

TITLE: TECHNICAL SPECIFICATION

COOLING TOWER MANUGURU STPP, (4 X 270 MW) DATASHEET - A

SPEC. NO.	: PE-	TS-411-165-N001
VOLUME:	IJΒ	
SECTION:	D1	
REV. NO.	0	DATE 05.12.14
SHEET	5	OF 6

8.14 Water Distribution Pipes (Inside CT) : PVC

8.15 Hot water line valves

a) BF Valves : Body: Ni-Cl-FG 260

Shaft: SS

Test pressure & duration shall comply

with AWWA C504

b) Sludge pit isolation valves

Body : Ni-Cl Spindle & Trim : Bronze

8.16 Sludge outlet pipe : As per the material specified above in

8.13

8.17 Submersible Pumps : Casing: Ni-CI-FG260

Impeller: SS

8.18 Stop log gates with rubber seals in cold : Carbon Steel Plates to IS 2062

water outlet channel

8.19 Guide for stop log gates : SS-316

8.20 Screen : 8 gauge SS 316 crimped wire netting with

25 mm clear opening welded to Hot Dip Galvanised (as per IS: 2629) carbon steel

frame and supports

8.21 Guide for Screen : SS- 316

8.22 Bolts, buts & other hardware : SS-316

Note:

(a) Carbon /Mild steel parts or structures used in Cooling Tower or its vicinity shall be Heavily Galvanised.

(b) Material of construction for items not specified shall be subject to purchaser's approval during detailed engineering stage, in the event of order.

9.0 Pipe work Painting / Protection of Pipes:

9.1 Internal surface Surface preparation: Sand blast to SA 2.5

Internal Paint: Application of two(2) coats of (DFT of each coat 40 to 50 microns) Epoxy based Zinc rich primer followed by 2 to 3 coats of coal tar epoxy paint to achieve total DFT of 125 to 150 microns.

9.2 External surface – over ground piping: Surface preparation : Sand blast to SA 2.5

External Paint: two coats of red oxide Zinc Chromate primer (conforming to IS 2074) with minimum dry film thickness (DFT) of 25 microns per coat and two coats of finish paints using enamel paint to give a minimum total DFT of 100 Microns (after two coats of primer and two

coats of finish paint). Shades

shall be as per IS



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9.3 Buried piping shall be protected as under (as per IS-15337)

Surface cleaning
 Sand blasting to SA 2.5

 Apply one coat of coal tar primer/ coal tar enamel, inner wrap of fibre glass, final outer wrap of enamel impregnated fibreglass.
 Total thickness of coating shall not be less than 4.0 mm.

Yes

or Apply one layer of anti-corrosive tape of 4 mm thick confirming to AWWA C 203-93 & IS 10221.

INSPECTION AND TESTING

10.0 Quality Surveillance by : Manufacturer, purchaser and customer

10.1 Material testing and identification : Required

10.2 Stage inspection to be witnessed by Purchaser and customer

10.3 Hydrostatic test for piping & valves : Yes required

10.4 Hydrostatic test to be witnessed by Purchaser and customer Yes

10.5 Field performance test of individual : Yes items and the cooling tower as a whole

required

10.6 Field performance test to be done by : Approved CTI agency along with bidder for one Tower. For remaning towers by

for one Tower. For remaning towers Bidder.

10.7 All testing instruments by supplier : Yes

10.8 Commissioning at site by : Bidder

10.9 Mandatory spares: : NIL

Attachments:

- a) Sketch showing T.P details for hot water riser and discharge channel. Annexure-1.
- b) (Key Plan Annexure-2.



TELANGANA STATE POWER GENERATION CORPORATION LIMITED

TEST REPORT BY PAVIRONMENT SUBDIVISION

1. Sample Name : GODAVARI RIVER WATER

2. Location : AT MANUGURU

3. Sampling date : 09-10-2014.

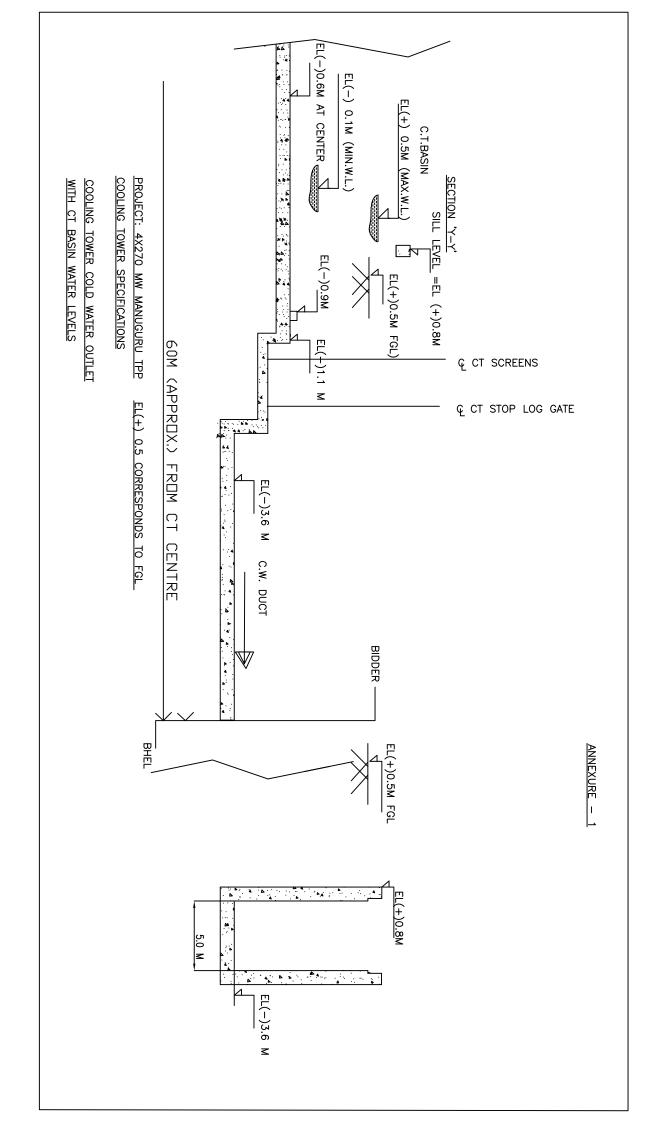
4. Reporting date : 10-10-2014.

