water reservoir ozonisation system housed under Ozone generation plant area -2 and ventury Injector installed at outlet of Raw water reservoir ozone dosing pumps shall be 100 meter and the same is also in Bidder's scope.				
4.	IIB	SECTION – C1-A	8.9.4	Page 19 of 245	Sr. No.	PIPING	TOTAL PIPING LENGTH IN METERS (BIDDER'S SCOPE)	Sr. No.	PIPING	TOTAL PIPING LENGTH IN METERS (BIDDER'S SCOPE)
					8.9.4	Ozonated water dosing piping from Ozone dosing pumps for Ozonization system for Raw water Reservoir to inlet line of Raw water reservoir	250 Meters	8.9.4	Ozonated water dosing piping from Ozone dosing pumps for Ozonization system for Raw water Reservoir to inlet line of Raw water reservoir	320 Meters



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						Sr. No.	PIPING	MINIMUM NUMBER OF HUME PIPE REQUIRED (BIDDER'S SCOPE)
5.	IIB	SECTION – C1-A	8.10.4	Page 20 of 245	New Clause Added			
						8.10.4	Ozone piping from Ozone generation Building -2 to Raw water reservoir ozone dosing pumps at raw water reservoir pump house & Ozonated water dosing piping from Raw water reservoir ozone dosing pumps at raw water reservoir pump house to inlet line of raw water reservoir.	Minimum 6 numbers each for 6 meter road crossing
6.	IIB	SECTION – C1-A	15.19	Page 23 of 245	New Clause Added	To select the pressure of Booster pumps the working pressure and temperature at the dosing points shall as per details provided below: <ul style="list-style-type: none"> Working pressure and temperature at each dosing point at Condenser inlet and outlet: Working Pressure = 2.0 Kg/cm2 (g). Temperature = 28 Degree Celsius. Working pressure and temperature at dosing point at common discharge header of CW makeup pumps: Working Pressure = 1.2 Kg/cm2 (g). Temperature = Ambient. Working pressure and temperature at dosing point at RO plant supply pumps: Working Pressure = 4.6 Kg/cm2 (g). Temperature = Ambient. Working pressure and temperature at dosing point at inlet line of Raw water reservoir: Working Pressure = 1.5 Kg/cm2 (g). Temperature = Ambient. 		
