

LEGEND:

CODE DESCRIPTION REHEATER SUPERHEATER ECONOMIZER RH SH ECO

LOW PRESSURE TURBINE LP

ΙP INTERMEDIATE PRESSURE TURBINE HIGH PRESSURE TURBINE

HP G CP GENERATOR

CONDENSATE PUMP FEED WATER PUMP FWP

MASS & HEAT BALANCE

State Point	Pressure (Mpa)	Temp. (°C)	Enthalpy (kJ/kg)	Mass _{steam} (kg/s)		
1	20	540	3366.37	406.494		
2	10	454.945	3255.865	27.657		
3	7.5	404.933	3162.805	378.837		
4	7.5	540	3502.65	345.311		
5	3	467.83	3384.948	324.697		
6	1.5	385.178	3224.385	314.426		
7	0.5	274.7936	3012.732	255.134		
8	0.25	187.826	2843.513	227.089		
9	0.1	99.6059	2597.888	190.685		
10	0.005	32.8743	2351.307	190.685		
11	0.005	32.8743	137.749	324.697		
12	0.1	32.886	137.802	324.697		
13	0.1	99.6059	417.504	134.012		
14	0.25	99.6163	417.66	324.697		
15	0.25	127.411	535.245	36.405		
16	0.5	127.434	535.612	324.697		
17	0.5	151.831	915.29	59.292		
18	1.5	198.287	916.383	324.697		
19	1.5	198.287	844.557	10.27		
20	3	198.535	846.288	324.697		
21	3	233.853	1008.34	406.494		
22	7.5	244.823	1060.9	406.494		
23	7.5	290.535	1292.93	36.405		
24	10	292.171	1299.771	406.494		
25	10	310.997	1408.06	33.526		
26	20	316.545	1425.491	406.494		

	1 4
•	2'/5
	20 MPa / / 3/15
	$\frac{26/25}{24}$ 10 MPa $\frac{6}{9}$
	22' /23 7.5 MPa /3 / 7 17'
	20/19 2 MPa
	16 17 0.5 MPa 8 9 8'
	$14//15$ 0.25 MPa $\sqrt{\frac{6}{10}}$
	12' 13 0.1 MPa 9
	0.005 MPa
	10 10
	S

T-S DIAGRAM

11 DESIGN OPTION 3

TATE		PROJECT LEADER		INSTRUCTOR		PROJECT / LOCATION:	OWNER	PREPARED BY:	No.	REVISIONS	DATE	OUEET OONTENT	OUEET NO
631110	DatCtatall											SHEET CONTENT	SHEET NO.
		ENGR. LEMUEL ARNEL A. RIVERA		ENGR. ALLAN B. DE VILLA		600 MW COAL-FIRED POWER PLANT	MPR POWER	ENGR. BRYAN MERCADO					
BATANGA:	BATANGAS STATE UNIVERSITY	MECHANICAL ENGINEER		PROFESSIONAL MECHANICAL ENGINEER	LEMERY BATANGAS	CORPORATION					DESIGN OPTION 3		
	Gov. Pablo Borbon Main Campus II			ASEAN ENGINEER			ENGR. VINCE LEMUEL						
Can San San	Alanailan, Batanaas City	PRC Reg No.:	SECTION: ME - 5302	PRC Reg No.	PTR No.		ENGR. LEMUEL ARNEL A. RIVERA	PANOPIO				DESIGN OF HONS	
PHILIPPINIS	MECHANICAL ENGINEERING DEPARTMENT	TIN:	GROUP NO: 05	TIN:	Issued on:	BatStateU Main Campus 2	PRESIDENT	ENGR. LEMUEL ARNEL					
MECHANICAL ENGINEERING DEPARTME	DATE SUB: JULY 1, 2019		Issued at:	Alangilan Batangas City		RIVERA					i		