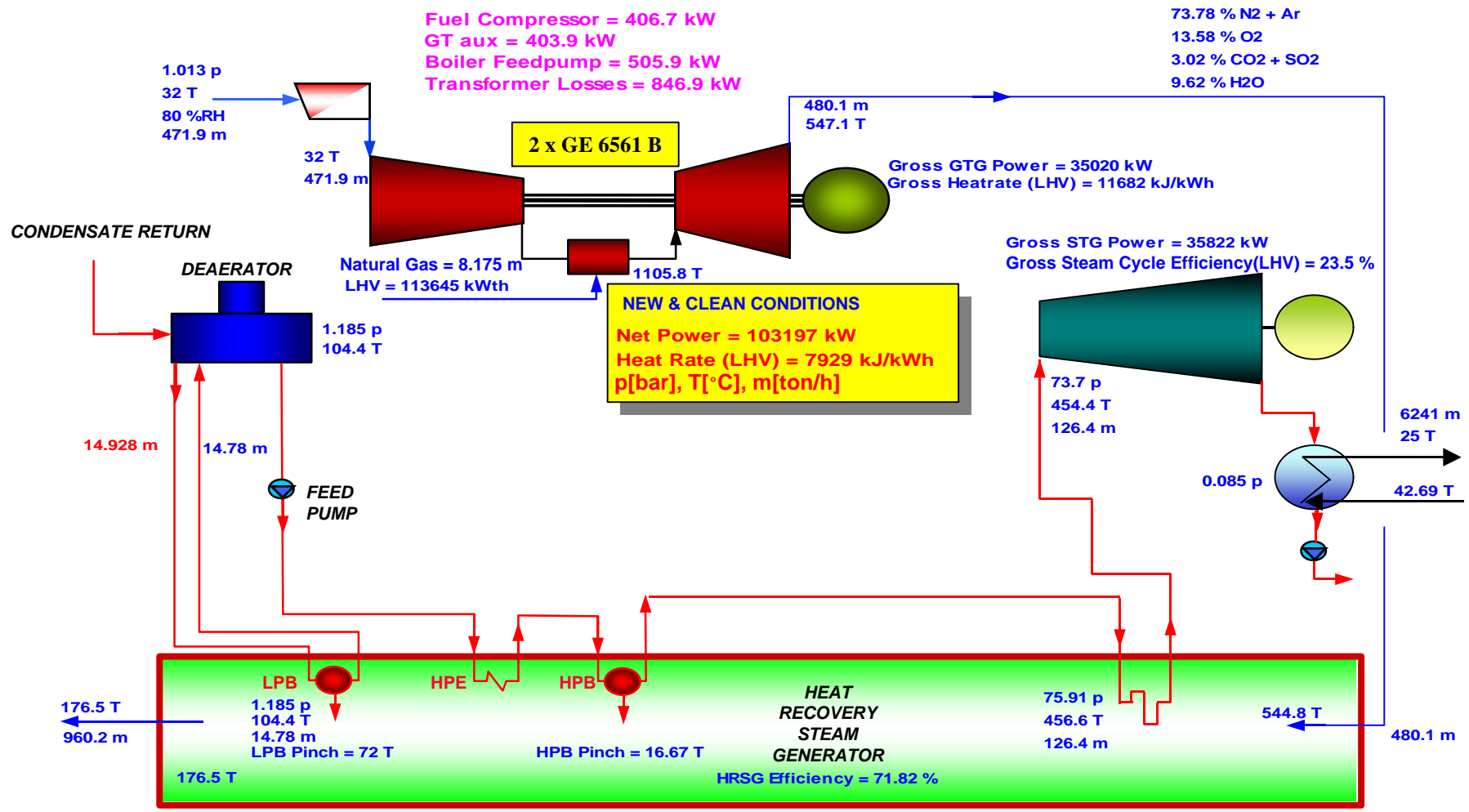
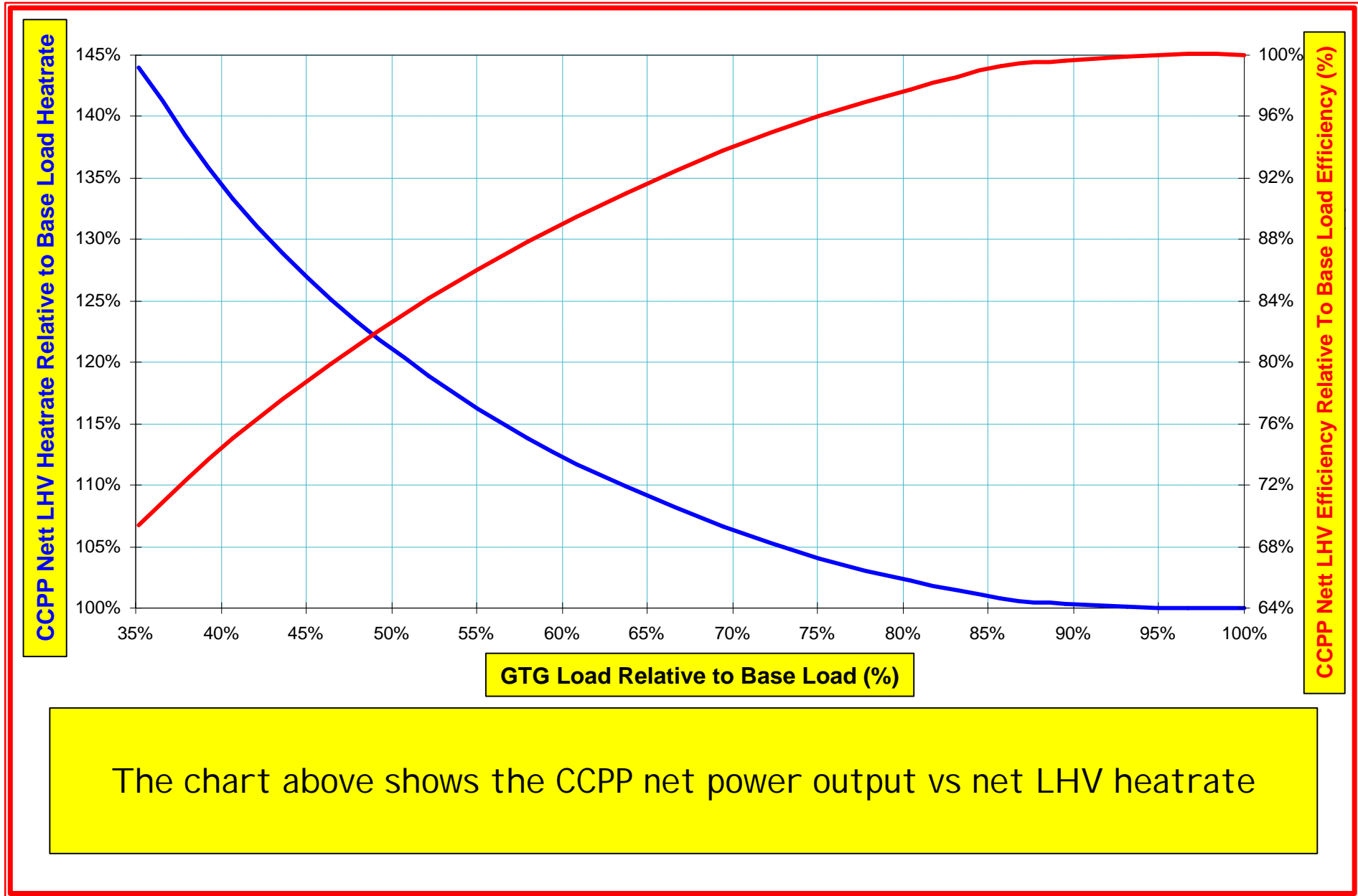


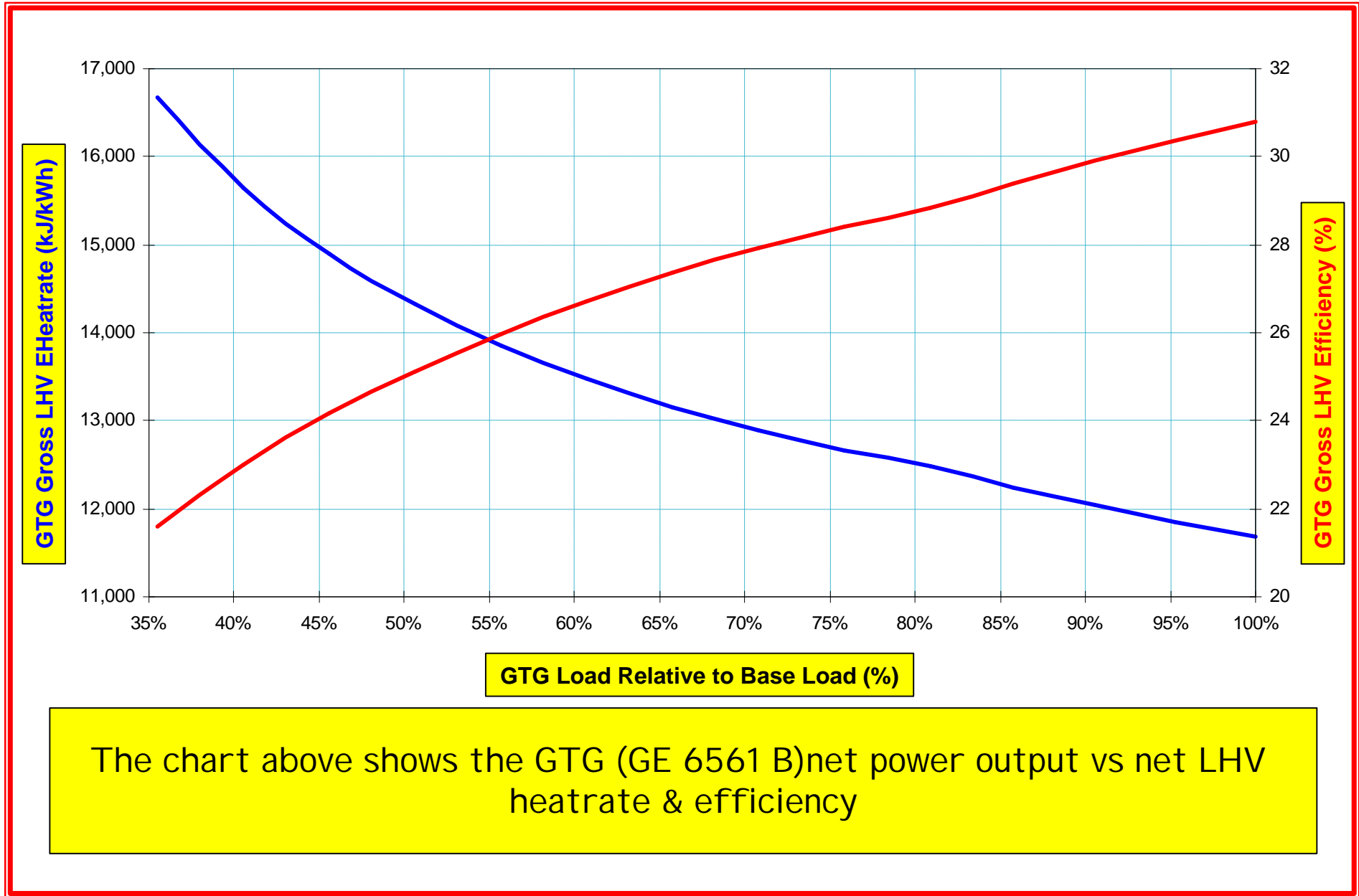
# 100 MW Combined Cycle Power Plant Performance & Degradation Charts

