

Advanced technology to bottle purity

Algeria has been home to Romans, Jews, Berbers, Christians, Africans and Arabs, it is a Country ready to be explored, a reality with a thousand facets, for many aspects unspoiled, it represents a never-ending source of historical testimony from ancient times until the present. In this unique environment history lives side by side with modern companies, who invest in new production plants and thus contribute to increasing the wealth of the nation's economy, among these is the Tousnina Sarl.

For the bottling and packaging in PET bottles of the natural spring water under the Lejdar brand Tousnina Sarl turned to the experience of **SMI**, which supplied a complete turnkey line of 20,000 bottles/hour



SK ERGON series' shrink wrapper (SMI).

and supported the customer during design, construction and installation of the plant.

Lejdar water springs where history meets modernity

Near the village of Tousnina, not far from the city of Tiaret in Algeria, flows the spring water of Lejdar bottled by the company Tousnina Sarl. The name "Lejdar" derives from the archaeological site of the same name located in the area of the spring, where you can visit important Berber mausoleums from the Roman era.

All the machines installed in the new line are part of the ERGON range, which uses the most innovative technologies in the field of In-

dustry 4.0 solutions. The new installations respond completely to the growth expectations of this Algerian company, which has invested exclusively in latest generation systems to increase its production capacity.

The solution installed consists of an ECOBLOC® ERGON series' integrated system for stretch-blow moulding, filling and capping of PET bottles along with an SK ERGON series' shrink wrapper for the secondary packaging, a HA 80 handle applicator, a PACKSORTER pack divider-sorter and an APS ERGON series' palletizer. The whole plant is equipped with an automation and control system of the latest generation incorporating the best technologies for the management of a "smart factory."



Natural spring water Lejdar brand of Tousnina.

The advantages of SMI solutions

The ECOBLOC® ERGON 10-40-10 EV integrated system combines in a single unit the operations of stretch-blow moulding, filling and capping of PET containers and it doesn't need conveyors in-between the machines. The stretch-blow moulding module is equipped with high efficiency IR lamps and with a double-stage air recovering system called Air Master, for a low energy consumption.

The SK automatic shrink wrapper allows to pack multiple containers in film only collations and ensures quick format changeovers in order to satisfy the Algerian company's current and future needs.

Motors are connected directly to the drive shafts, with the advantage of reducing maintenance, energy waste and noise. An automatic film-splicing device with heated blade system joins the edge of the reel, which is about to finish with the beginning of the stand-by reel while the machine is running, with no need to stop production, with the advantage of reducing energy costs and maintenance; it also allows more sealing precision when joining the two edges of printed film reels. The system gets packs in single lane from an SK800 F shrink wrapper and lanes them onto two rows towards an APS palletizer.

The APS ERGON palletizer is a single-column system with two Cartesian axes and SCARA technology; it is extremely flexible and easily suited to the logistic conditions of the end-of-line area; the mechanical simplicity of the machine and the use of robotic components ensure precise operations and low energy consumptions.

Finally, the conveyer belts system allows the fluid and continuous

handling of loose and packed containers; furthermore, short format changeover times ensure the fast switch from a production pattern to another, while the machine's structure and components in AISI 304 stainless steel are synonymous with a reliable and long-lasting plant.

Unique and appealing decorations

In the beverage industry, the development of an innovative container in PET, with a unique design and highly desired finishing touch, is without a doubt an efficient way to attract attention and choices of the final consumers. Starting from the requirements of the Algerian customer, who wanted to reproduce the company logo, also present on the label, on the shoulder of their 0.33 L, 0.5 L and 1.5 L bottles, the SMI bottle designers created very original containers characterised by elements of "appeal", which are able to add value to a light, unbreakable, economical material like PET.

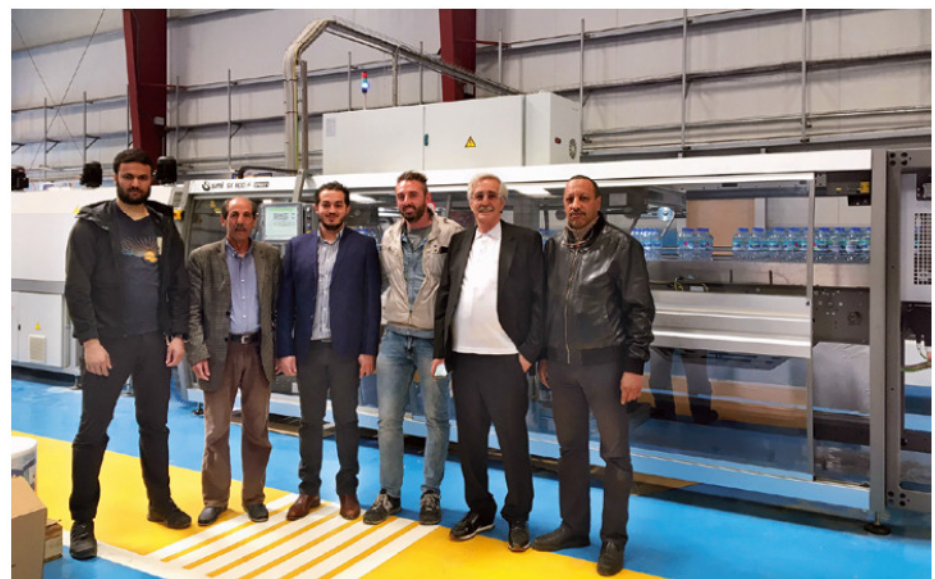
The image of the logo, that reproduces the typical Berber mau-



The bundles to the APS ERGON series' palletizer (SMI).

soleums of the nearby "Jedars" archaeological site, was elaborated to give an original and captivating look making the Lejdar bottle immediately recognisable for its shape and "design". The most particular aspect of the decoration, reproduced on all the bottom part of the bottle, reminds of a stone wall, typical of the Jedars, that ideally connects the brand to the archaeological site from where it originated.

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Tousnina and SMI staff.