

FLAMANVILLE 3 EXERGY BALANCE

component	Q_{th} (kW)		η_{energy}		
	Resource	Product	Exergy efficiency	Irreversibilities	% total
HP vane	15,231.06	0.00	0.00%	15,231.06	2.51%
Reheater 2 vane	697.90	0.00	0.00%	697.90	0.11%
HP1 turbine	359,277.13	332,704.95	92.60%	26,572.18	4.38%
IP2 turbine	190,613.93	187,177.26	98.20%	3,436.67	0.57%
Extraction pump	3,131.62	2,537.94	81.04%	593.68	0.10%
Feedwater heater	367,208.08	362,713.21	98.78%	4,494.87	0.74%
Feedwater pump	25,765.14	22,501.82	87.33%	3,263.32	0.54%
SG inlet vane	232.30	0.00	0.00%	232.30	0.04%
LP1 turbine	322,840.33	264,777.18	82.01%	58,063.15	9.56%
LP2 turbine	137,103.97	102,879.36	75.04%	34,224.61	5.64%
LP3 turbine	166,799.76	135,091.87	80.99%	31,707.89	5.22%
Condenser inlet	139,884.76	140,146.15	100.19%	-261.40	-0.04%
HP2 turbine	129,438.02	117,466.48	90.75%	11,971.54	1.97%
HP3 turbine	180,688.83	159,874.29	88.48%	20,814.54	3.43%
HP6 mixer	127,023.41	126,994.09	99.98%	29.32	0.00%
IP vane	582.94	0.00	0.00%	582.94	0.10%
LP3 mixer	54,468.23	54,464.23	99.99%	4.00	0.00%
IP1 turbine	200,331.66	188,077.27	93.88%	12,254.39	2.02%
LP4 mixer	126,267.45	125,638.50	99.50%	628.95	0.10%
LP1 mixer	17,638.06	16,882.39	95.72%	755.67	0.12%
LP4 turbine	212,981.96	212,981.96	100.00%	0.00	0.00%
LP2 pump	173.09	145.61	84.13%	27.48	0.00%
LP3 pump	143.98	121.55	84.42%	22.43	0.00%
LP4 pump	65.61	56.36	85.90%	9.25	0.00%
mel F	49,332.12	51,847.86	105.10%	-2,515.73	-0.41%
FWH7	92,197.45	88,423.81	95.91%	3,773.65	0.62%
HP7_mixer	143,407.28	142,222.72	99.17%	1,184.56	0.20%
FWH6	100,295.92	95,156.06	94.88%	5,139.87	0.85%
LP1	15,760.78	10,335.38	0.00%	5,425.39	0.89% LP1-LP1 heater
LP2	48,128.00	35,581.66	0.00%	12,546.34	2.07% LP2-LP2 heater
LP3	77,290.49	67,119.50	0.00%	10,170.99	1.68% LP3-LP3 heater
LP4	52,827.38	49,075.62	0.00%	3,751.76	0.62% LP4 heater-LP4
Reheater 1	68,238.03	61,066.37	0.00%	7,171.66	1.18% Reheat 1-Reheater 1
Reheater 2	104,209.81	88,981.94	0.00%	15,227.87	2.51% Reheat 2-Reheater 2
Condenser	137,998.37	0.00	0.00%	137,998.37	22.72% Tk = 15,00 °C
Steam generator	1,840,943.95	1,713,301.78	93.07%	127,642.17	21.02% Tk = 334,00 °C
economizer	439,032.46	384,601.73	87.60%	54,430.73	8.96% Tk = 334,00 °C
global	2,279,976.41	1,672,672.06	73.36%	607,304.35	100.00%
T0 = 288,15 K	4,339,459.80	38.55%			