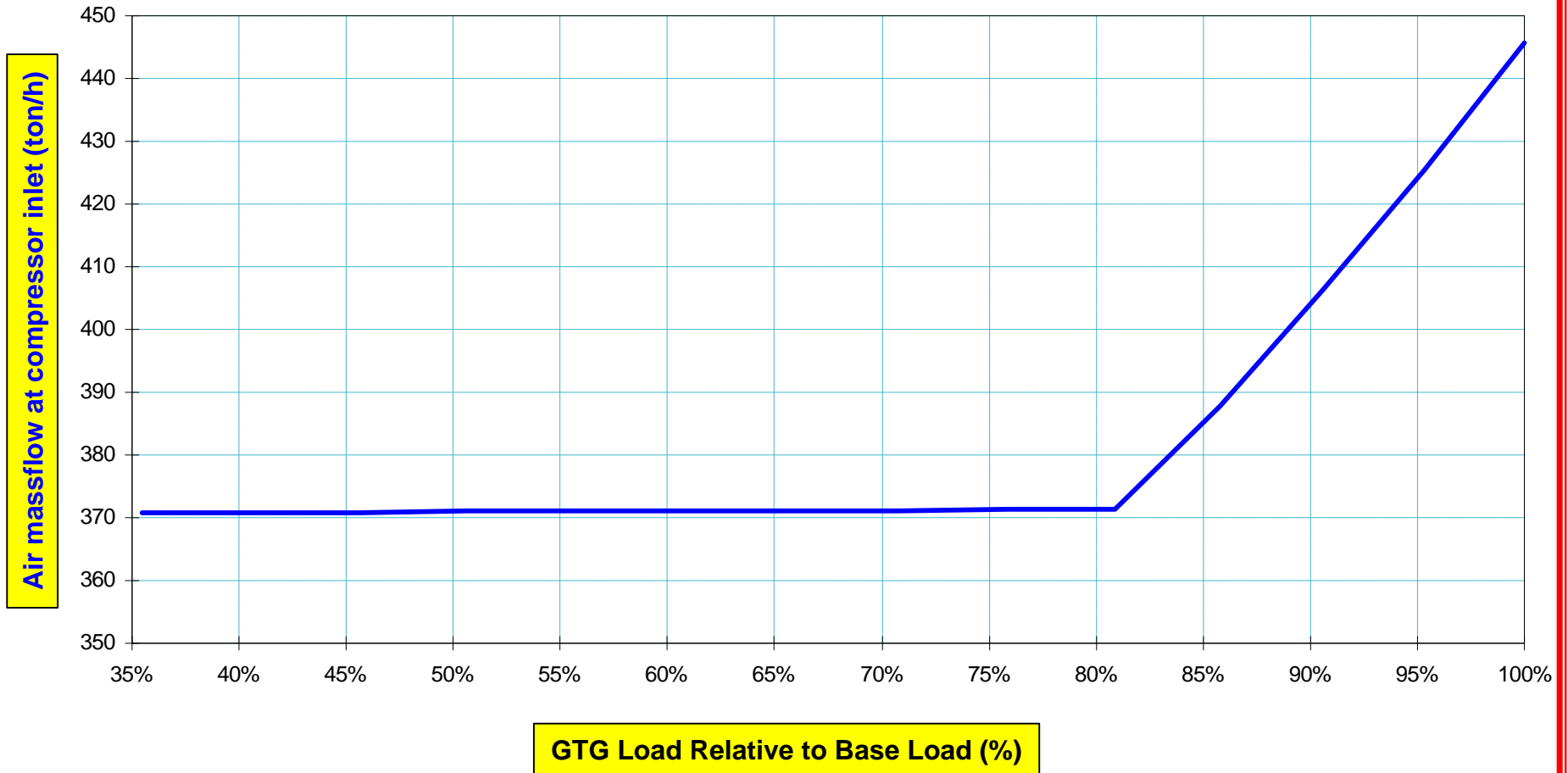
Website : [www.Vyconsult.com.my](http://www.Vyconsult.com.my)



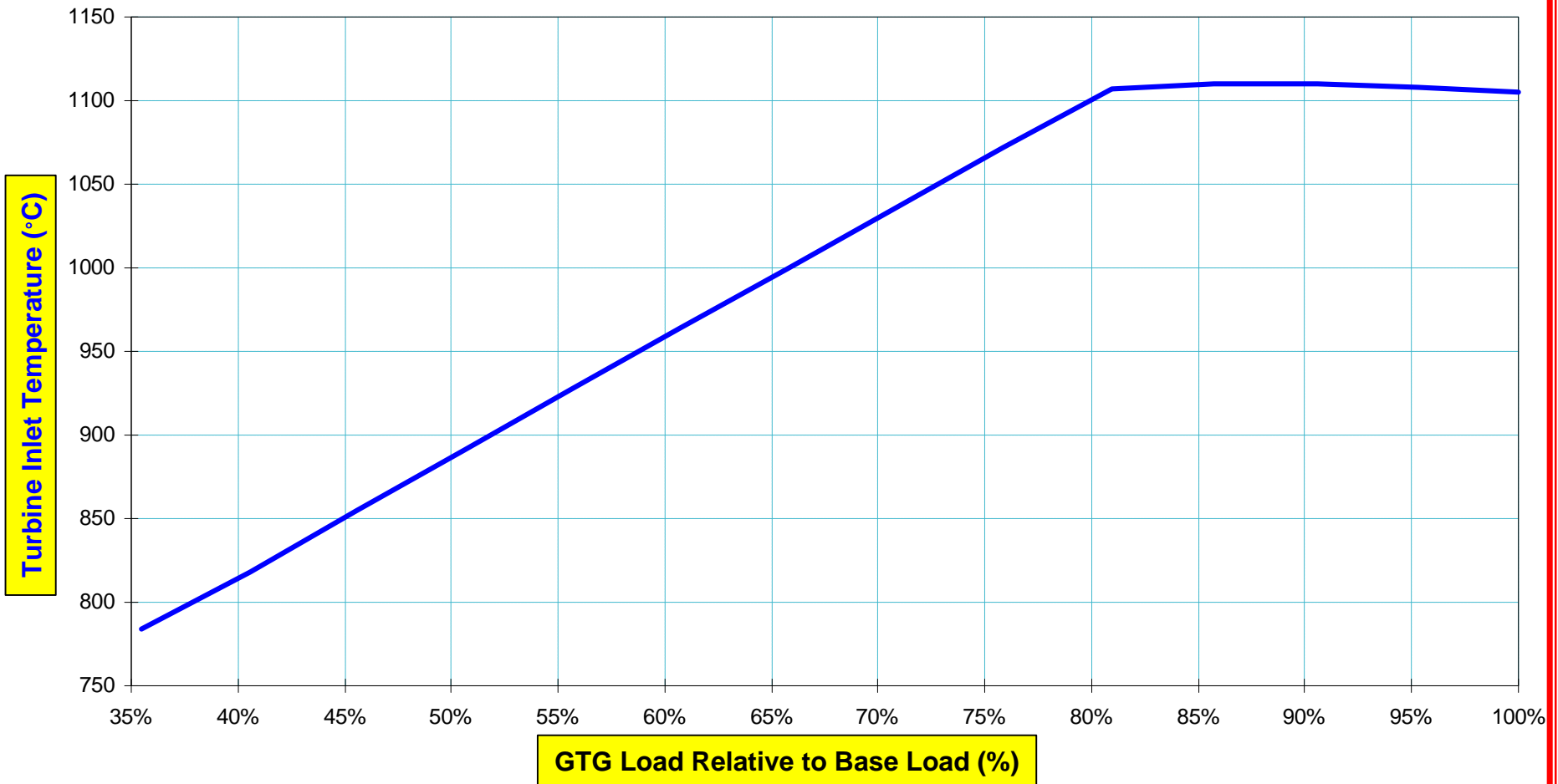
The heatbalance above is for a 100 MW Combined Cycle Power Plant (CCPP) (2 GE 6561 B GTG + 2 single pressure HRSG + 1 STG)



