

Case Study

Steam Injection in the Clay at a Ceramics Plant

Main activities	Ceramic plant that produces 110,000 tons of baked clay building products a year on three production lines
Region	EU
Energy Consumption	5,000 tons of fuel oil and 8,910 MWh of electricity per year



Project goals

To reduce energy consumption by installing a steam boiler for mixing water with clay in the form of dry saturated steam.

Main investments

A single steam boiler for production line 3.

Benefits

The system:

- shortens the drying cycle, facilitating an increase in output and improves quality by producing more even results with fewer breakages,
- reduces moisture needs, thereby lowering energy consumption, and
- reduces the mechanical energy needed in the extrusion process.

Applications

Processes requiring addition of water, and later drying.

Investment type	Cost (€)	Energy saved (KWh/year)	Saving achieved (€/year)	Payback period from energy saving
Steam boiler	50,000	3,260 GJ for the drying process 139,400 kWh for the extrusion process	10,000 for the drying process 10,700 for the extrusion process	2.4 years