SteamDry

Superheated steam drying for sustainable and recyclable web-like materials

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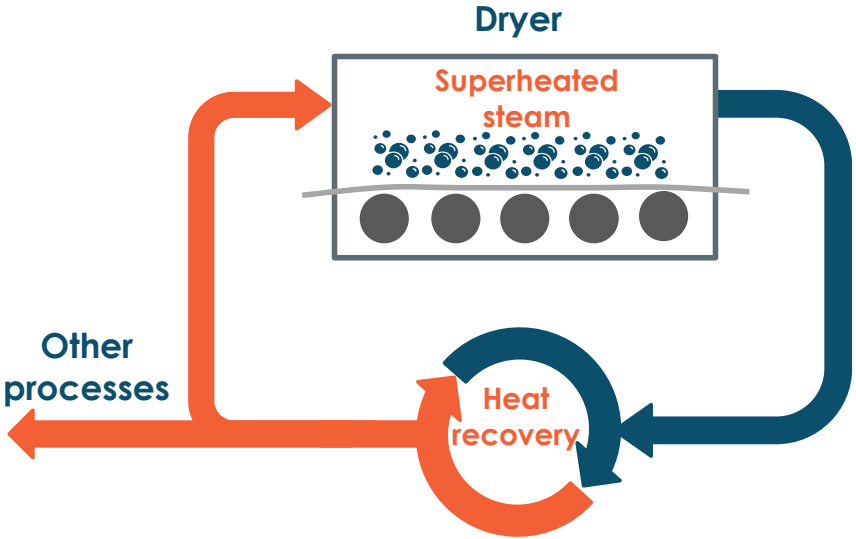
www.steamdry.eu

- Superheated steam as drying medium to remove excess water from materials quickly and effectively.
- Circulating and reheating steam in a closed loop and use of surplus steam for other processes within the facility.
- System integration and advanced digitalisation of monitoring and control systems.
- Demonstration of substantial improvement potential by pilot-scale measurements.



AIT Austrian Institute of Technology GmbH

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Key Benefits

- Enhanced heat transfer and inactivation of micro-organisms, ensuring product hygiene.
- Increasing energy efficiency by heat recovery for various processes.
- CO_2 Emission-free by eliminating reliance on combustion processes.

	CURRENT	SteamDry
ENERGY	~1100 kWh/ton	~450 kWh/ton
CO2 (FOSSIL)	0,45 tCO2/t paper	No emissions
HEAT	30-40% lost to air	Latent heat recovered
SOURCE	Combustion	Electricity

100% Elimination of CO2 emissions

60% Energy savings in thermal drying

40% Energy savings on production line

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Objectives

(1) Developing Energy-Efficient Drying Technology
(2) Achieving CO_2 - Emission Free Drying Process
(3) Advanced Control System for Superheated Steam Dryer
(4) Pilot Superheated Steam Drying Process for Web-like Products
(5) Environmental and Techno-economic Assessment of Superheated Steam Drying
(6) Evaluate Business Potential for Various Product Manufacturing Sectors
(7) Communicate, Disseminate, and Exploit Project Outcomes

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Project duration: 01/2024 – 06/2027

Project coordinator: Harri Kiiskinen, harri.kiiskinen@vtt.fi,

VTT Technical Research Centre of Finland Ltd

Project partners:

VTT, AIT Austrian Institute of Technology, Valmet, BFI Excellence in Applied Research, feuga fundación empresa universidad gallega, SOFIDEL, Smurfit Kappa, AHLSTROM, PILLER Blowers & Compressors, University of Twente., Wageningen University & Research, USC Universidade de Santiago de Compostela, Metsä, sappi

AIT contact: Sabrina Dusek, sabrina.dusek@ait.ac.at

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