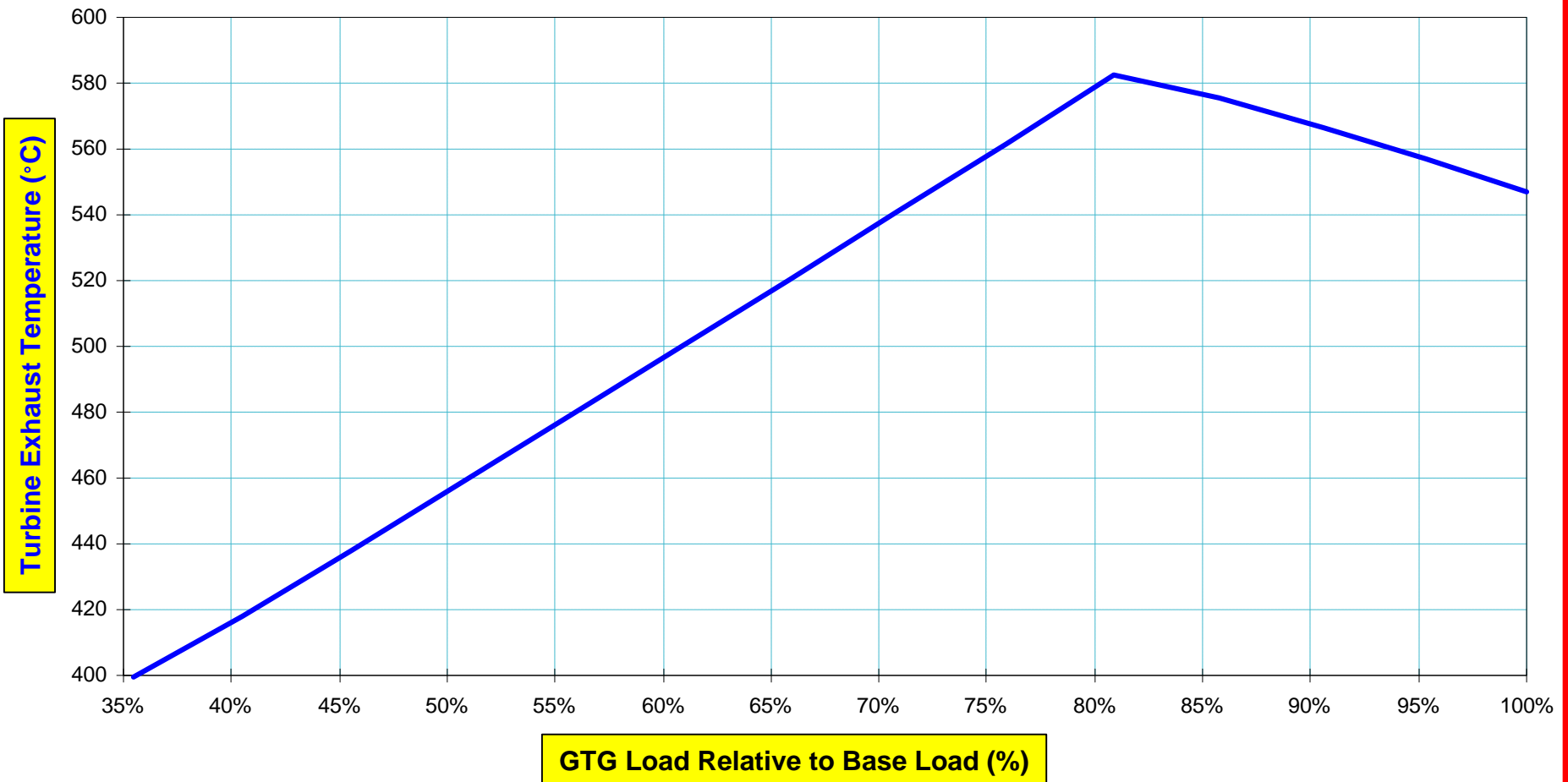




The chart above shows the variation of the air mass flow into the GTG with the GTG gross power output

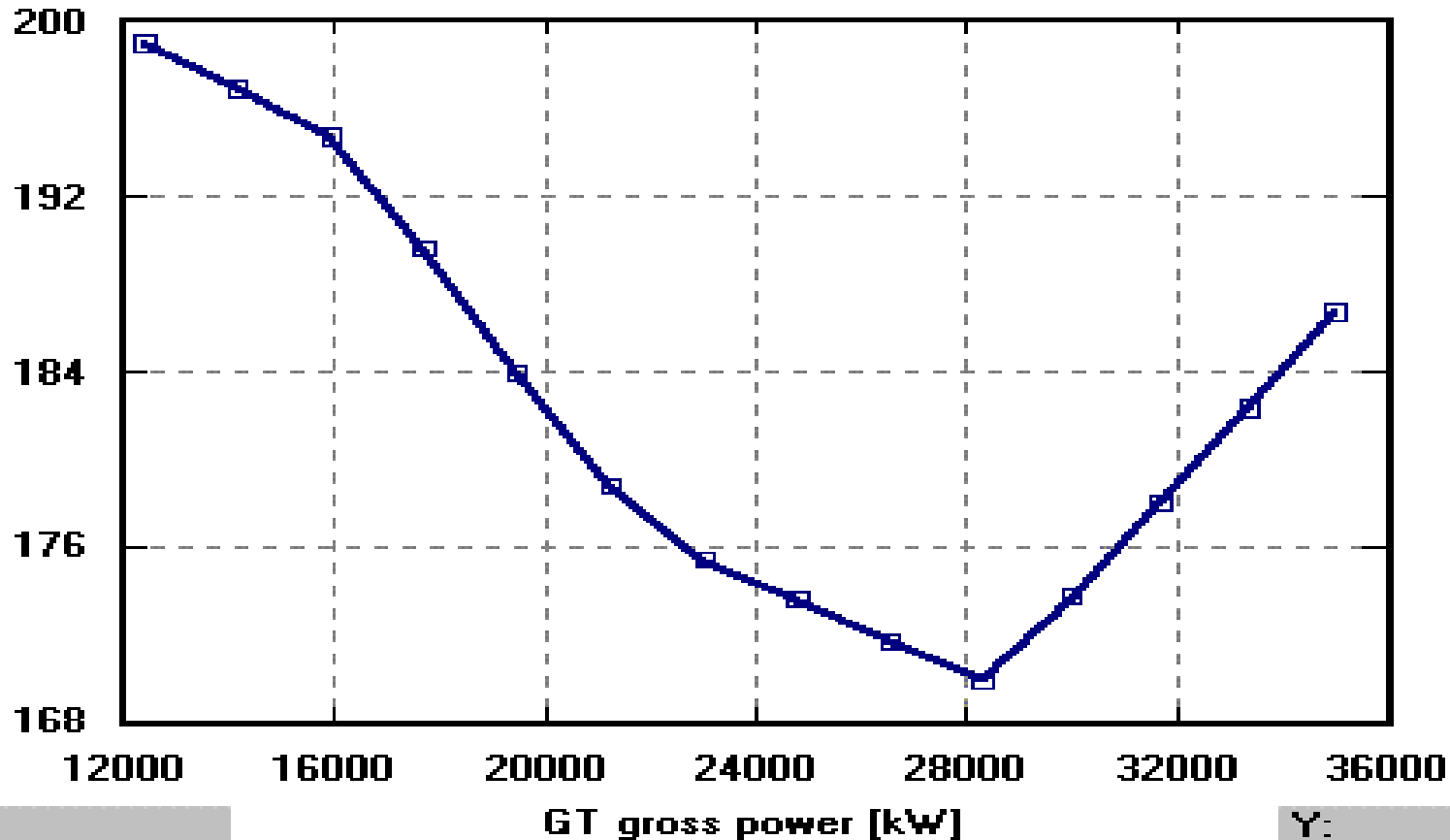


The chart above shows the variation in the turbine inlet temperature (TIT) with the GTG gross power output



The chart above shows the variation in GTG exhaust temperature with the GTG gross power output

Stack temperature [C]



X:

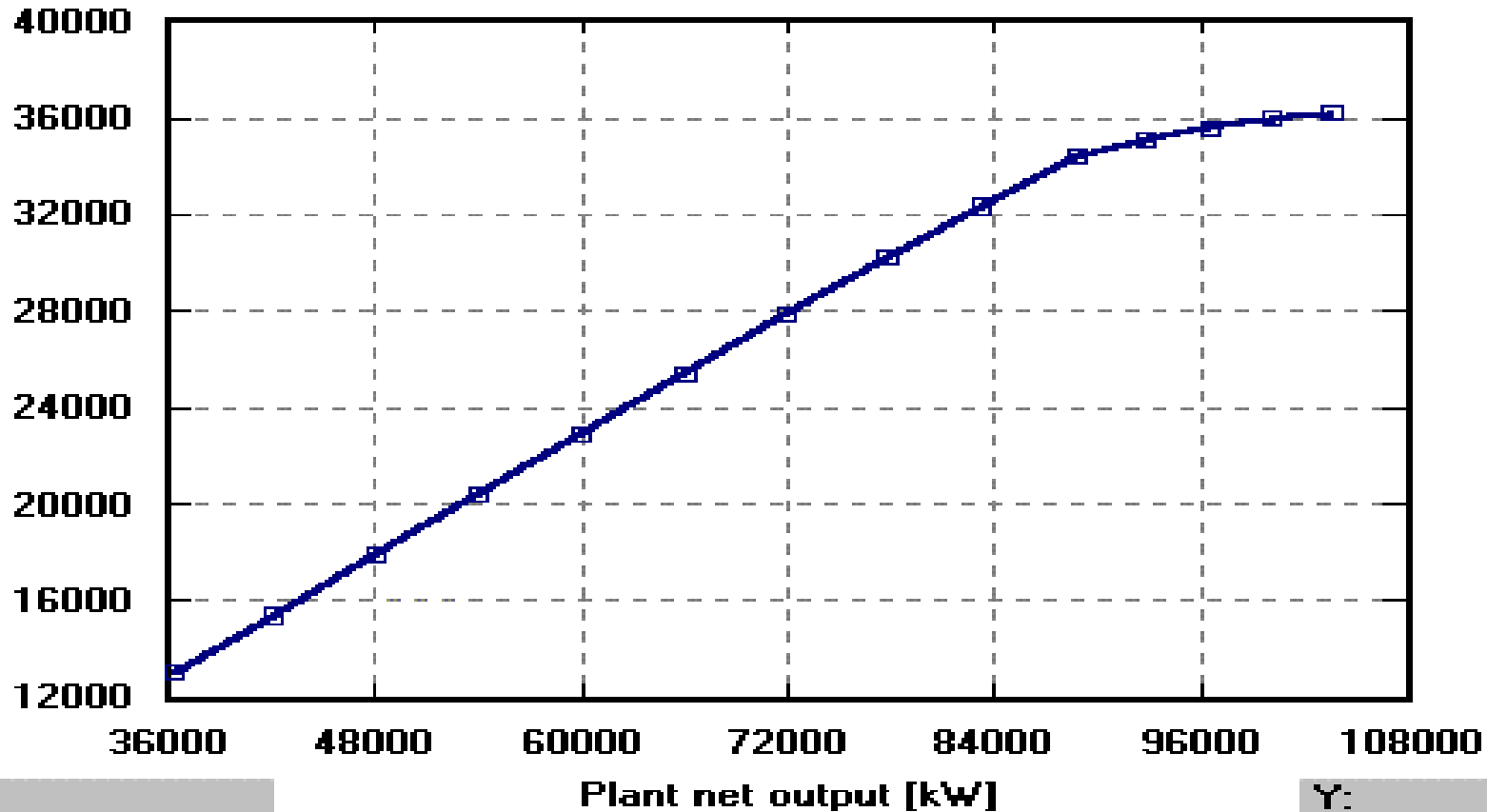
GT gross power [kW]

