

Project Name MEG 560NM  
 Project Location  
 Prepared by Vishnu Barran

Engine Information		
MAN Engine ID		E3262 LE202 (.5)
Model Number		E3262 LE202
RPM		1800
Fuel Type		Natural Gas
Aspiration & NO <sub>x</sub>	g/bhp-hr	Lean, 0.5
Supply Fuel Pressure	psi	3-5

Generator Information	
Marathon Model	573RSL4035
105°C rise NEMA-F rating	kWe 710
KVA	562
Voltage	480
Frequency	Hz 60
Power Factor	1.0

Engine Performance		Unit	100%	75%	50%
Electrical Power		kWe	562	418	275
Mechanical Power		bHP	778	583	389
Exhaust Flow		lb/h	6,667	5,022	3,457
Exhaust Temp		°F	756	756	756
Heat to Radiation	(Ambient)	BTU/h	116,040	102,360	75,060
Fuel Consumption	(LHV)	BTU/h	4,886,160	3,766,980	2,661,480
Fuel Consumption	(LHV)	BTU/bHP-hr	6,280	6,461	6,842
Fuel Consumption	(LHV)	BTU/kWh	8,699	9,004	9,667

Energy Balance			100%	75%	50%
Total Primary Heat Recovered		BTU/h	2,292,936	1,754,234	1,260,604
Total Secondary Heat Recovered		BTU/h	0	0	0
Total Steam Recovered		BTU/h	0	0	0
Total Heat Recovered		BTU/h	2,292,936	1,754,234	1,260,604
Electrical Efficiency	(LHV)	%	39.23%	37.89%	35.30%
Thermal Efficiency	(LHV)	%	46.93%	46.57%	47.36%
Total Efficiency	(LHV)	%	86.15%	84.46%	82.66%

Primary Circuit		Water		100%	75%	50%
Process Water Flow		GPM		235	180	130
Process Water Temp Inlet		°F		170	170	170
Process Water Temp Outlet		°F		190	190	190

Secondary Circuit		None		100%	75%	50%
Secondary Water Flow		GPM		0	0	0
Secondary Water Temp Inlet		°F		0	0	0
Secondary Water Temp Outlet		°F		0	0	0

Steam Production			100%	75%	50%
Steam Produced		lb/h	N/A	N/A	N/A

Engine HT Circuit		50% Ethylene glycol		100%	75%	50%
Jacket Water Heat		BTU/h		1,381,920	1,068,000	788,220
Exhaust Heat	cooled to 248 °F	BTU/h		911,016	686,234	472,384
HT Radiator Rejection		BTU/h		0	0	0
Jacket Water Temp Inlet		°F		176	179	182
Jacket Water Temp Outlet		°F		190	190	190
Jacket Water Flowrate		GPM		220	220	220

Engine LT Circuit		50% Ethylene glycol		100%	75%	50%
Intercooler Heat		BTU/h		170,580	122,880	85,320
LT Radiator Rejection		BTU/h		-170,580	-122,880	-85,320
Intercooler Water Temp Inlet		°F		108	108	108
Intercooler Water Temp Outlet		°F		120	117	114
Intercooler Water Flowrate		GPM		32	32	32

Radiator Specifications	% Oversize	Capacity BTU/h	Ambient	Altitude	Voltage
HT Radiator	10	1,520,112	105 °F	1,000 ft	480
LT Radiator	25	213,225			

**Notes**  
 Energy balance data is stated at ISO 3046-1 conditions

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**Issue Date**  
 7/13/2018