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Modelling of waste heat recovery for combined heat and power applications

Georges Descombes , , **Serge Boudigues**

Conservatoire national des arts et métiers, Laboratoire de génie des procédés pour l'énergie, l'environnement et la santé (EA21), Case 333 292 rue saint Martin, 75141 Paris cedex 03, France

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Abstract

The current environmental context dictates to reduce the pollutant emissions by improving thermal efficiency of the energy production units. The authors present some studies of cogeneration applications using gas turbines and thermal engines. The on-going research concerns a detailed study of thermodynamic modelling cycles with energy recovery. These combined cycles with gas turbine and ICE can generate a potential increase of about 10% of the energy efficiency. They will generate a technological complexity and the over-charge must be estimated. At last, the authors insist on the necessary synergy between gas turbines and thermal engines.