Y:

The chart above shows the variation in the HRSG stack temperature vs the GTG gross power output



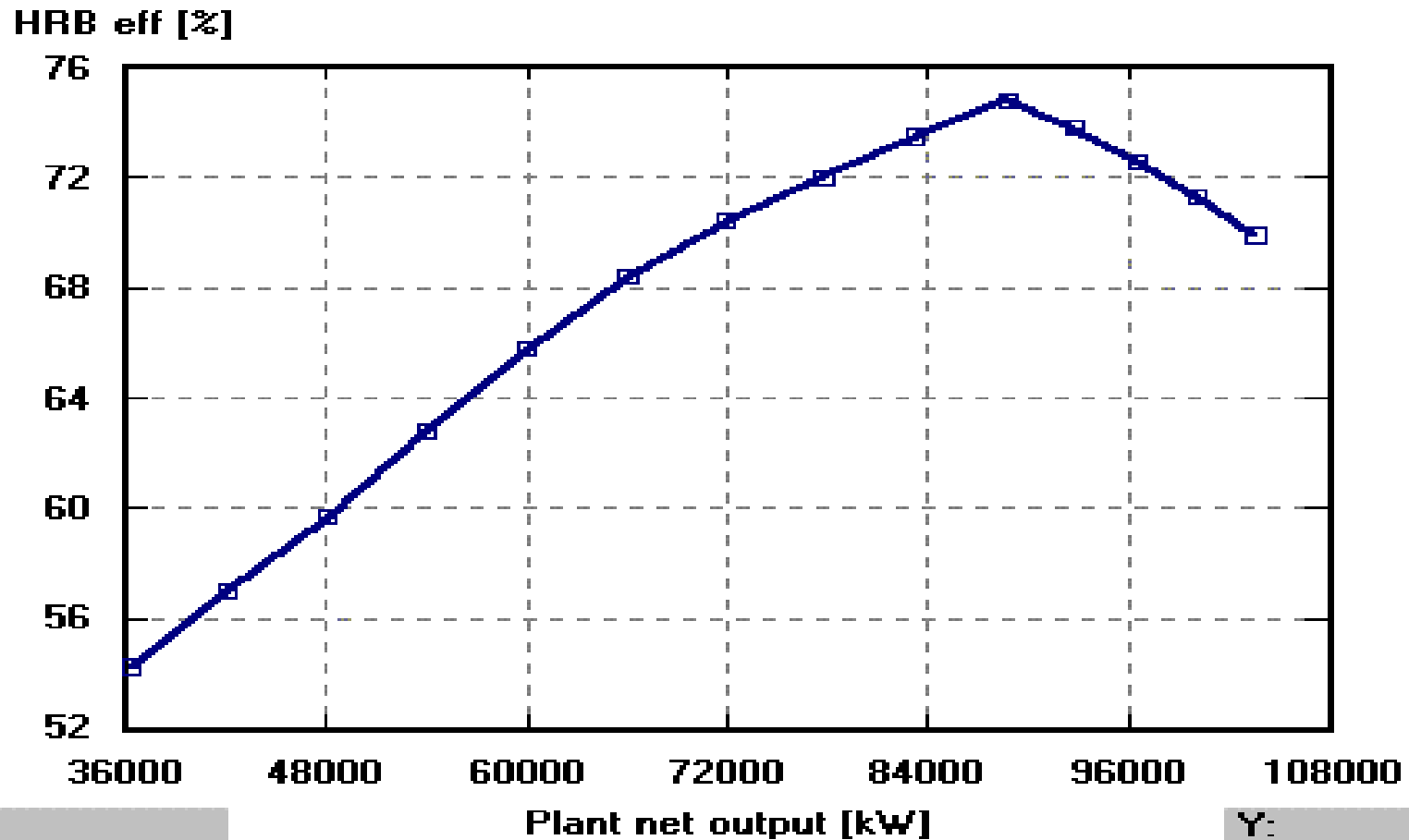
ST gross output [kW]



X:

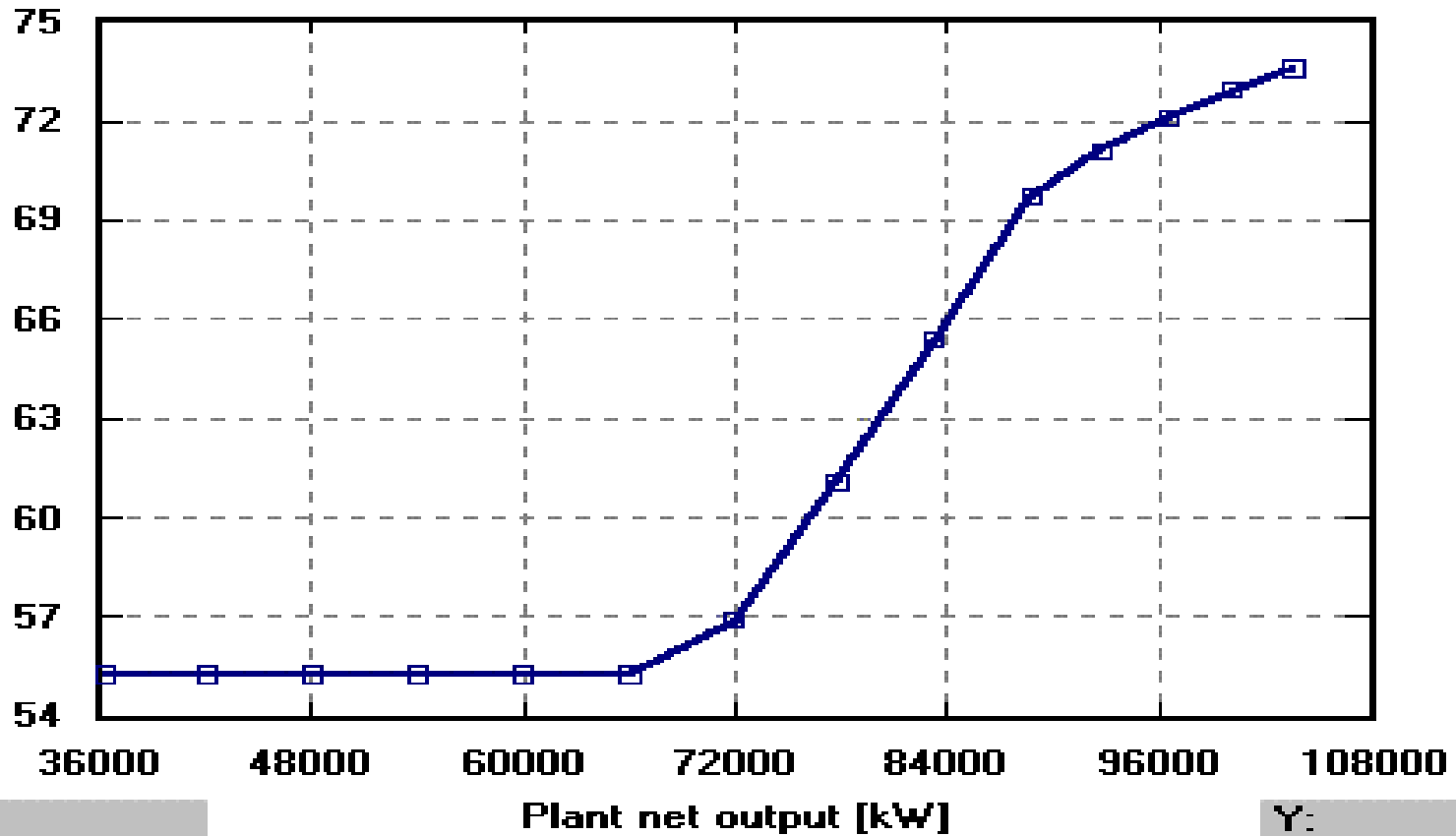
Y:

The chart above shows the variation in the Steam Turbine Gross Power with the plant net power output



