

Trigeneration: A Comprehensive Review Based On Prime Movers and Cooling Technologies

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Abstract: The fast depletion of fuels and huge demand for fuel in transport, power and agricultural sectors activates the research and development of substitute energy resources to maintain economic development. Hence a lot of work has already been done in the direction of alternative fuels like hydrogen, bio-diesel, and other additives like alcohols and energy as also energy conservation techniques to enhance the efficiency of various systems. In this report the prime focus is on waste energy (heat) utilization techniques in heating and space cooling. This paper provides a comprehensive review of the latest developments in the field of combined cooling, heating and power generation. On the basis of comprehensive review key areas for future work and investigation aiming to improve tri-generation systems performance include, development of cost-effective micro-scale tri-generation systems to serve residential building and automobile applications employing ORC and IC engine units.

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