SIEMENS

May River Phase I
Additional ST Operational Data

		Load						Off-design Cases		
		100%	Guaranteed	75%	50%	25%	Min.	A	B	B
ST Inlet		**Turbine Rated**	**Compr. Rated**							**all valves open**
Pressure	kPa (a)	**4230**	**4230**	4230	4230	4230	4230	4057	3954	3954
	kPa (g)	**4137**	**4137**	4137	4137	4137	4137	3964	3861	3861
Temperature	deg C	**399**	**399**	399	399	399	399	399	399	399
Enthalpy	kJ/kg	**3208**	**3208**	3208	3208	3208	3208	3211	3213	3213
Flow	kg/s	**41,04**	**36,36**	30,78	20,52	10,26	6,9*	36,36	36,36	38,3
ST Exhaust										
Pressure	kPa (a)	**163**	**163**	163	163	163	163	163	163	163
	kPa (g)	**69**	**69**	69	69	69	69	69	69	69
Temperature	deg C	**113,9**	**113,9**	113,9	113,9	144,0**	186,6**	113,9	113,9	113,9
Enthalpy	kJ/kg	**2648**	**2633**	2640	2663	2752	2834	2643	2650	2657
Flow	kg/s	**41,04**	**36,36**	30,78	20,52	10,26	6,9*	36,36	36,36	38,3
Thermodynamic Output	kW	**23002**	**20918**	17479	11179	4679	2579	20653	20472	21278
Bearing Losses***	kW	**79**	**79**	79	79	79	79	79	79	79
ST Shaft Output	kW	**22923**	**20839**	17400	11100	4600	2500	20574	20393	21199
Gland Steam Condenser (inlet)										
Enthalpy	kJ/kg	**2841**	**2833**	2844	2864	2927	3001	2840	2844	2849
Flow	kg/s	**0,0241**	**0,0241**	0,0241	0,024	0,0234	0,0225	0,0241	0,0241	0,024

*flow calculated due to the min. power of 2500 kW!

**calculated temperature without consideration of condensate injection into the exhaust part

***max. bearing losses

Notes:

1. There are no operating restrictions for the turbine regarding life steam conditions according to Case B.

2. For the operating points "Off-design Cases", the calculation was done with less inlet pressure but still with an inlet temperature of 399°C (assumption) according to normal conditions.

3. If the normal operating pressure would be revised to 3954 kPa (a), the new minimum inlet pressure will be 3754 kPa (a).
There is no trip value in the control system, only an alarm signal will be generated at 0,9 * 3754 kPa (a) = 3379 kPa (a).

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E O C&S TRB EN ND 3
Naggert, 2011-05-09