

## Spaghetti Design Calculations

U	1		Annualization factor	0.25				
HEX	Q (kW)	Thentry	Thexit	Tcentry	Tcexit	LMTD	Area	
heater	54	300	300	162	180	128.7904253	0.419285827	
1	63	180	150	141	162	12.98425537	4.852030264	
2	21.64	150	144.59	130	141	11.57082102	1.870221651	
3	11.361	150	144.59	130	141	11.57082102	0.981866367	
4	210	144.59	80.328	60	130	17.30069985	12.13823728	
5	47.05	144.59	80.328	60	130	17.30069985	2.719543163	
6	139.951	144.59	80.328	60	130	17.30069985	8.089325933	
7	26.85	80.328	67.54	30	60	28.05963735	0.956890485	
8	51.15	80.328	67.54	30	60	28.05963735	1.822903103	
cooler	57.894	67.54	40	15	30	30.84634047	1.876851488	
cooler	110.16	67.54	40	15	30	30.84634047	3.571250214	<b>HW1 values</b>
						<b>Area Target</b>	38.87911995	39.01
						<b>Cost Hex</b>	459439.56	259503.7
						<b>Utility Costs</b>	8160.54	8160
						<b>Total Cost</b>	123020.43	73036
						<b>Cost/Area</b>	3164.177331	1872.238

## MER Calculations

U	1		Annualization factor	0.25				
HEX	Q (kW)	Thentry	Thexit	Tcentry	Tcexit	LMTD	Area	
heater	54	300	300	162	180	128.7904253	0.419286	
1	63	180	150	141	162	12.98425537	4.85203	
2	231	150	40	30	130	14.42695041	16.0117	
3	243	150	81.999	60	141	14.54397082	16.70795	
4	29	150	81.999	30	130	33.48954552	0.865942	
cooler	168	150	81.999	15	30	90.93981194	1.847376	<b>HW1 values</b>
						<b>Area Target</b>	40.70429	39.01
						<b>Cost Hex</b>	260352.1	259503.7
						<b>Utility Costs</b>	8160	8160
						<b>Total Cost</b>	73248.04	73036
						<b>Cost/Area</b>	1799.516	1872.238