

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.

Morocco

Plastex

Mechanical sector

Context

Number of employees: 100

Key products: Friction products for clutches and brakes

Main markets: Local, international

Founded in 1980, PLASTEX Morocco specializes in the manufacture and sale of friction products for clutches and brakes. The company is advancing thanks to the work of highly qualified, experienced and ambitious teams, supported by appropriate training programs. Plastex regularly makes significant investments to continuously optimize all of its production lines and thus maintain its technological edge over other manufacturers.

ISO/TS 16949 certified: 2009, Plastex is committed to providing its customers with the appropriate response to their concerns under the best conditions, a way that fully respects the quality standards in force in the automotive industry.

Benefits



Graphic: UNIDO

The MED TEST II project identified opportunities for total annual savings of € 222,755 in raw materials, water and energy for a projected investment of € 373,101. The average return on investment period for the identified RECP measures is 1.7 years. All the steps identified have been accepted by the management and are being implemented.

Through the improvement and optimization of production and installation of more efficient equipment, these procedures implemented will reduce energy consumption by 49.4% and water consumption by 5%.

The implementation of a rigorous waste management, wastewater and atmospheric emissions policy will have a positive impact on the company's environmental performance, while improving the productivity and comfort of people. Photovoltaics and energy saving actions will reduce CO₂ emissions by 41.1% (485 t).

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
Electric energy including speed variation	36,770	15,361	2.4	-	163	Total: 485 t CO ₂ 149 m ³ waste water 7.6 t solid waste
Improvement of impregnation booth and molding presses	23,836	18,566	1.3	-	337	
Improved mixer performance	9,270	73,548	0.1	7.6 t raw materials	-	
Management tools and production optimization	73,186	67,290	1.1	149 m ³ water	24	
Independent PV energy production	230,039	47,990	4.8	-	393	
TOTAL	€ 373,101	€ 222,755	1.7	7.6 t raw materials 149m³ water	917 MWh	

¹ Numbers based on production value from 2015

Electric energy including speed variation

Energy consumption will be reduced through measures aimed at the optimization of contract power, improving performance of indoor and outdoor lighting by installing LED appliances, as well as the installation of press pumps and dust extraction fans.

Improvement of impregnation booth and molding press

Replacing the steam impregnation booth with an electrical cabinet will ensure a stable temperature and generate substantial cost savings as well as reduced maintenance costs. The thermal insulation of the heating plates of the molding presses will limit the heat loss and guarantee the safety of the operators, ensuring a constant and uniform temperature of the equipment for a homogeneous quality of the product, and will also avoid cracks and leaks of the hydraulic cylinders.

Improved mixer performance

Review of the preparation process will make it possible to control the characteristics of the prepared mixture and control its viscosity. Setting up a wall-mounted temperature regulator will ensure a stable viscosity and product weight, while commissioning a duplicate of the mixer's internal casing will reduce cleaning costs and mixture loss.

Management tools and production optimization

The implementation of an electrical energy management system to implement standard ISO 50001 on energy management, the implementation of the 5S approach and introduction of new tools will enable improvement, the optimization and continuous process control, the reduction of waste and wastage in non-product outputs and better use of resources.

Independent PV energy production

The independent production of photovoltaic energy for internal consumption (248 kWp) will cover more than a quarter of annual consumption of the company.

For more information, contact:



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