## MED TEST II Case Study



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 NEW AMICO** Textile, finishing sector

## **Context**

Number of employees: 1,045

Key products: Denim sports-wear

Main markets: International

Management

standards: ISO 9001

> ISO 14001 **SA 8000 Oekotex**

An active player in the textile and clothing sector, NEW AMICO is a company which specialises in washing, dyeing and special treatments for made-up articles.

The company is located in Moknine, Tunisia, and its main products and brands comprise denim clothing for various European brand names. NEW AMICO is completely dedicated to the export market. As part of the MED TEST II project, the company has benefited from initial steps in the implementation of the ISO 14001 version 2015 standard.

"Aware of the importance both of our environmental and economic performance as well as our customers' expectations, NEW AMICO took this opportunity to participate in the MEDTEST II project in order to identify new ecologically sensible solutions and develop our capacity in terms of sustainable production"

> Bouguila Jelloul. Director General

## **Benefits**



Graphic: UNIDO

The application of an RECP approach as part of the MED TEST II project has led to the identification of total annual savings of EUR 366,033, particularly in energy and water, versus a total investment of EUR 366,522. The return on investment term varies between 0.5 and 1.2 years.

All of the projects will enable an improvement in the company's environmental performance by reducing CO<sub>2</sub> emissions by 27 %.

81% of these measures were accepted and approved by the manager, and the company has begun with their implementation. 12% of the projects have been retained for further study.









## Saving opportunities<sup>1,\*</sup>

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 new innovative technologies	195,652	186,177	1.1	28,532 m³ of water 150 kg of chemical products	3,011	- Total: 1,485 t CO <sub>2</sub>
Waste water recycling	48,696	42,609	1.1	60,000 m³ of water	-	
Energy optimisation	91,304	113,877	0.8	5,500 m <sup>3</sup> of water	3,286	
Measures promoting Good Practices	870	23,370	Immediate	3,420 m³ of water	-	30 t of COD
TOTAL	336,522€	366,033€	0.9	97,452 m³ of water 150 kg of chemical products	6,837 MWh	

1 Numbers based on production value from 2014

## **Acquisition of new technologies**

The first project relates to the acquisition of three E-flow machines. The jeans industry has developed new technologies to produce more environmentally-friendly items through the use of the "nano-bubble bath" principle. A washing or dyeing machine equipped with the E-Flow system developed in recent years enables water savings of up to 95% compared to the traditional process.

The second project involves the continuous gas dryer for trousers, and consists of installing a gas-heated drying furnace and automatic feeding with a capacity of 12,000 items per day. This drying method enables natural gas consumption savings of 30% compared to the conventional method.

### Waste water recycling

This project consists of filtering and decontaminating water from STEP waste, and treating this with nano-filtration, enabling N improvement in water quality by eliminating colouring molecules and divalent ions.

This measure will enable the company to use recycled water in the washing process while guaranteeing the quality of the final product.

## **Energy efficiency optimisation**

This involves a set of projects: harmonic treatment, installation of lines, improved yield in boiler no. 2, repair or replacement of the economisers on the two boilers, compressed air system optimisation, implementation of an energy accounting system, acquisition of a reverse osmosis system for supply to the boilers.

#### **Measures promoting Good Practices**

This involves the implementation of a set of measures to optimise resource consumption, notably water, by putting in place a technical assistance campaign to control washing and drying processes in order to reduce water consumption and optimise the cycle times of the various procedures, namely leaching and dyeing.

"We believe that the methodology applied has helped us to strengthen our group working culture in order to identify the causes of losses and environmental impact. The economic and environmental impacts are more easily palpable, and hence have an impact on the company's brand image, and, consequently, on foreign customers. NEW AMICO will consolidate this approach"

Bouguila Jelloul, Director General

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