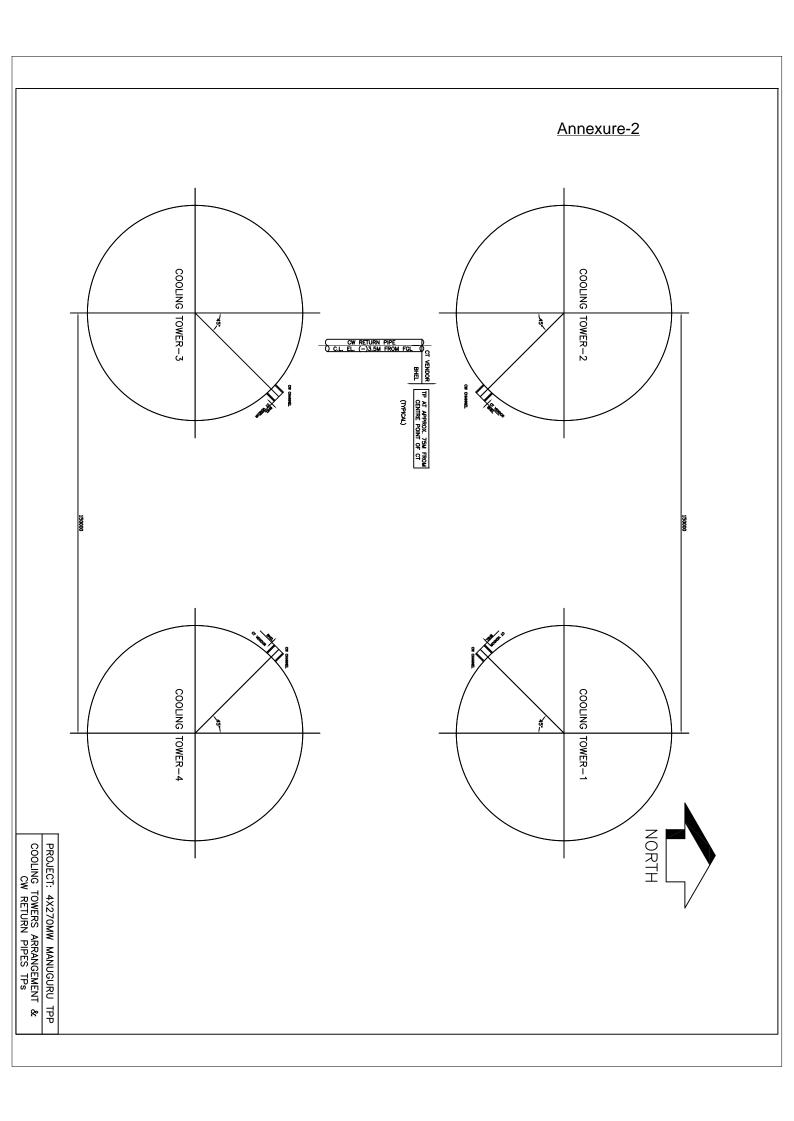
S.NO	TESTING PARAMETER	RESULT
1,	$\mathbf{p}\mathbf{d}$	7.73
2.	Conductivity(micro Siemens/cm)	328
3.	Dissolved solids(mg/litre)	
4.	Total Hardness as CaCo ₃ , mg/litre	<u> </u>
5.	Calcium as Ca, mg/litre	60
6.	Magnesium as Mg.mg/litre	34
7.	Total Alkanity as CaCo3, mg/litre	140
8.	Chlorides as Cl, mg/litre	30
9.	Sulphates as SO ₄ mg/litre	58
10.	Silica as SiO ₂ ,mg/litre	5.20
11.	Iron as Fe,mg/lifre	0.007
12.	Turbidity (NTU)	16

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3	Test Certificates & Reports	3 Nos	13 Prints
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BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING MI. NAGEMENT

STANDARD QUALITY PLAN

... BUTERFLY VALVES

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7767	SHEET	1 OF 3	SYSTEM	POWER CYCLE/ LP VALVES		ITEM: G	GATE/ GLOBE VALVE	ALVE	SECTION	VOLUME
S.NO.	COMPONENT/	CHARACTERISTICS	CATE-	TYPE/METHOD	EXTENT	REFERENCE	ACCEPTANCE	FORMAT	AGENCY	REMARKS
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			BIDDER'S/ VENDOR'S COMPANY SEAL
BIDDER/VENDOR			
PARTICULARS	NAME	SIGNATURE	DATE
BHEL			