EXERGY

02/ WASTE HEAT RECOVERY
FROM INDUSTRIAL PROCESSES

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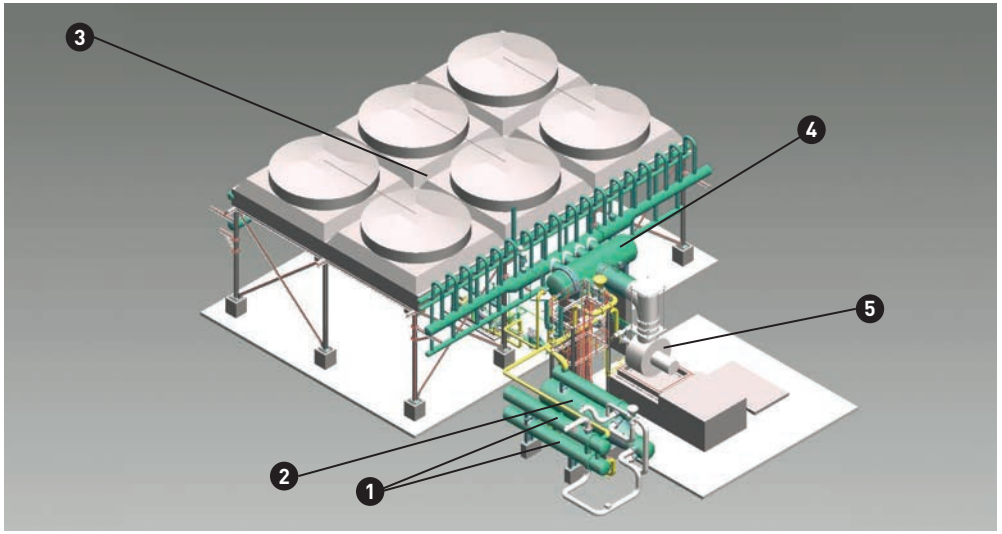
Heat Recovery has become one of the major choices towards achieving these aims for the industrial sector and ORC technology is considered one of the most effective solutions for lower temperature applications (from 90°C up to 350 °C) and for small power output.

EXERGY has brought all the advantages of ORC systems to a higher level thanks to the innovative Radial Outflow Turbine (ROT), that allows better efficiency and lower operational and maintenance costs, also eliminating the requirement for water treatment and make up.

Exhaust heat can be recovered from:

- CEMENT PLANTS: RESIDUAL HEAT IN THE EXHAUST GASES GENERATED IN THE CEMENT MANUFACTURING PROCESS IN THE CLINKER COOLERS
- STEEL MILLS: GASES FROM COKE OVENS, BLAST FURNACES, BASIC OXYGEN FURNACES AND ELECTRIC ARC FURNACES
- GLASS FACTORIES: DIRECT FIRED, RECUPERATIVE, REGENERATIVE, UNIT MELTERS, OXYFUEL AND MIXED FUEL FURNACES
- OTHER INDUSTRIAL APPLICATIONS



1 Preheater 2 Evaporator
3 ACC 4 Recuperator
5 Radial outflow Turbine (ROT)

When compared to traditional ORC cycles, EXERGY's technology offers simplicity, compactness, higher efficiency of the turbine, optimal match with the heat release curve and better operation at partial loads; this ensures a higher system efficiency and lower specific cost in addition to the following advantages:

- NO WATER TREATMENT PLANT OR MAKE UP WATER
- AUTOMATED OPERATION
- COMPETITIVE CAPITAL COSTS, LEADING TO FAST PAYBACK
- HIGH EFFICIENCY AT A VARIETY OF OPERATING TEMPERATURES AND LOADS
- FAST START UP AND SHUT DOWN
- FLEXIBLE PLACEMENT, AWAY FROM THE HEAT SOURCE IF REQUIRED
- REDUCTION OF THE PLANT ENERGY CONSUMPTION AND CARBON FOOTPRINT, IN THE CASE OF INDUSTRIAL PROCESSES