MED TEST II Case Study

switchmed

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

SOCIETE DE FABRICATION TEXTILE (SFT)
Textile sector

Context

Number of employees:	177
Key products:	Textile items for leisure clothing
Main markets:	International
Management standards:	Flosert, Gots, OEKOTEX

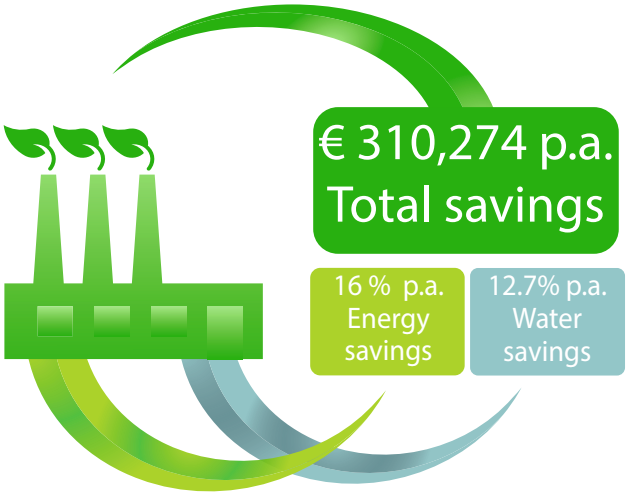
SOCIETE DE FABRICATION TEXTILE (SFT) is specialized in the knitting, dyeing and finishing of fabrics and specifically in knitted items, mainly ecru and dyed knitted lace, knit microfibre, ecru cotton and Santoni, as well as knit ecru and elastic cottons and blends.

The company is located in the Megrine Industrial Zone, in Ben Arous, Tunisia. All of its products are intended for export to international markets. When it participated in the MEDTEST II project, the company had no environmental management system, and through its participation in the project, it has benefited from training for the implementation of the ISO 14001 version 2015 standard.

"Faced with stiff competition and an ever more demanding market, we cannot ignore the impact of an ambitious project such as MED TEST II, in order to minimise our losses during production, and preserve resources, and thus, the environment. We must monitor and control our costs, and the MED TEST II project offers the opportunity to reveal our hidden costs and direct us towards significant areas of savings "

Soumaya Cherif
The Director General

Benefits



Graphic: UNIDO

As part of the MED TEST II project the application of an RECP approach has led to the identification of 11 options offering total annual savings of EUR 310,274, particularly in energy, water and auxiliary products, versus a total investment of EUR 246,709. The payback period on these investments varies between 1 and 19 months.

Water and energy consumption will be reduced by 12.7% and 16% respectively.

All of the projects will enable an improvement in the company`s environmental performance by reducing CO_2 emissions by 15.8%.

Of a total of 11 identified RECP options, 91% of the tasks were accepted and approved by the company manager, and the company has set about implementing these immediately; the remainder (9%) of the tasks will be retained for further study.

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Saving opportunities[1]

Action	Economic key figures			Resource savings & Environmental impacts per year		
	Investment euro	Savings euro / Yr.	PBP Yr.	Water & Materials	Energy MWh	Pollution reduction
Acquisition of a machine for continuous washing of printed materials	86,957	56,348	1.5	8,000 m^3 water	92	Total: 950 t CO_2
Process optimisation	115,217	155,080	0.7	-	99	
Energy efficiency optimisation	45,435	98,846	0.5	5,185 m^3 water	2,771	
TOTAL	**€ 247,609**	**€ 310,274**	**0.8**	**13,185 m^3 water**	**2,962 MWh**	

1 Numbers based on production value from 2014

Acquisition of a machine for continuous washing of printed materials

Admitted and printed fabrics are currently washed in a traditional dyeing machine and must be washed in a suitable continuous washing machine.

Dyeing production gains from the freeing-up of a machine are estimated at EUR 56,348, and the water consumption reduction is estimated at 8,000 m^3.

Process optimisation

The recommended measures include:
(1) The development of a production tracking dashboard software which involves the collection of real-time IT data, from acceptance of the raw materials through the various preparation and treatment stages, for real-time interpretation on an IT-based dashboard. Savings are estimated to make up 1% of turnover.
(2)The installation of a dryer humidity control system to optimise the operating speed as a function of the drying rate. Savings are estimated to be 20% of the thermal energy of a dryer.
(3) The installation of additional trays or vats on the dyeing machines is intended to prepare the baths for multiple dyeing stages, in order to save filling and heating time, estimated at 10% of total energy and chemicals.

Energy efficiency optimisation

The suggested tasks include the introduction of an energy accounting system; the acquisition of two PTZ gas correctors; the acquisition and installation of a battery of automatic capacitors and filters; and the detection and repair of compressed air leaks and the thermal insulation of the speaking circuit.

Forecast cumulative savings are estimated to be approximately 2,770 MWh and 911 t CO_2/year. Real-time tracking of electrical and gas energy consumption on the washing machines automatically results in water savings, because the rate of repeat performance drops. This water-saving is estimated to be 5,184.65 m^3 per year.

"The MED TEST II project has triggered a new process to establish a company which is more concerned about its environmental impact. In fact, a number of projects and measures which have been proposed have already been put in place within the company. The economic gains following the implementation of these RECP measures have begun to make themselves felt and we aim to continue this improvement process by rolling out the TEST approach across the rest of the group"

Soumaya Cherif
The Director General

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