

Arrays Table: Main

	P_i [psia]	T_i [F]	h_i [Btu/lb _m]	s_i [Btu/lb _m -R]	x_i [dim]	v_i [ft ³ /lb _m]
1	1600	1100	1548	1.632	100	0.549
2	100	464.5	1261	1.69	100	5.36
3	100	900	1481	1.884	100	8.053
4	25	589.8	1330	1.91	100	24.91
5	25	750	1408	1.98	100	28.76
6	1	203.9	1152	2.054	100	394.9
7	1	101.7	69.72	0.1326	0	0.01614
8	1600	102.8	75.01	0.1336	-100	0.01606

Parametric Table: Table 2(copy)

	P_2 [psia]	P_4 [psia]	η_{th}	\dot{m} [lb _m /hr]	\dot{Q}_{in} [Btu/hr]	\dot{Q}_{out} [Btu/hr]
Run 1	300	125	0.38622	812411	1.318E+09	8.087E+08
Run 2	300	100	0.38757	797967	1.313E+09	8.041E+08
Run 3	300	75	0.38863	782283	1.309E+09	8.006E+08
Run 4	300	50	0.38895	764887	1.308E+09	7.995E+08
Run 5	300	25	0.38687	745261	1.315E+09	8.065E+08
Run 6	250	125	0.38551	814839	1.320E+09	8.111E+08
Run 7	250	100	0.38726	799034	1.314E+09	8.052E+08
Run 8	250	75	0.38877	781810	1.309E+09	8.001E+08
Run 9	250	50	0.38968	762558	1.306E+09	7.970E+08
Run 10	250	25	0.38844	740351	1.310E+09	8.012E+08
Run 11	200	125	0.38379	820782	1.326E+09	8.171E+08
Run 12	200	100	0.38605	803124	1.318E+09	8.093E+08
Run 13	200	75	0.38816	783823	1.311E+09	8.021E+08
Run 14	200	50	0.38982	762103	1.305E+09	7.965E+08
Run 15	200	25	0.38967	736530	1.306E+09	7.971E+08
Run 16	150	125	0.38019	833415	1.339E+09	8.296E+08
Run 17	150	100	0.38316	812989	1.328E+09	8.193E+08
Run 18	150	75	0.38611	790622	1.318E+09	8.091E+08
Run 19	150	50	0.38882	765314	1.309E+09	7.999E+08
Run 20	150	25	0.39018	734969	1.304E+09	7.954E+08
Run 21	100	125	0.37239	861586	1.367E+09	8.577E+08
Run 22	100	100	0.37650	836274	1.352E+09	8.427E+08
Run 23	100	75	0.38080	808588	1.336E+09	8.275E+08
Run 24	100	50	0.38517	777187	1.321E+09	8.123E+08
Run 25	100	25	0.38888	738991	1.309E+09	7.997E+08

REFLECTION:

Thermal efficiency reaches maximum of 38.2% at ~175 psia reheat pressure.
This is slightly higher than the cycle w/o reheat which had an efficiency of 36.4%.

Mass flow rate is fairly constant, increasing slightly at reheat pressure increases.
The mass flow rate is somewhat less than the cycle w/o reheat.

Boiler duty and condenser duty have similar behavior to mass flow rate.

The ratio of HPT to LPT power decreases substantially as reheat pressure increases.

As expected, the quality at the turbine exit is somewhat higher than the cycle w/o reheat.