

PRESS RELEASE

What could not be done before is now possible: Turboden Large Heat Pump decarbonizes industrial steam demand.

Pulp&Paper Industry chooses Turboden to generate steam with zero CO2 emissions.



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Turboden, Mitsubishi Heavy Industries group company, and worldwide player in technological solutions for industries decarbonization, will generate high temperature heat (steam) without CO2 emissions with his second large-heat-pump (LHP) project.

Turboden signed a contract with a European¹ leading company in the **pulp & paper industry**, that wanted to feed its process with decarbonized steam.

The innovative heat upgrade system, based on the integration of Turboden LHP and a mechanical vapor compressor, will exploit low-grade heat (ranging between 10°C and 20°C.) to produce, absorbing green electricity, 12 MWth of superheated steam at 170°C needed in the paper production process.

The heat upgrade system solution has been developed by Turboden and its customer to perfectly match with the production process's needs.

"This project is an important milestone for establishing Turboden leadership in large heat pump solutions for customers with high demand of steam or high temperature heat in industrial processes" states Paolo Bertuzzi, Managing Director & CEO Turboden S.p.A



 $^{^{\}mathrm{1}}$ Non-disclosure agreement with the customer.



The project is also a remarkable example of corporate synergies within **Mitsubishi Heavy Industries Group**. In fact, this Turboden large heat pump system has at its heart the compressor of **Mitsubishi Heavy Industries Compressor Corporation (MCO)**.

"MCO is very pleased to provide our compressors to Turboden for the realization of this innovative large heat pump. Thanks to our long experience in the market, we will provide a cutting-edge proven technology in order to achieve outstanding performances with the highest reliability" states Masahiro Kobayashi, Director of Mitsubishi Heavy Industries Compressor Corporation.

Before this project, Turboden developed a LHP solution for the Italian steel industry, Ori Martin; a great example of smart cities development where, the Turboden LHP, integrated into Ori Martin production process, provides heat to the city district heating network, reducing the CO2 emission of the entire system.

For more information, please contact:

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Turboden S.p.A., Mitsubishi Heavy Industries group company, is an Italian firm and a global leader in the design, manufacture, and maintenance of Organic Rankine Cycle (ORC) systems, highly suitable for distributed generation, that generate electric and thermal power exploiting multiple sources, such as renewables (biomass and geothermal energy), traditional fuels, and waste heat from industrial processes, waste incinerators, engines, or gas turbines. Today Turboden expands its technological solutions with gas expanders and large heat pumps to play a broader role in the decarbonization of the district heating sector and of energy-intensive industrial processes.

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