News No. 14

PLEVA

SENSORS AND CONTROLS

Energy Costs are Threatening the Existence of Textile Companies

Beside the financial crisis and the structural change in the global textile industry the increasing energy costs are actually jeopardizing the existence of many textile finishing companies. Therefore the essential need of getting highest process transparency in the cost and quality relevant parameters using state of the art measuring and control systems in all energy-intensive textile processes is obvious.

Energy-Intensive Textile Finishing Processes

Drying
Curing
Heat-Setting
Fixing
Condensation
Cross-Linking
Moist Cross Linking
Thermosol Dyeing

and others

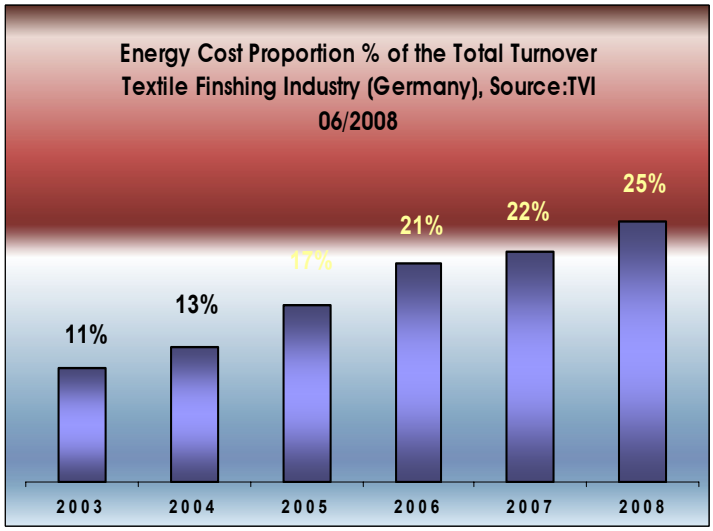
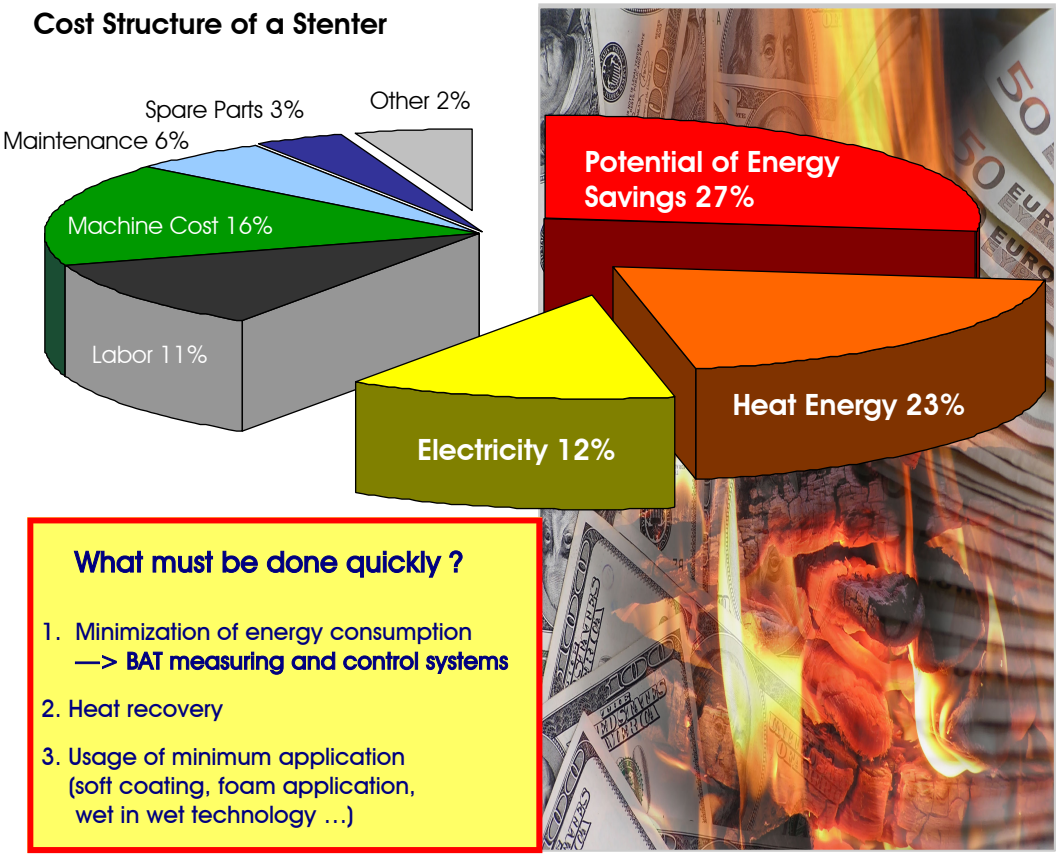


Fig. 1: Percentage of energy costs versus turnover in the Textile Finishing

Cost Structure of a Stenter

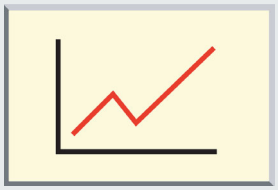


What must be done quickly ?

