

As part of the SwitchMed programme, UNIDO supports industries in the Southern Mediterranean through the transfer of environmental sound technologies (MED TEST II) to become more resource efficient and to generate savings for improved competitiveness and environmental performance.

Tunisia

Société Tunisienne de Vêtement de Travail et de Loisirs (VTL) Textile sector

Context

Number of employees: 94

Key products: Trousers, work clothing, sportswear and prêt-à-porter for ladies

Main markets: International

Management standards: OEKOTEX Standard 100, SA 8000

Société Tunisienne de Vêtements de Travail et de Loisirs (VTL) is an integrated business which specialises in knitting, dyeing, finishing and special treatments for semi-finished items. The company includes a screen printing unit, called VTL8, which participated in the MED TEST II project.

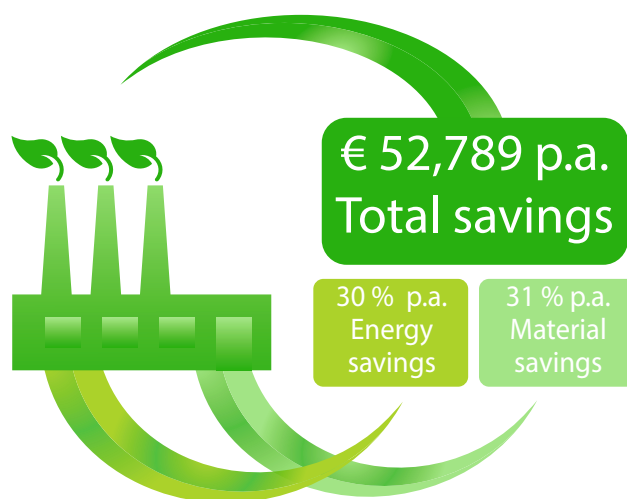
The screen-printing workshop (VTL8) is on the same site as the VTL group, at Menzel Temime in the Nabeul Governorate. Its main products include light knit cut pieces and weft and warp items for various international name brands such as ADIDAS, LACOSTE, etc.

The company is entirely focused on exports, mainly to the European Union.

“Our participation in the MED TEST II project provided an opportunity to implement our loss minimisation process throughout the production process and to conserve resources and thus the environment, particularly since our screen printing activities generate significant quantities of hazardous waste and airborne emissions”

Faycel Ramoul
Director

Benefits



Graphic: UNIDO

The application of an RECP approach in the MED TEST II project has led to the identification of total annual savings of EUR 52,789, particularly in energy and chemicals, versus a total investment of EUR 84,967. The return on investment term varies between 2 months and 3 years.

All of the projects will help to improve the company's environmental performance, by reducing CO₂ emissions by 21%, and the pollutant load of liquid waste by 35% compared to the baseline year, 2015.

The majority of the identified tasks (70%) were accepted and approved by the company, and implementation was begun immediately; the remainder (30%) of the tasks will be retained for further study.

Saving opportunities¹

Action	Economic key figures			Resource savings & Environmental impacts per year		
	Investment euro	Savings euro / Yr.	PBP Yr.	Water & Materials	Energy MWh	Pollution reduction
Reduction in chemicals through procedural changes, new technology and proper maintenance	69,565	41,078	1.7	7.1 t chemical products	120	Total: 167.7 t CO ₂
Energy efficiency system optimisation	14,424	6,688	2.1	-	97	
Automation of dryers and improvement of their combustion	978	5,023	0.2	-	337	
TOTAL	€ 84,967	€ 52,789	1.6	7.1 t raw materials	554 MWh	

¹ Numbers based on production value from 2015

Reduction in chemicals through procedural changes, new technology and proper maintenance

This option consisted of renewing the submicron engraving machinery fleet and switching to laser engraving. This would enable a reduction in the rate of rejected parts, currently 13%, to 3.5%, and the expected gains include a 12% saving in total electrical energy, a 3% reduction in CO₂ emissions and a 35% reduction in solid waste. The other project consisted of introducing automated washers, and screen printing frames to replace a solvent pulveriser and cleaning rags. This was intended to ensure significant solvent savings, estimated at 60%, and to eliminate polluting smells in the workshops, hazardous to workers' health.

Another measure to promote good practice consisted of introducing a management tracking system for spray glues, where significant losses had been found.

This measure will enable a reduction of 3% in the consumption of glue per year, together with a reduction in CO₂ emissions and hazardous solid waste.

Energy efficiency system optimisation

Energy efficiency measures include the acquisition and introduction of an energy management system, the installation of division-level counters, the optimisation of the lighting system in the VTL8 production areas, and the reparation of compressed air leaks. This set of measures has enabled annual savings estimated at EUR 6,688, as well as electrical energy and gas savings of approximately 5% compared to current consumption, which can only be estimated because of the lack of division-level counters.

Automation of dryers and improvement of their combustion

The automation of the dryers consists of equipping these with timers and movement sensors. It is possible to achieve relatively significant electrical energy and a gas savings by installing sensors to detect the presence of items to be dried or polymerised in the dryers, to automatically stop the machines during the preparation of other items to be printed, and to reactivate them with a pushbutton when ready. This is estimated to achieve savings of 50% on total consumption in the dryers, and a reduction of 19% in CO₂ as well as 18% in energy consumption.

The second project consisted of adjusting the combustion parameters in the five gas dryers, enabling a 52% reduction in CO₂ emissions.

“The MED TEST II project has enabled us to establish a culture of efficiency and to develop a company approach that takes environmental impact into account through the conservation of resources. This project is a great start and we will continue to pursue a sustainable development strategy. Thus, we intend to reproduce the results of this project across the VTL group»”

Faycel Ramoul
Director

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