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Thermoelectric Power Generation from Industrial Waste Heat: Challenges and Opportunities

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Abstract: *The increasingly worldwide problem regarding rapid economy development and a relative shortage of energy, the internal combustion engine exhaust waste heat and environmental pollution has been more emphasized heavily recently. Out of the total heat supplied to the engine in the form of fuel, approximately, 30 to 40% is converted into useful mechanical work. The remaining heat is expelled to the environment through exhaust gases and engine cooling systems, resulting in to entropy rise and serious environmental pollution, so it is required to utilized waste heat into useful work. As waste heat recovering techniques, such as thermoelectric generator (TEG) is developed, Due to distinct benefits of thermoelectric generators, they have become a promising alternative green technology...*

Keywords: Waste heat from I. C. Engine, waste heat Recovery, TEGs, Electricity

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