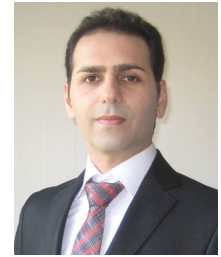




KTH-CCGEx

# Waste Heat Recovery on Internal Combustion Engines by Using Turbines



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Nowadays turbomachines are widely used on internal combustion engines. However, turbomachines and reciprocating engines are different in nature and it is often a challenge to match a turbomachine with an internal combustion engine with high efficiency in a wide range of operation. Reducing fuel consumption of engines is one of the main issues in research and development of internal combustion engines. Almost one-third of fuel energy in internal combustion engines is wasted through the exhaust flow. One way to recover this otherwise wasted heat is to apply turbines on the exhaust system; however this makes a back-pressure for the engine which has a negative impact on the engine fuel consumption. The aim of this research is to show the potential of using turbines as a waste heat recovery system on internal combustion engines in combination of advanced technologies.