1. Minimization of energy consumption
   —> **BAT measuring and control systems**
2. Heat recovery
3. Usage of minimum application (soft coating, foam application, wet in wet technology …)

"Retrofitting Strategy"
ROI < 5 months

Data monitoring and evaluation



"If you get your quality under control you get your costs under control"

Best Available Technology

Sensors for

- Exhaust humidity
- Residual moisture
- Fabric and air temperature

Process visualization and control systems

PLEVA GmbH
Rudolf-Diesel-Strasse 2, D - 72186 Empfingen / Germany
Tel.: +49 (0) 7485 -1004, Fax: +49 (0) 7485 -1009

www.pleva.org

info@pleva.org

PLEVA

SENSORS AND CONTROLS

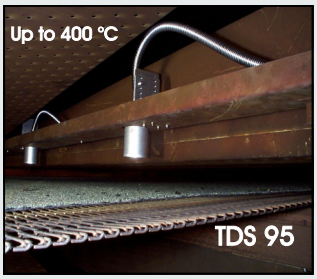
The Solution

Best Available Technology for Textile and Carpet Dryers

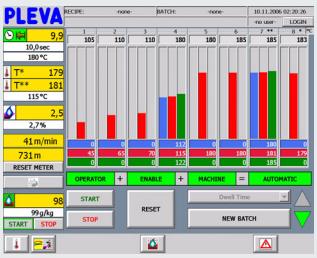
Exhaust humidity

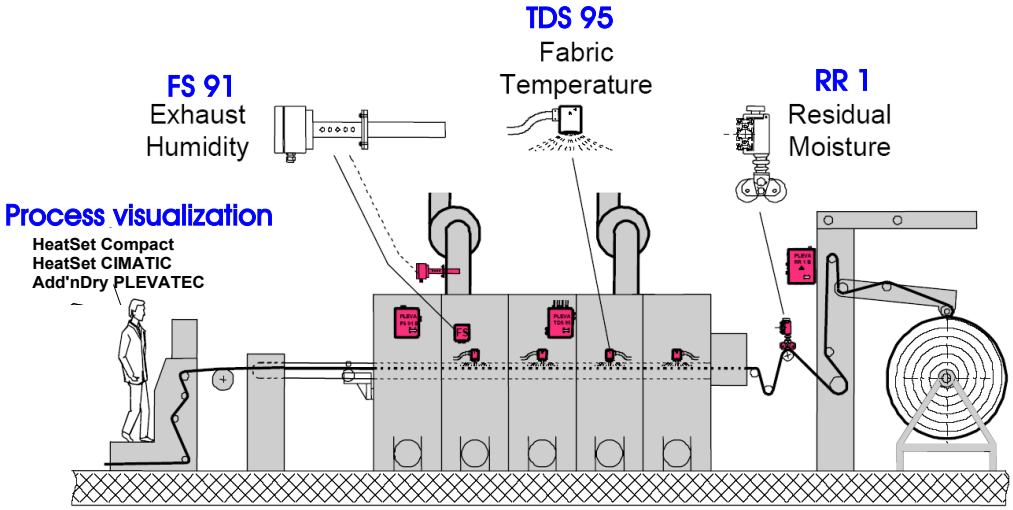
Residual moisture

Fabric and air temperature



Process visualization





- **Exhaust humidity measurement with FS 91**

  Measuring and controlling humidity to load exhaust air most efficiently with humidity. This reduces the hot exhaust air volume and thus unnecessarily used energy dramatically.

- **Residual moisture measurement with RR 1**

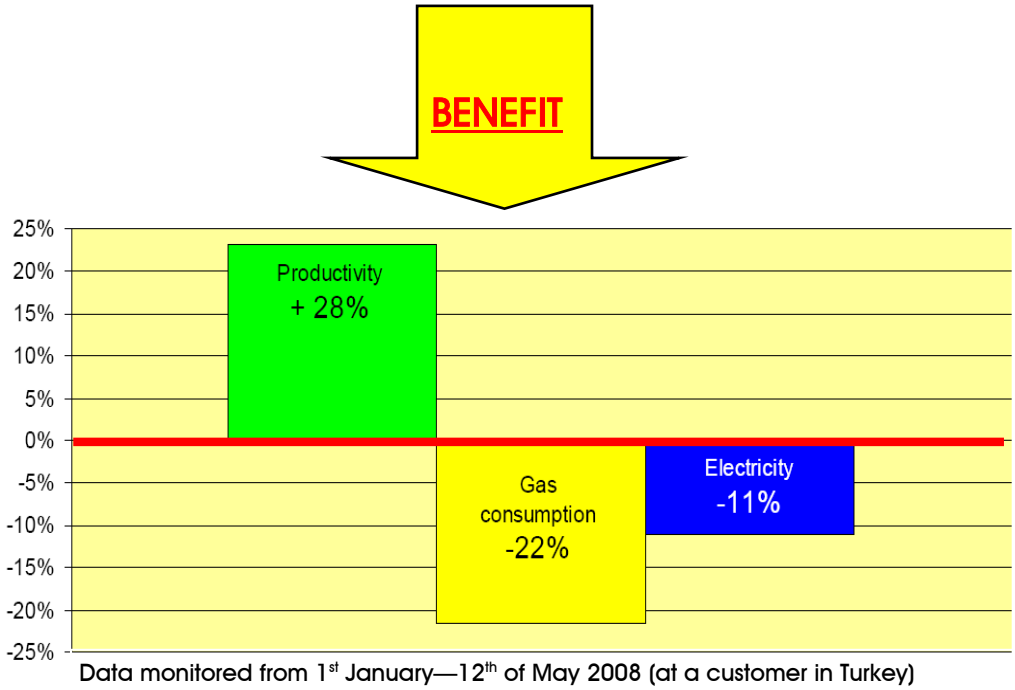
  Residual moisture control provides highest productivity at lowest energy costs. Overdrying and overheating of fabric will be avoided.

- **Fabric and air temperature measurement with TDS 95**

  Several fabric temperature sensors inside the dryer along the fabric run provide perfect supervision and optimization of heat treatment processes. You earn highest productivity with lowest energy input.

- **Process adapted controllers and visualization systems are available**

  Ask for HeatSet COMPACT, HeatSet CIMATIC, Add'nDry PLEVATEC.



Data monitored from 1st January—12th of May 2008 (at a customer in Turkey)