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Case Study

Low Cost Heat Recovery in a Textile Plant

Main activities	Textile factory which produces synthetic carpet yarn and woven nylon nets for the fishing industry
Region	EU
Energy Consumption	€420,000 annually

Project goals

The company manufactures, heat-treats, dyes and then dries nylon netting. This is an energy intensive process and energy costs are a significant overhead. The investment aimed to optimise the heat treatment and dyeing processes in order to reduce energy consumption, by adding two new forms of heat recovery.

Main investments

Process 1: Heat recovery from a new heat setting and dyeing process. A new closed cycle dyeing process was installed allowing heat recovery and reducing water usage.
Process 2: A new net drying process using heat recovered from the air compressors (replacing old steam heating).

Benefits

Process 1: 2,500 m^3 of water saved, 1.6 GWh of gas saved.
Process 2: 2.1 GWh of gas saved.
Decommissioning of old steam plant.

Applications

Any industry operating an old steam plant.
Any industry operating compressors and requiring low grade heat for drying.

Investment type	Cost (€)	Energy saved (GJ/year)	Saving achieved (€/year)	Payback period from energy saving
Dye house redesign and heat recovery	62,000	1.6 GWh	9,300 (energy and water)	1.5 years
Compressor heat recovery	8,000	2.1 GWh	25,000	
Removal of steam boiler plant			10,400	