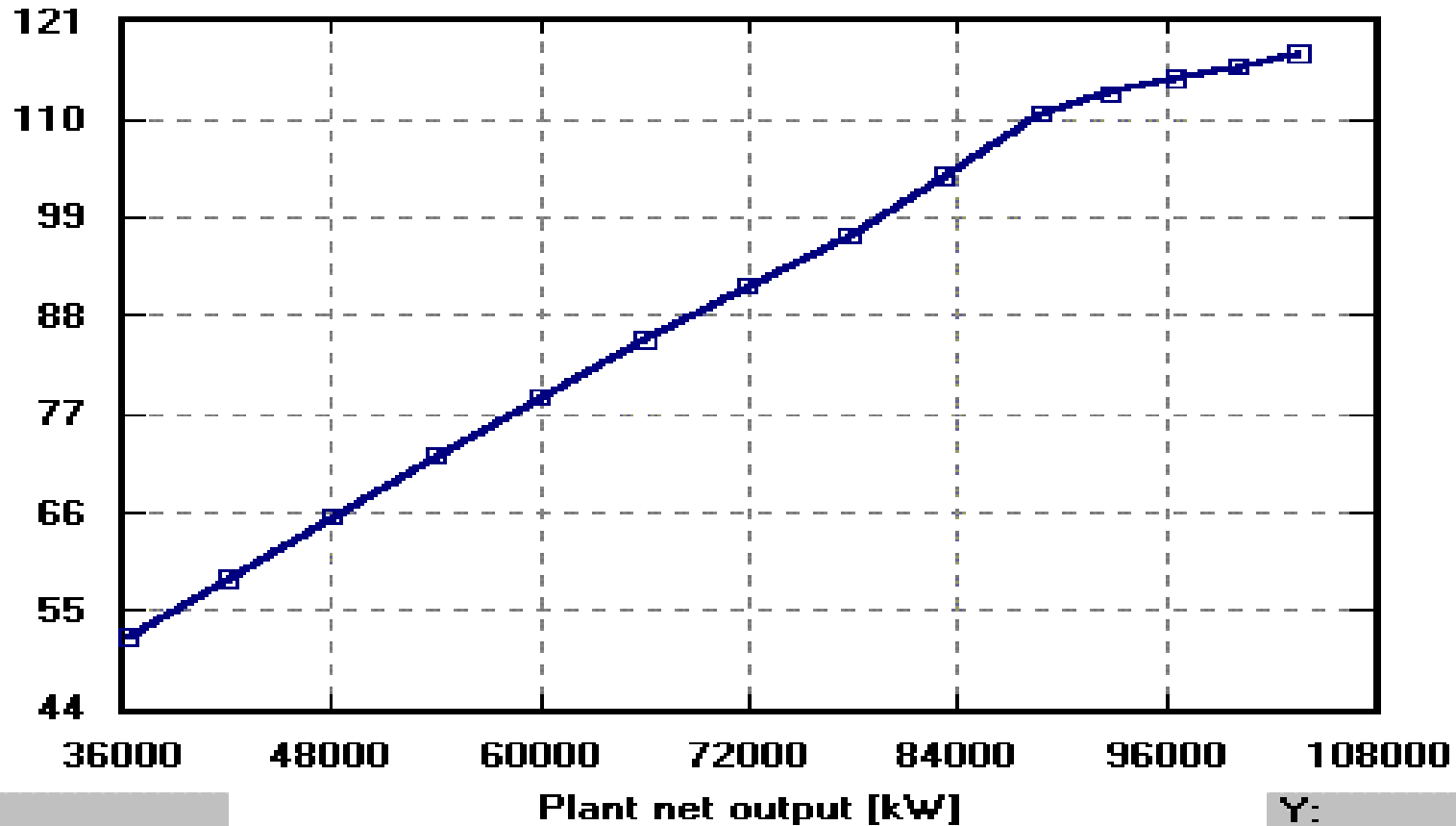
The chart above shows the variation in HRSG efficiency with the plant net power output

HPT pressure before stop valve [bar]



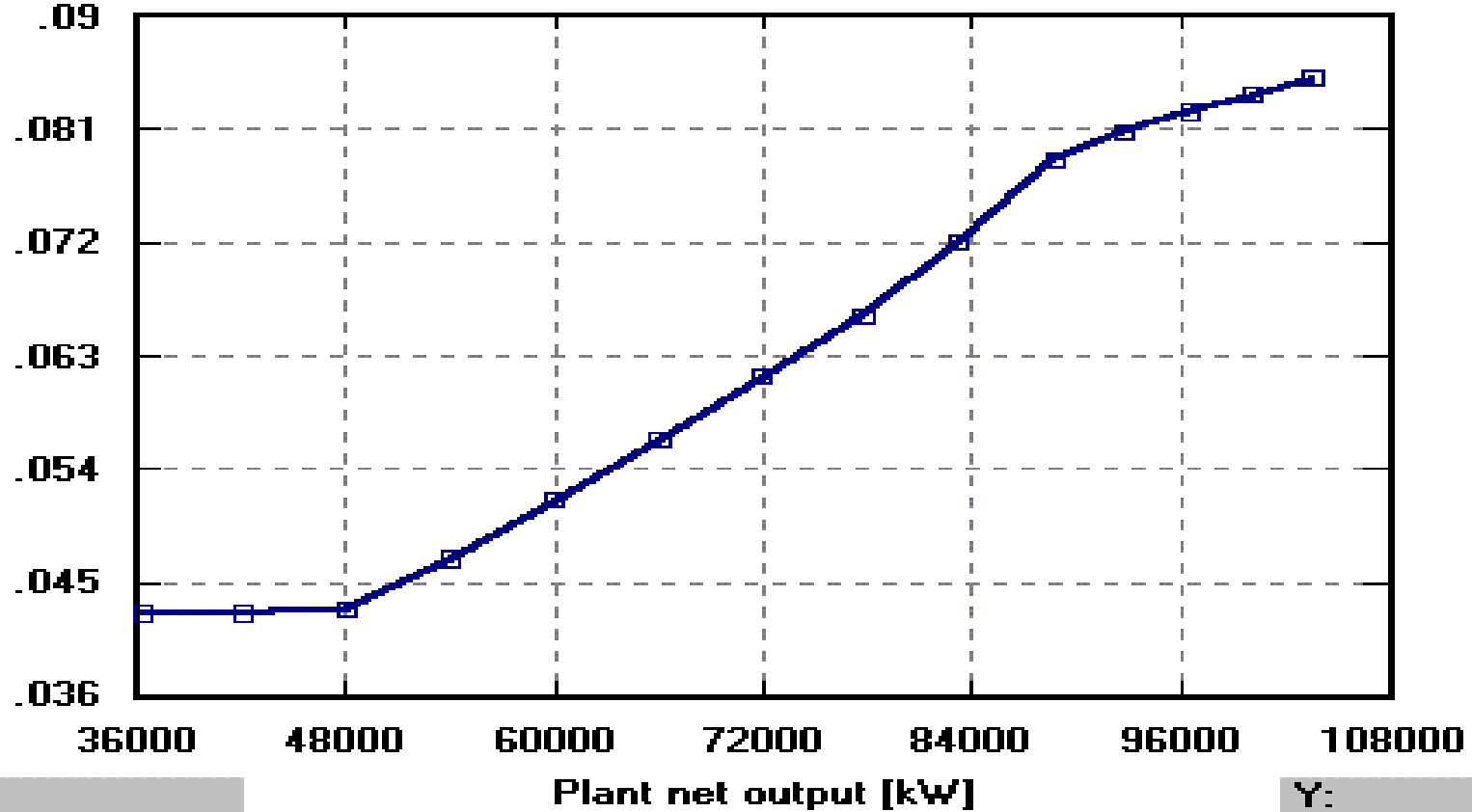
The chart above shows the variation in HP pressure with the plant net power output

HPT massflow before stop valve [t/h]

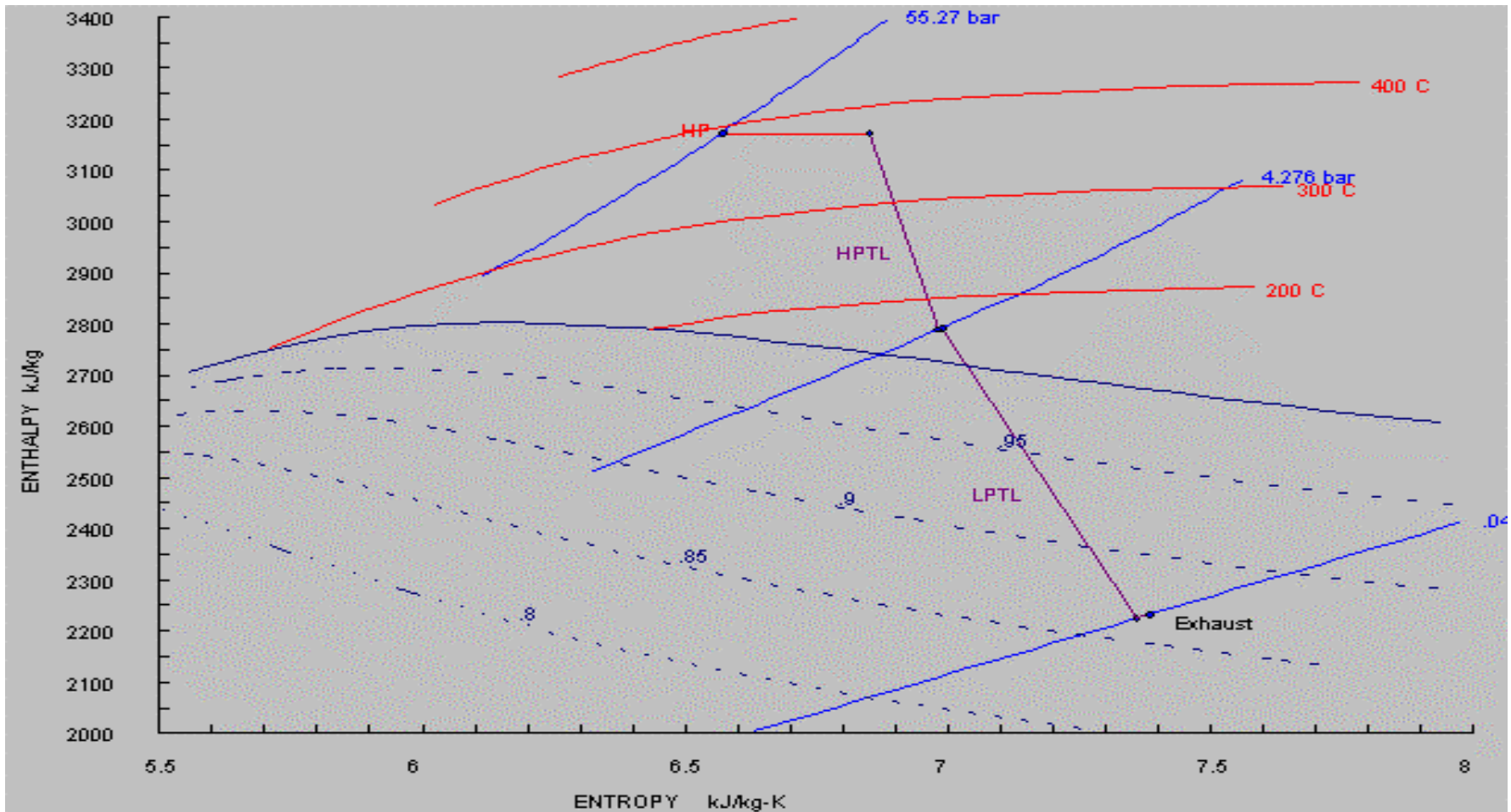


The chart above shows the variation in HP steam mass flow with plant net power output

