

Conclusion and Recommendations

5-1 Conclusion

The compressor use 1.6944 MW on the other hand the net available power after using this system is 8MW from one unit, the total power from the plant is 64MW equal to one and half gas turbine. Considering that the installation of new gas turbine units takes more time and high cost of the cooling system also finding energy sources for these new stations is a problem In addition to the environmental pollution. The new power plant can be delayed by enhancing the production capacity of existing power stations.

In this research the maximum output power from the plant and cooling load calculated on the maximum temperature of surrounding air of Garri 43 °C and the inlet air to the compressor cooled to design inlet temperature 15°C by using chilling system.

5-2 Recommendations

The expected results confirmed by calculations but there are many required data make the system better these data required extra research in:

- Design condition in the new power plant must be according to the local environmental parameters.
- The treatment of water because there are many systems in Garri power plant station out of service.
- Use absorption refrigeration system instead of vapor compression refrigeration system because the source of energy is available (steam)