RECP Best Practices Catalogue

Energy recovery of fumes for preheating combustion air

Developed within the framework of MED TEST II

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

switchmed

The SwitchMed Programme is funded by the European Union

Best Practice - Energy recovery of fumes for preheating combustion air

SECTOR:	**Textile & Readymade Garments**
SUBSECTOR:	Manufacture of other textiles
PRODUCTS	Upholstery and clothing, indoor and outdoor furniture
CATEGORY	Process control or modification
APPLICABILITY	Utilities

COMPANY SIZE	160

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Description of the Problem (Base Scenario):	The drying trains work on the principle of forced air convection. Gas burners heat the air used to dry fabrics, which is discharged at high temperatures by the chimney to the outside, resulting in energy losses.
Description of the Solution	It is a matter of recovering these calories at the point of the combustion chimneys to preheat the combustion air and/or the fresh air for drying. The same applies to the various chimneys for the evacuation of cooking gases impregnated with moisture and VOC (Volatile Organic Compounds).

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Economic Gain	We estimate that the benefits are on the order of 20% of current consumption of propane gas, about € 7,909
Environmental Gain	A reduction in Propane consumption of 7.3 tons per year GHG: 22 tons of CO_2/year
Health and Safety Impact	Not Applicable

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Investment and Financial Indicators	The amount of investment is to be established during the feasibility study. It should be around € 45,454 (Time for Return on Investment: 5.7 years)
Suppliers	There are several Suppliers of smoke/air energy recovery equipment.
Other aspects	None
Implementation and New Indicator	Under study