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The waste heat from the gas turbine is routed to the nearby steam turbine, which generates extra power. Improve Performance with Digital How a Combined-Cycle Power Plant Produces Electricity

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GAS TURBINE PROBLEMS. Low unit output and low heat supplied to an HRSG may start with the gas turbine. Problems seen with gas turbine performance include: Dirty inlet filters; Dry evaporative...

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The thermodynamic analysis of the combined cycles shows that it is as important to optimize the steam cycle as the heat recovery steam generator (HRSG), and thus its effectiveness epsilon. The difficulties arise because the problem is highly constrained and there may be conflict between these two objectives. A page of this portal presents this issue.

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In many combined cycle plants around the world the benefits of advanced gas turbine technology have not been fully realised due to problems with compressors, combustors, transition pieces, blades and vanes. Meherwan P Boyce, who has been in the turbomachinery business for 44 years, reviews the problem areas. The new generation of combined cycle power plants operates at thermal efficiencies in the range 53-58%, with some incorporating innovative variations on the conventional technology ...

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#### GAS TURBINES IN SIMPLE CYCLE & COMBINED CYCLE APPLICATIONS ...

8. 7 Combined Cycles in Stationary Gas Turbine for Power Production The turbine entry temperature in a gas turbine (Brayton) cycle is considerably higher than the peak steam temperature. Depending on the compression ratio of the gas turbine, the turbine exhaust temperature may be high enough to permit efficient generation of steam using the "waste heat" from the gas turbine.

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