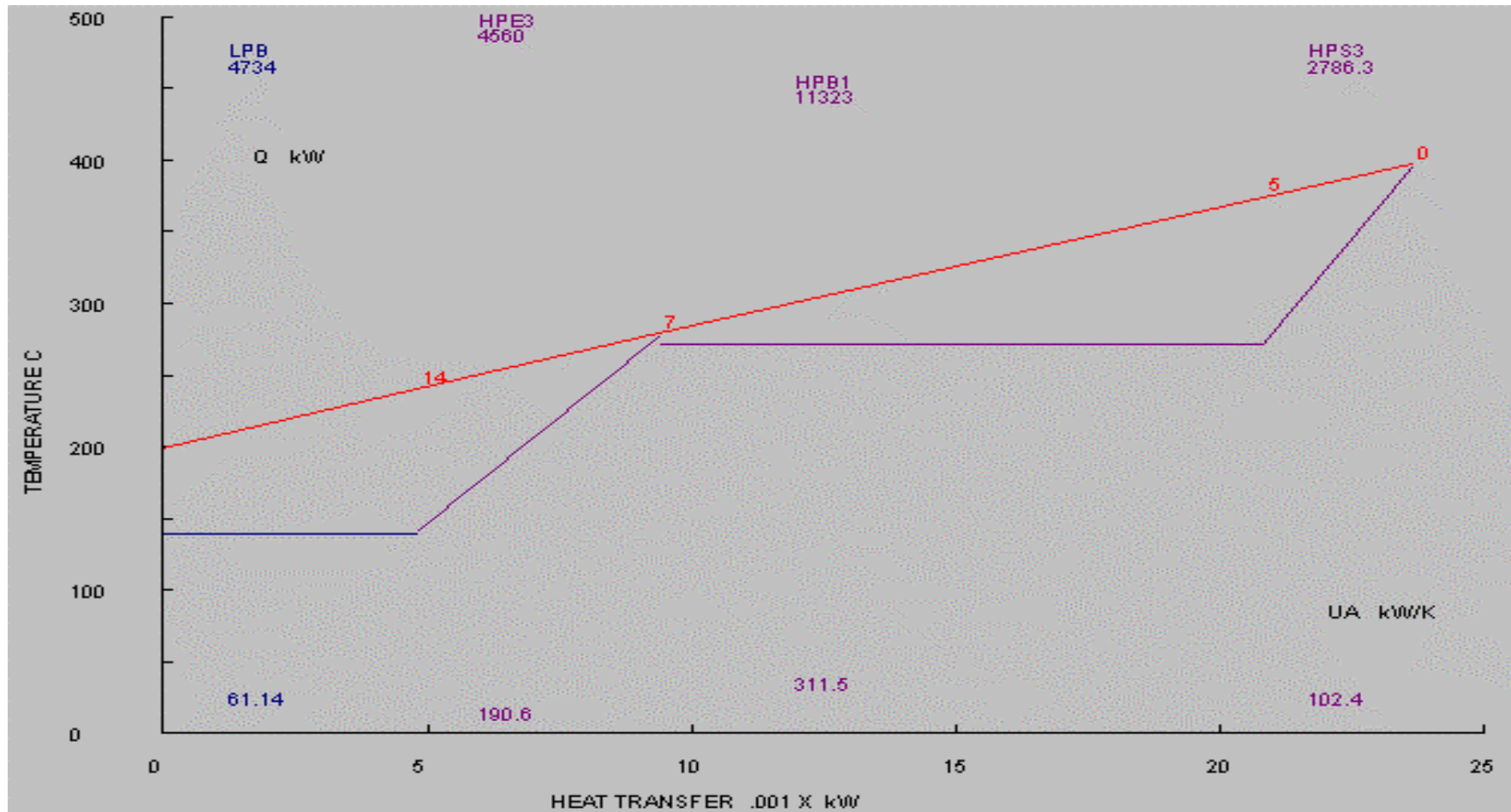
Condenser pressure [bar]



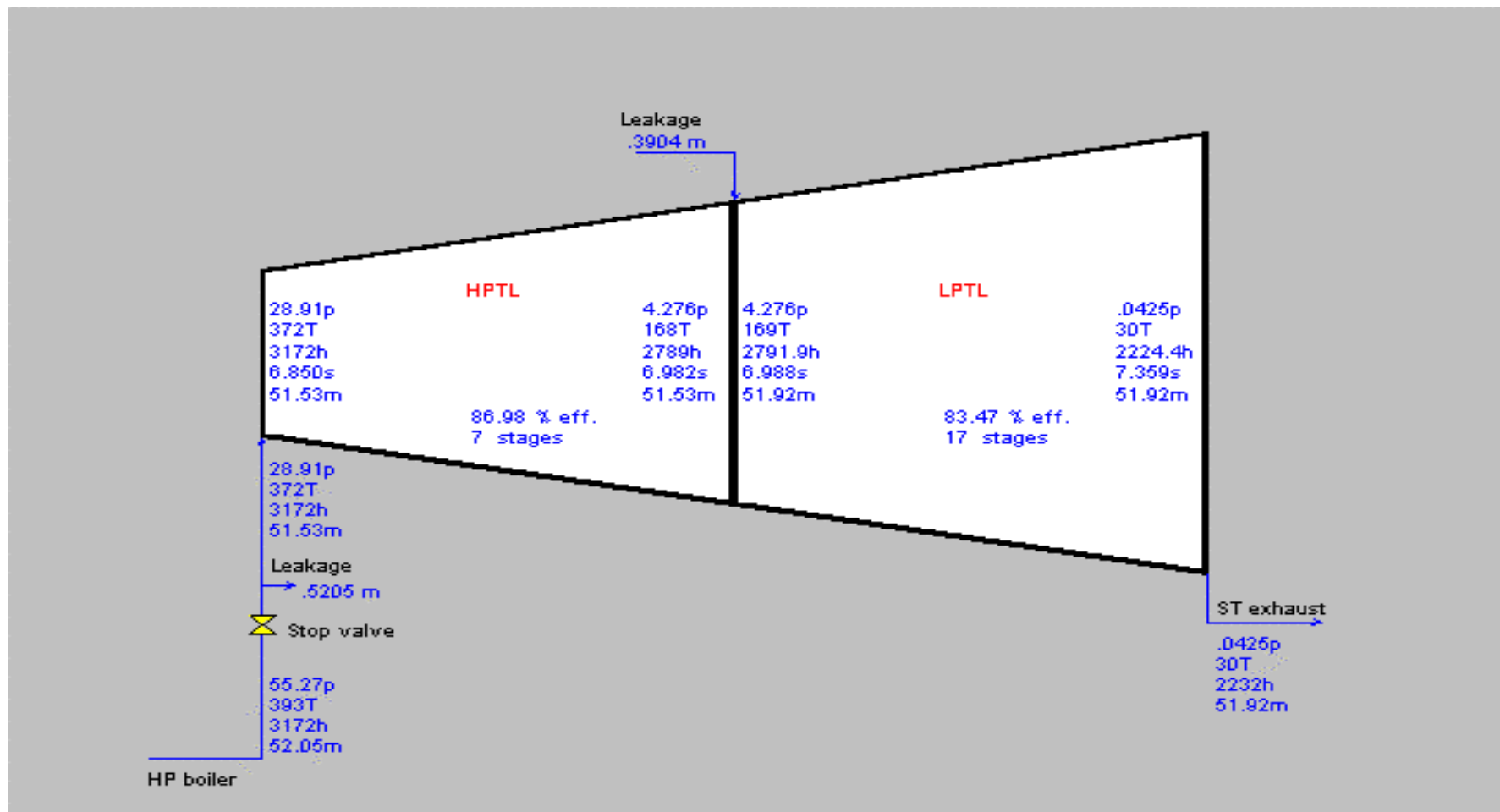
The chart above shows the variation in condenser pressure with plant net power output



The h-s chart above shows the expansion of steam across the single pressure Steam Turbine Generator

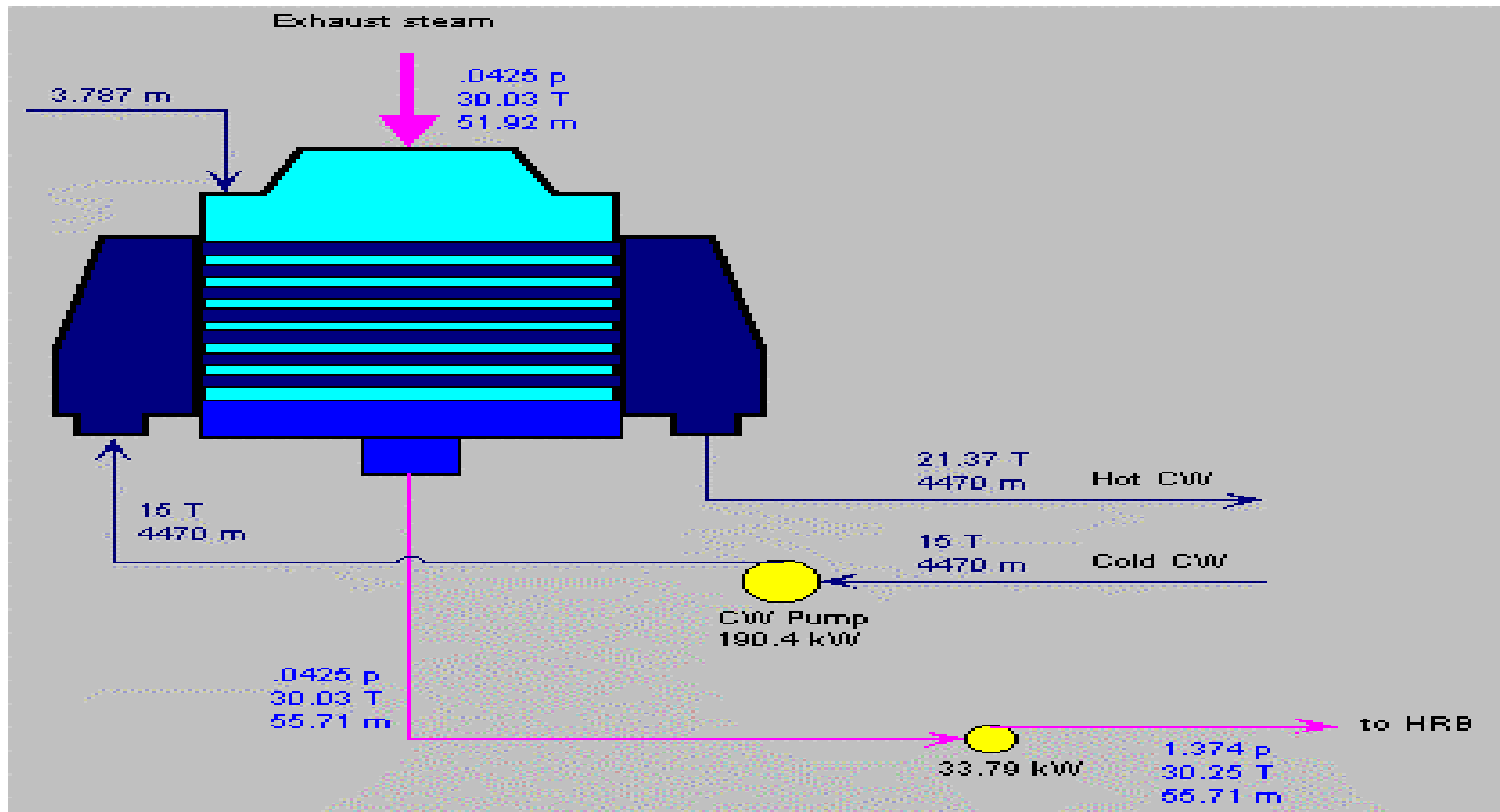


The chart above shows temperature profile and heat transfer across the single pressure HRSG

