# Waste heat power generation dual wind extraction patent

Can a poly-generation system eliminate waste heat from a wind turbine?
Conclusion A new poly-generation system for the production of power,heating,cooling,and freshwater was proposed for proper waste heat eliminationof a wind turbine. The proposed system benefited from a power-cooling absorption cycle as well as a DHWHX for waste heat recovery in the wind turbine cooling subsystem.

How a wind turbine cooling system benefited from a dhwhx?
The proposed system benefited from a power-cooling absorption cycle as well as a DHWHX for waste heat recoveryin the wind turbine cooling subsystem. Then,the produced power in the absorption cycle was transmitted to a RODU for the production of freshwater.

What is waste heat recovery of a wind turbine for poly-generation purpose?
Waste heat recovery of a wind turbine for poly-generation purpose. Energy and exergo-economic analyses are done through parametric study. Wind turbine is the major contributor in exergy destruction and cost rates. This waste heat recovery produces 73.25 kW heating,45.86 kW cooling,and 0.274 kg/s of freshwater.

Can wind turbines recover waste heat?
In the last decades,the waste heat recovery of the generator of wind turbines attracts little attention (for freshwater [9 ],power [10 ],heating [11 ],and cooling production [12 ]),and a few studies have been done in this field[,,].

Can a wind turbine be used as a heat source?
As it is clear from the literature review,wind turbines are of a high potential for waste heat recoverybut a few studies have been done about using this waste energy in high-performance poly-generation systems. In this research,this waste energy is utilized as a heat source in a new power-cooling LiBr-H 2 O absorption cycle and a DHWHX.

Are waste heat recovery systems the future of the shipping industry?
Among these last mentioned,waste heat recovery systems,already developed and applied in industrial stationary power generation applications,will have a predominant role in the very next future of the shipping industry(Lion et al. 2020).

This research investigates the performance of a waste heat recovery thermoelectric generator (TEG) designed to enhance power generation through a novel energy-free cooling technique. ...

Thermoelectric power generation offer a potential application in the direct conversion of waste-heat energy into electrical power where it is unnecessary to consider the cost of the thermal ...

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In particular, the operating ranges of sCO2 and other heat to power systems are reported as a function of the waste heat source temperature and available thermal power. The resulting map ...

A reduction of emissions, implying a conversion of waste heat to more noble forms of energy and a concurrent increase of efficiency of the same devices and processes, is of paramount importance.

Supercritical CO2 power cycles have been deeply investigated in recent years. However, their potential in waste heat recovery is still largely unexplored. This paper presents a critical review of engineering background, ...

In this paper an Organic Rankine cycle is used as waste heat recovery cycle for a 250 x 2 MW thermal power plant. The exhaust flue gas (80 to 130°C) in the thermal power ...

The invention relates to the generation of electricity and the ventilation of urban areas with the use of waste heat from air-conditioning systems, waste organic matter, fuel cells and wind. A first ...

heat sources. Energy extraction from industrial waste heat, biomass energy, solar energy, and turbine exhaust heat is becoming more popular. Organic Rankine Cycle is an effective way to ...

The pilot installation will convert waste heat from a gas turbine into emissions-free power using supercritical carbon dioxide (sCO 2) Enough electricity will be produced to ...

The supercritical CO2 power cycle (s-CO2) is receiving much interest in the utilization of waste heat sources in the medium-to-high temperature range. The low compression work and highly regenerative layout result in high ...

This method of heat extraction has gained popularity, which is emphasized by the fact that the International Organization for Standardization (ISO) is publishing a standard for ...

In recent years, an increasing concern of environmental issues of emissions, in particular global warming and the limitations of energy resources has resulted in extensive research into novel ...

Aspects of the invention disclosed herein generally provide heat engine systems and methods for recovering energy, such as by generating electricity from thermal energy. In one configuration, ...

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