

MONDELEZ BELGIUM BISCUITS PRODUCTION - HEAT RECOVERY OVENS

Mondelez Herentals, known for its LU biscuits (Cent, Cracotte, Heudebert, Prince, Pim's, Tuc, Baudoir, Cha-cha, etc.), commissioned INDUSTRIUM to carry out a feasibility study of the possible heat recovery from the outgoing gases of the baking ovens.

CUSTOMER

Mondelez Belgium

ARCHITECT / DESIGNER

LOCATION

Herentals

SURFACE

0 m²

BUDGET TECHNIQUES

STUDY PERIOD

IMPLEMENTATION PERIOD

SERVICES

Feasibility studies & energy plans

SECTORS

Industry

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It was chosen to carry out this study on the Prince lines because on these baking ovens the outgoing gases have a temperature of around 225 °C. Given the relatively limited flow rate per chimney, it was opted to bring all outgoing gases together first and only then provide a heat exchanger.

After an in-depth study with extensive measurement campaign and pinch analysis, it was calculated

that a thermal output of about 500 kW can be exchanged with water. The heat from this is used to heat up hot process water for the plant via a heat exchanger and buffer tank.

On an annual basis, approx. 14,500 GJ_{prim} could be saved in this way taking into account the additional consumption of electricity. The payback time of the project was around 3.5 years.

Based on this study, an extrapolation could be made to apply this measure to the other ovens in the plant.