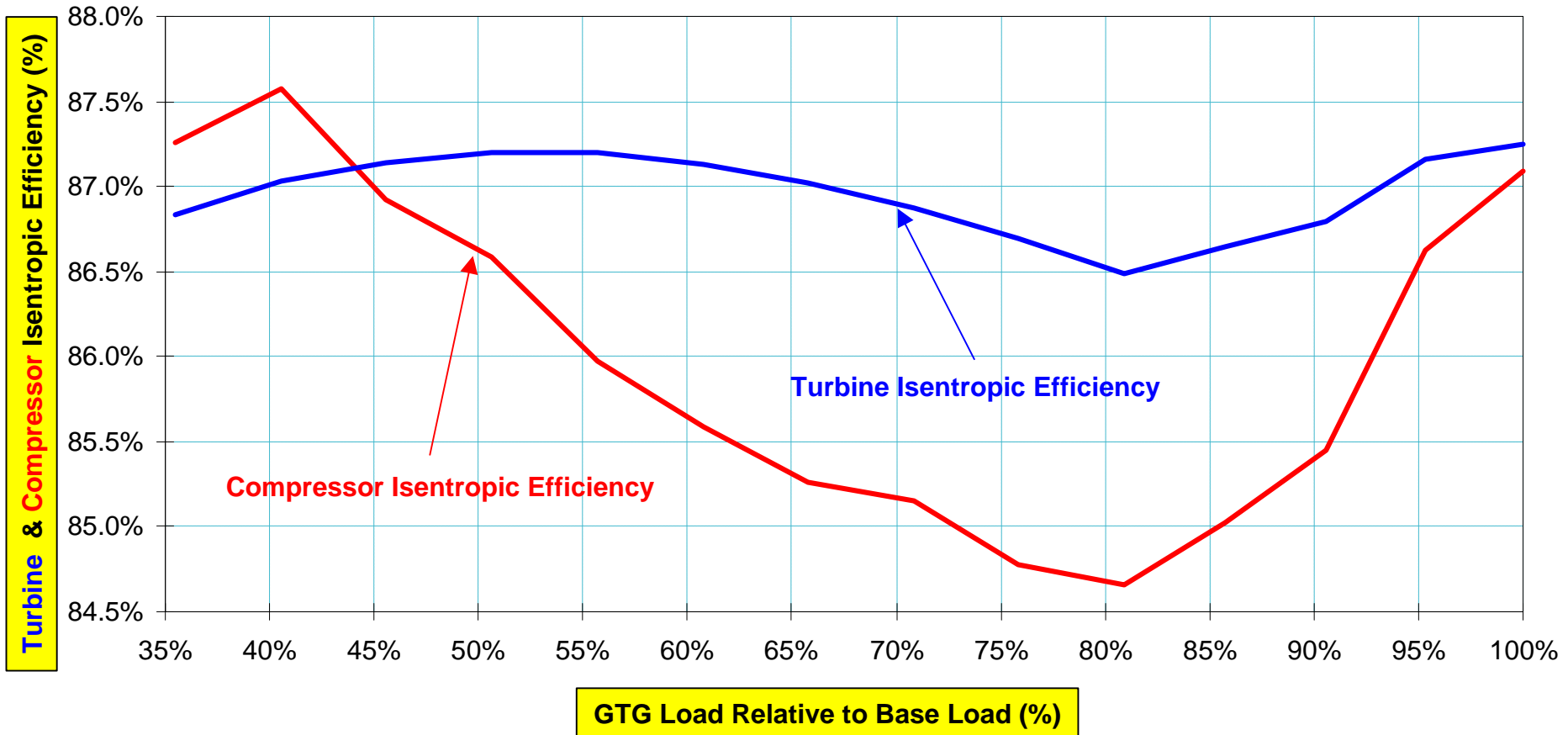


The chart above shows the steam flow across the single pressure Steam Turbine Generator

