ETC
ECO-TECH CERAM

Recovering waste heat
from a ceramic tunnel kiln

Villeroy & Boch
1748

Valence d'Agen, Occitanie - France

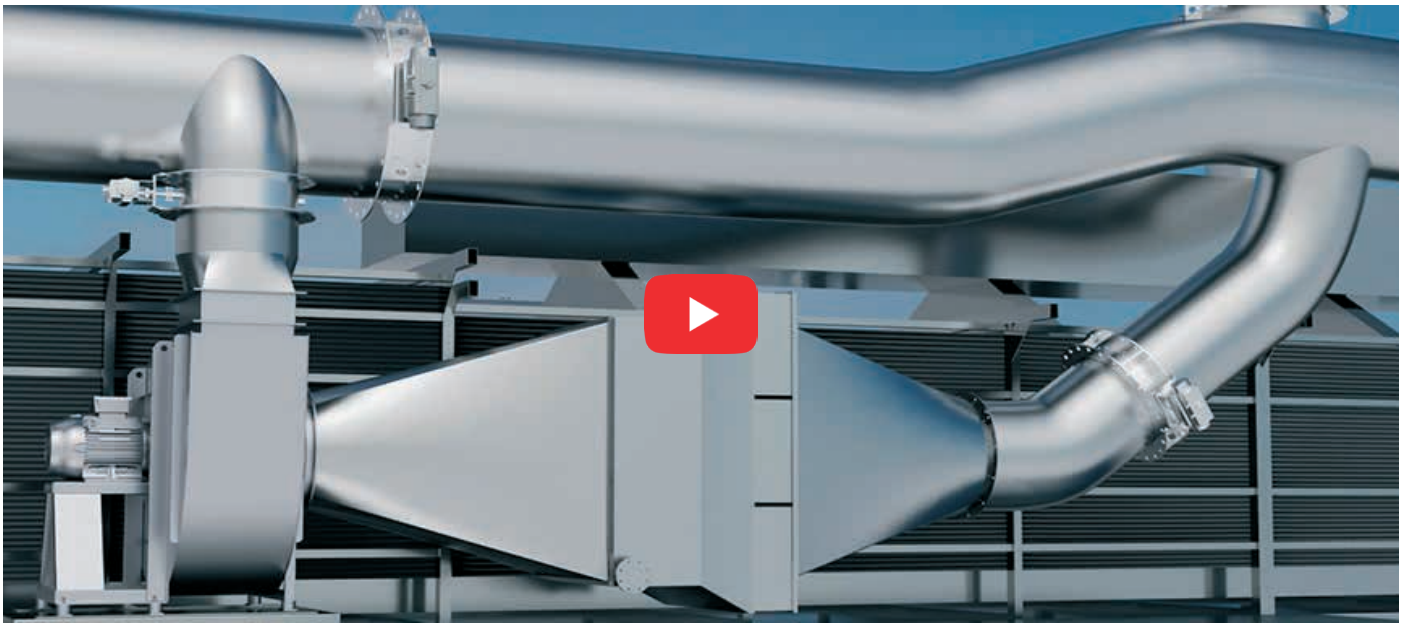
Pictures: tunnel kiln for firing Villeroy & Boch ceramics in Valence d'Agen - flames inside the tunnel kiln (> 250°C)

Industry	Decarbonisation	Energy savings	Productivity gains
Top-of-the-range ceramics	1000 tonnes of CO_2 saved per year*	3000 MWh saved per year, equivalent to 10%	17 % of productivity gains

The project

Villeroy & Boch wants to bring about a real energy and environmental transformation of its production facilities at its Valence d'Agen site.

Eco-Tech Ceram is proposing to **recover the high-temperature waste heat** (> 250°C) from the kiln by installing an exchanger from the kiln to the plant's dryers to the plant's dryers.



**Based on an emission rate of 0.201 kgCO2/kWh consumed*

Customer needs - requests

Villeroy & Boch wanted to carry out a real environmental and energy transformation of its production facilities in Valence d'Agen. The manufacturer called on Eco-Tech Ceram to prepare a comprehensive multi-year decarbonisation programme.

Project progress

➢Study of energy recovery options identified for the site's facilities
➢Solutions identified by Eco-Tech Ceram to optimise the energy efficiency of the various facilities studied

The study focused on renovating the plant's dryers, recovering waste heat from the compressors and insulating the slip and enamelling tanks.

Eco-Tech Ceram achievements

➢Detailed study of the dryers and identification of heat losses
➢Overhaul of insulation, defective parts and thermal bridges
➢Approach to possible savings, comparison with conventional ceramic drying
➢Proposed solutions in terms of process regulation
➢Costing of the solution for each dryer
➢Economic study of the solution and financial package
➢Sizing of a storage tank
➢Installation of a power to heat system
➢Design of the solution for capturing and utilising waste heat

Each energy optimisation solution has been studied in such a way as to:

➢Detailed study of dryers and investigation of heat losses
➢Removal of insulation, defective parts and thermal bridges
➢Approach to possible savings, comparison with conventional ceramic drying
➢Costing of the solution for each dryer
➢Economic study of the solution and financial package

Description of the proposed solution

Interdependent heat recovery and energy optimisation projects on the production process (cooking + drying):
➢Replacing the 11 ageing dryers with 5 new, more efficient dryers powered by waste heat from the tunnel kiln.

The drying process is 100% carbon-free.

The **energy transition** and the **decarbonisation** of industry are no longer unattainable challenges!

Contact us

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