عنوان مقاله:

Thermodynamic optimization of Heat Recovery Steam Generators in combined cycle power plant

محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

Combined cycle power plants (CCPP) are preferred technology for electricity generation due to less emission and high efficiency. These cycles are made of a gas turbine and Heat Recovery Steam Generator (HRSG) .A combined cycle power plant with dual pressure and supplementary firing is selected for this study. The optimum design procedure included designing an objective function (Exergy destruction per unit of inlet gas to the HRSG) subject to a list of constraints. the design parameter (design variable)were drum pressure and pinch temperature difference as well as steam mass flow of HRSG high and low pressure levels. The influence of HRSG inlet gas temperature on the steam cycle efficiency is discussed. The results show increasing HRSG inlet gas temperature has less improvement .on the steam cycle efficiency when it is over 650oC

کلمات کلیدی:

Exergy analysis, heat recovery steam generator, Supplementary firing