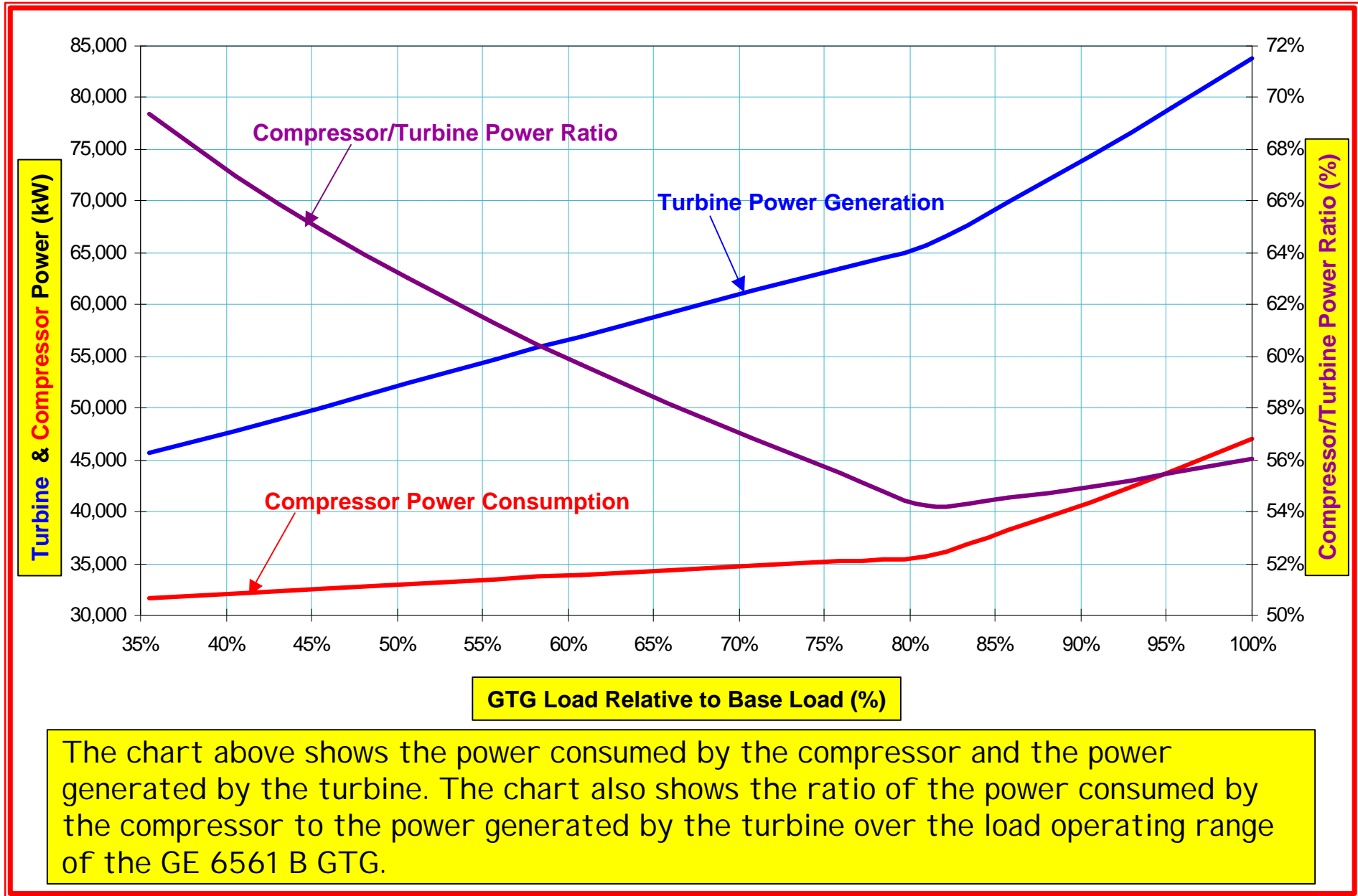


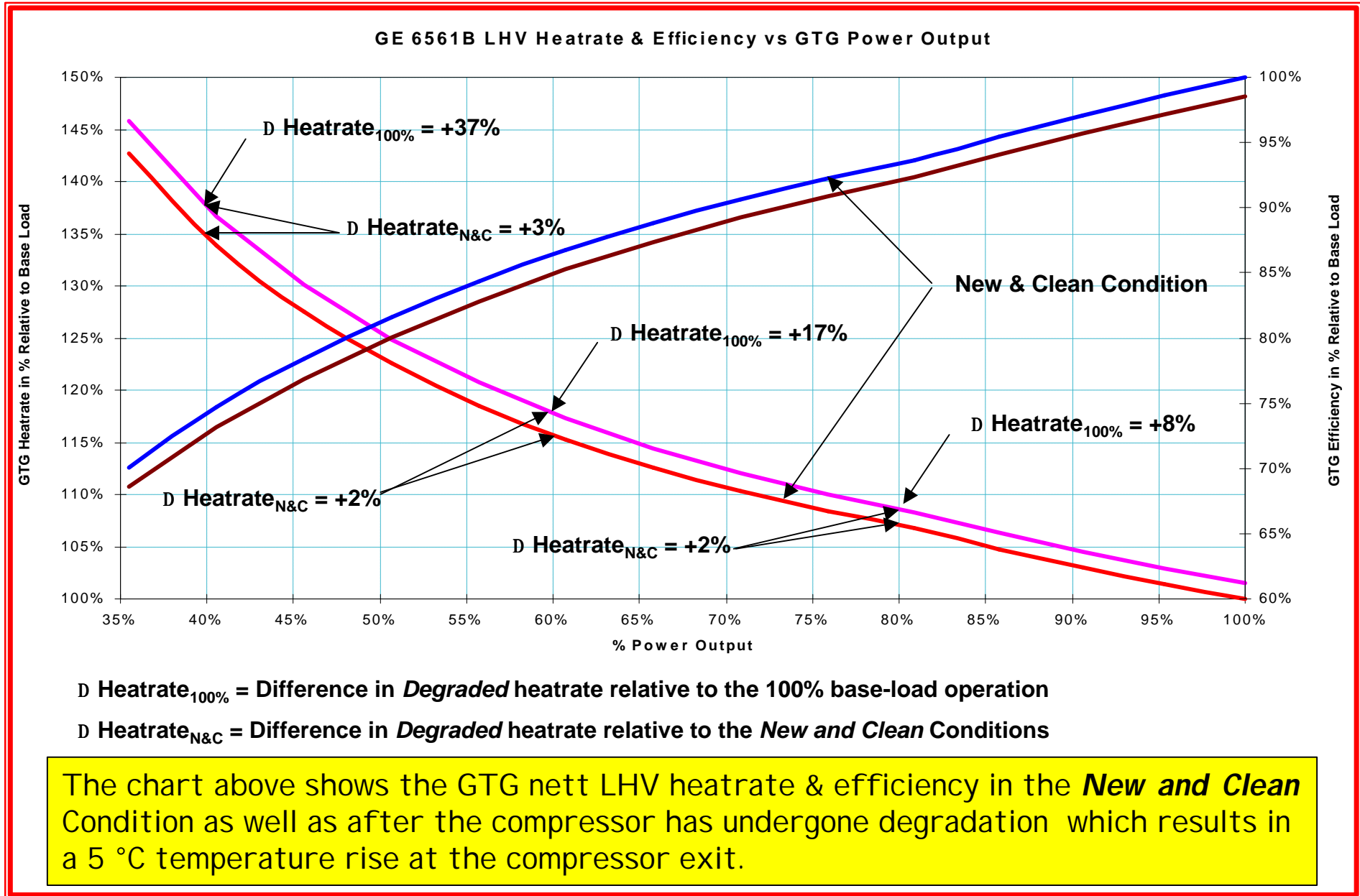


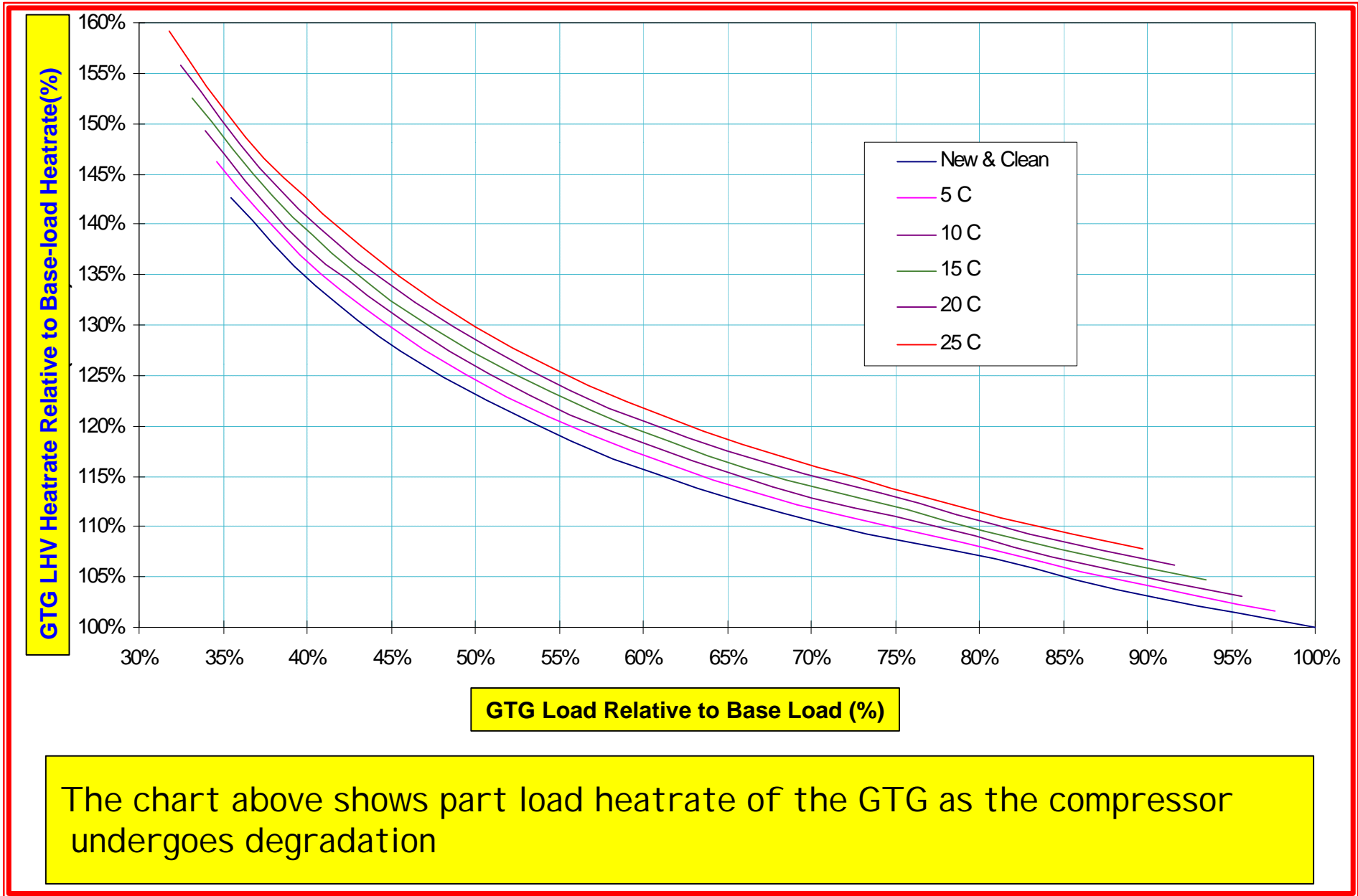
The chart above shows the fluid flow across the once through water cooled condenser



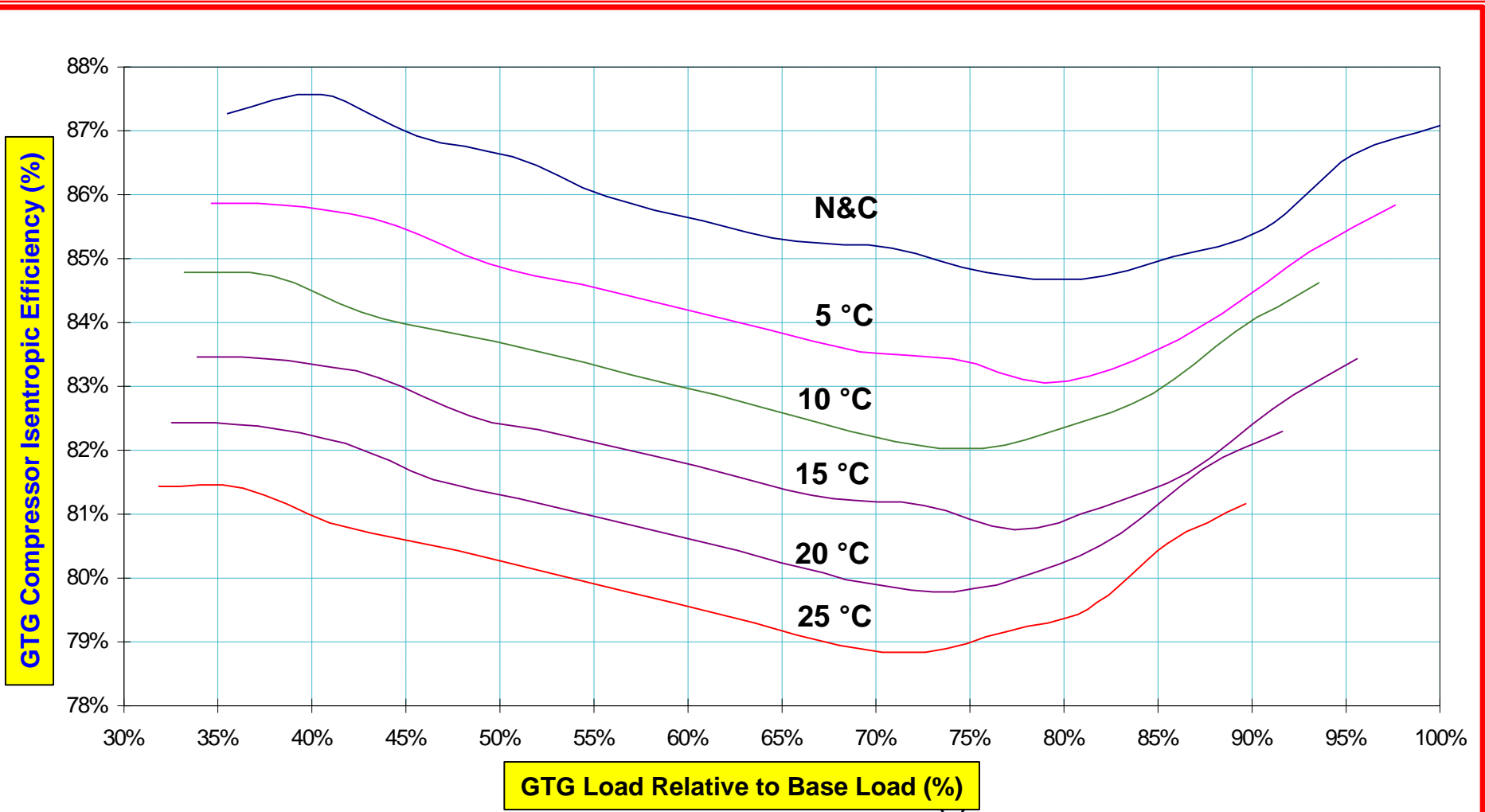
The chart above shows the compressor and turbine isentropic efficiency for the GE 6561B GTG at various loads







The chart above shows part load heatrate of the GTG as the compressor undergoes degradation



The chart above shows the GTG compressor isentropic efficiency as it undergoes degradation

