

AL-AHLIA



WATER SECTOR

Al-Ahlia Mineral Water Company (AMWC)
Ibb, Alsyani region, Yemen

25,200 BOTTLES PER HOUR PET LINE

- Smiform 14-54-14 VMAG ECOBLOC®
- Smiflexi LSK 40T Shrinkwrapper
- Smipal APS 3070 palletizer
- Smiline conveyor belts
- Subcontracting equipment



GEO LOCATION



Water is the main source of life, the most precious natural resource. When it comes to mineral water bottling plants, you inevitably think of a natural, lush environment that transmits sensations of freshness and purity, far away from any pollutant. When one thinks of the water sources in Yemen, the image cannot change since the desert landscapes give way to those of the beautiful enchanted region of Alsyani, in the south-western Yemeni plateau, known for its amazing nature, its green landscapes, the freshness of its water, its permanent vegetation and for the presence of companies like Al-Ahlia Mineral Water Company (AMWC), which make environmental protection a pillar of the company mission. This Yemeni company makes use of modern production lines and cutting-edge technologies designed to protect the environment and optimize production costs. The system that SMI supplied to Al-Ahlia Mineral Water Company stands out among the latter company's most



recent investments, which includes Smiform's ECOBLOC® 14-54-14 VMAG integrated stretch-blow moulding, filling and capping system, a Smiflexi shrinkwrapper for packaging bottles in shrink film, model LSK 40T, and an automatic Smipal APS 3070 palletizing system. The supply also includes Smiline conveyor belts, the line management and automation system developed by Smitec, and machinery and equipment made by SMI's leading partners such as a rotary labeller, control systems, encoders, etc.



THE PERFECT

HARMONY BETWEEN COMPANY AND NATURE

The Al-Ahlia Mineral Water Company is specialized in the production and marketing of mineral water under the Beladi and Zaina brands, bottled in PET containers of different sizes and capacities. This company's facilities, spread over an area of more than 50,000 square meters, are used as administrative offices, bottling and packaging lines and water sources. AMWC is headquartered in the Ibb governorate, in the Alsyani region, i.e. the most humid area of the entire Arabian Peninsula. Temperatures are high, with an average of 30° Celsius, although the nights can be quite cold and, excepting urban areas, nearly the entire territory is cultivated with a great variety of different crops. Thanks to sophisticated water-management systems, the Yemeni farmers in this region are able to achieve good harvests even in dry periods. Al-Ahlia Mineral Water is very keen to preserve the local ecosystem, investing in latest generation technology that combines the necessary business development with the protection of the surrounding territory. The new line provided by SMI for the Beladi and Zaina water



Above

Fabio Sisimbro, Sales Area Manager of SMI, Pierre Anid of Novadim (SMI agent), Walter Conti, Service Area Manager of SMI, and Charaf Rguibi, Service Engineer of SMI, while tasting a traditional dinner at Yousuf Abdulwadood and Salahaddin Abdulwadood's (owners of Al-Ahlia).

bottling and packaging facility was designed, built and installed in full compliance with the environmental sustainability parameters imposed by the Yemeni company.



Al-Ahlia Mineral Water and the environment

Al-Ahlia Mineral Water pays utmost attention to the environment in which it operates and to the main source of its business: water. In this case, water comes from aquifers located a short distance from its facilities and is extracted from a depth of about 400 meters through modern technologies. Every year, about 60,000 cubic meters of water gush from AMWC's wells that are used for the production of the Beladi and Zaina-branded natural mineral water. Even though the water extracted from the local aquifers and bottled by the Yemeni company is of good quality, it undergoes rigorous laboratory tests to measure its organoleptic properties and mineral content, and also filtration and purification processes before packaging. In other words, the company is able to provide the market with a product the purity and quality of which is exceptional and highly appreciated both by domestic and international consumers.

SUSTAINABLE DEVELOPMENT AND ADVANCED TECHNOLOGIES

Al-Ahlia Mineral Water Company began bottling water in PET containers in 2004, following an investment of US\$ 4 million to modernize existing plants in operation since 1998. In the following years, thanks to this investment, the Yemeni company was able to reach a market share of 25-30% of the more than 150 million liters of water bottled annually in Yemen. The new 25,200 bottles/hour turnkey plant supplied by SMI in 2014, will allow AMWC to fully meet the growing consumer demand and further increase its market share in the domestic "food & beverage" sector. More specifically, the new production facility of natural mineral water under the Beladi and Zaina brand features primary packaging in 0.33 L - 0.6 L - 0.75 L and 1.5 L PET bottles through a Smiform ECOBLOC® 14-54-14 VMAG integrated system as well as secondary packaging in tray+film packs in the 6x5, 6x4, 5x4 and 4x3 collations and film only in the 4x3 and 3x2 collations by means of a Smiflexi LSK 40T shrinkwrapper. The foregoing packs are then taken by an advanced Smipal automated palletizing system, model APS

3070P, equipped with a fixed column and a simple double inlet, which stacks them on 1000X12000 mm pallets. Then these pallets reach, by means of a motorized roller system, an automatic wrap-around film wrapper that prepares them for the subsequent transport and distribution steps. The mechanical parts mounted on the palletizer's fixed central column are driven by brushless motors that ensure reliable and accurate movements on all the machine's operating axes. The use of this technical solution guarantees high reliability, reduces maintenance

and ensures low running costs. The entire production line that SMI supplied to Al-Ahlia Mineral Water Company is managed by an advanced control system that has a simple and user-friendly HMI which also allows the user to carry out format changeovers quickly, thanks to the high degree of automation of its machines.



THE ADVANTAGES OF THE ECOBLOC® INTEGRATED SOLUTION

Smiform's integrated system of the ECOBLOC® series, purchased by the Al-Ahlia Mineral Water Company, offers many advantages to the end user such as, for example, the machine's modular and compact structure (which brings together the stretch-blow moulding, filling and capping modules in a single block) that allows you to eliminate the connection belts between blow moulder and filler and even, except in rare cases, the bottle rinsing machine. With this type of system, there is a significant reduction in the consumption of water and electricity and also the management and maintenance of the production line. The "baseless" technology of the filling module, for instance, offers the advantage of placing the motors and transmission components at the top of the machine, leaving its base completely free to facilitate access to the filling carousel and also simplifies cleaning and maintenance. In addition, the stretch-blow moulding module of Smiform's ECOBLOC® integrated system can be equipped with an ARS (Air Recovery System), which recovers up to 40% of the high pressure compressed air used in the bottle production process to reuse it either during the pre-stretch blow moulding stage or in the machine's utility systems. Smiform's ECOBLOC® integrated system greatly reduces the risk of contamination of the bottles on their way from the blow moulder to the filler thanks to a star-star system enclosed inside a hollow joining cavity equipped with steel guards. The stretch-blow moulding, filling/capping modules integrated in an ECOBLOC® system are governed by a single automation and control system that allows the management of the system by only one line operator through a simple and user-friendly man-machine interface.