

BENEFITS

Capacity increase
Emission reduction
Energy efficiency
Fuel saving
Postponing boiler investment
Recovering of waste heat

CASE BAKERY

Food production industry

#bakery #foodproduction
#processindustry #heatrecovery
#nomoreclogging

A bakery uses a significant amount of energy in baking process, typically gas or electricity. All of this energy is used to evaporate water from dough and released after oven and lamellar heat exchanger to the atmosphere. At the same time, bakery buys external heating energy to be used in keeping the facilities warm over cold winter. They wanted to reduce their heating costs by recovering the heat from their ovens.

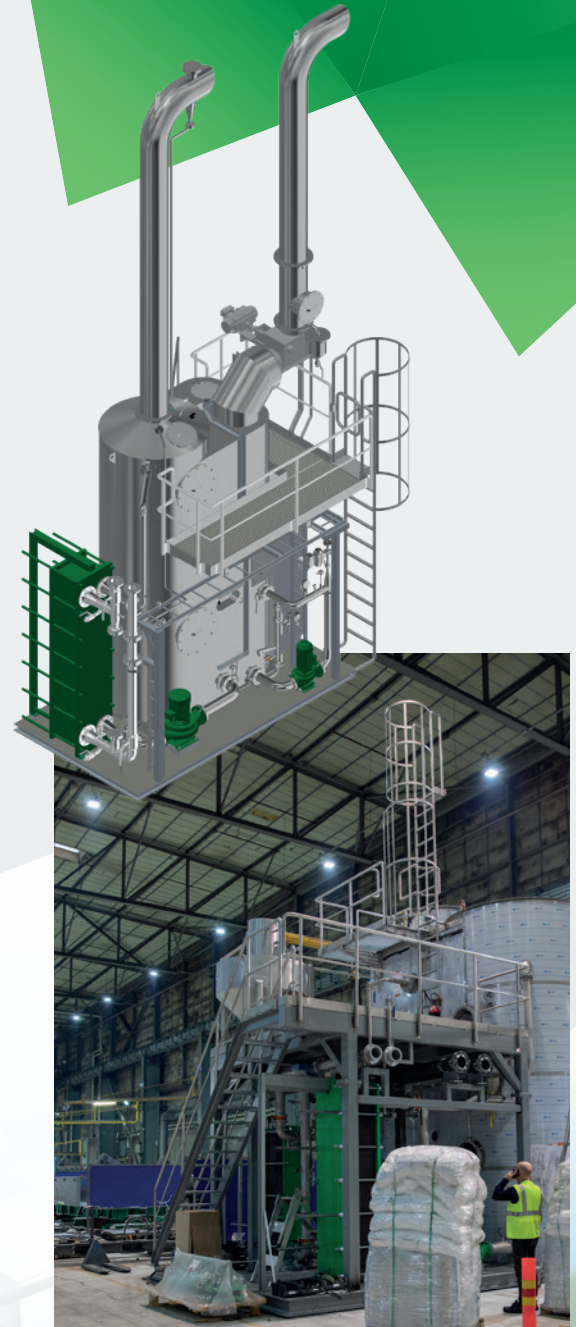
Another problem was their lamellar heat exchanger, that was often clogged due to particles from their process, thus reducing performance and requiring continuous maintenance.

After a thorough study on site with Caligo engineers, the bakery invested in 1,5 MW basic scrubber. Scrubber also replaced the lamellar heat exchangers.

Caligo CSx-B scrubber collects the humid baking fumes from 2 ovens and recovers the condensated heat directly to the facility heating network as 65–78°C water.

As result the external heating of the facilities is not needed any more. Payback time of the investment is estimated to be about 2 years. Also, the problem with heat exchangers was solved simultaneously. The bakery is planning to add more ovens to the system and even start selling the heat to the local district heating company.

Caligo scrubbers, with or without integrated heat pump, are delivered always as factory tested Plug And Play units, including all HW&SW needed to autonomous running of the unit. Site time during installation of CSx is only a few days.



Caligo Industria Oy is a Finnish CleanTech company, who markets and sells product and system solutions for energy recovery and purification of flue gases in the energy and processing sectors as well as for the utilisation of waste heat from the processes.

Caligo is a part of Swedish Addtech Group.

Caligo Industria Oy | sales@caligoindustria.com

www.caligoindustria.com

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