



# Safi Water.




WATER & CSD SECTOR  
**Safi Water Co.**  
 Safi National Company  
 Siwa, Egypt  
 >> stretch-blow moulder  
 SMIFORM SR 4  
 >> conveyors



## Water from the magical Egyptian desert

At the western end of the Egyptian desert, at the border with Libya, around 300 km south-west of Marsa Matruh, the Siwa Oasis offers its visitors an almost unique experience. It is a beautiful tourist destination, able to charm anyone, offering unique emotions thanks to the magic of the desert, especially when it is revived by the present of water sources which create green oases dotted around the great expanses of sand and rock.

The presence of water in the oasis encourages agricultural activities, the related food processing businesses and a small number of factories specialising in the production of mineral water. Among these, the "National Company for Producing and Bottling natural water & olive oils" stands out. Owned by the Egyptian army and controlled by the NSPO (National Service Products Organization), it produces and markets SAFI mineral water. The partnership with SMI was fundamentally important for the engineering study and installation of a new 6,000 bph PET line, which includes the rotary stretch-blow moulder for creating PET bottles, the labeller, case packer, systems for moving bottles and packages and various auxiliary equipment which completes the line.

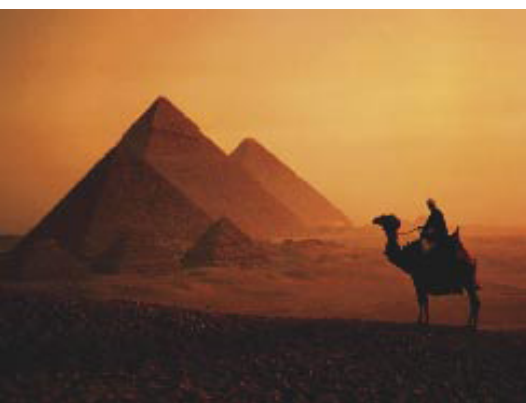
# Safi Mineral Water

...natural par excellence



■ Safi natural mineral water is known throughout Egypt for its high quality and many beneficial properties. Thanks to modern and sophisticated systems, water is extracted from a spring in the Siwa Oasis at a depth of 1,000 metres, from which it reaches the surface in a pure and uncontaminated state. As evidence of these characteristics, the National Company for Producing and Bottling natural water & olive oils obtained the ISO 9001: 2008 certification for its quality management system. In addition, production takes place under the direct supervision of the Ministry for Health and in accordance with international quality

standards. Safi water is particularly recommended for diets that are lacking in sodium and is free from iron and manganese. Its high fluorine content helps to protect the teeth. In all stages of production, the Egyptian company uses fully automated machinery, to which, in response to growing market demand, a new bottling line has recently been added, composed of technologically advanced machinery. The engineering study of the line for the new 6,000 bottles per hour system was entrusted to SMI, by virtue of its specialisation in the design of integrated systems for bottling and packaging beverages and foods in plastic (PET, PEHD, PP) and glass containers and metal cans. The SMI project managers looked very closely into the production requirements of the National Co. for Producing and Bottling water & oils and, following a preliminary study, several inspection visits to the Sawi Oasis



# SAFI WATER



and careful evaluation of all logistical aspects, they drew up a technical solution which was perfectly in line with the company's requirements, both in terms of production and finance. In order to guarantee maximum operating efficiency of the line, SMI also presented the customer with an accurate analysis of the cost dynamics (TCO - Total Cost of Operation), a 3D graphical simulation of the new system and a detailed study of the interactions between the different machines which co-exist on the line. All the Smiline conveyors were designed to respond appropriately to requests for fluidity and flexibility put forward by the Egyptian company and created using innovative technical solutions and

high quality materials. The SMI systems allow, among other things, for optimal management of product flows, thanks to a careful study of the dynamics of accumulation, distribution and movement of the loose containers and packaged products. The modular structure of the Smiline conveyors easily adapts to various types of bottles and product flows, with format changeover times reduced to a

minimum, which allows for the rapid switch from one type of production to another. An Smiform SR 4 rotary stretch-blow moulder has been placed at the "head" of the bottling line, which is capable of producing up to 7,200 bottles per hour. The design and creation of the new PET containers of 0.25 / 0.66 / 1.5 L, created by the Smiform designers, took account of the functional, economical and aesthetical requirements of the customer. The "design" of the new Safi water PET bottles is actually inspired by the Egyptian company's



- Economic development in the Siwa oasis

The fertile lands of the oasis have enabled the development of agricultural production based mainly on olives, date palms and alfalfa which are flanked by small crops of other kinds of vegetables and fruit, mainly intended for local use. As well as its agricultural activities and food processing (dates and olives) companies, Siwa is also a prestigious industrial centre. Tourism is the second most important economic sector in the area, attracting around 10,000 visitors per year (of which 6,000 are foreigners). The varied landscape and the relative abundance of water in the area have contributed to creating different types of habitat, allowing for the development of many different animal and plant species. This variety and scenic beauty is very attractive to



tourists, who in one single trip can enjoy many different experiences: the sandy area of the Great Sand Sea; the plains and plateaus where the scarce vegetation relies upon the scant winter rains; the cliffs and the "wadi", that is, the crests and cliffs at the edges of depressions; the green oases, where ground water rises to the surface and creates a fascinating contrast to the surrounding desert.

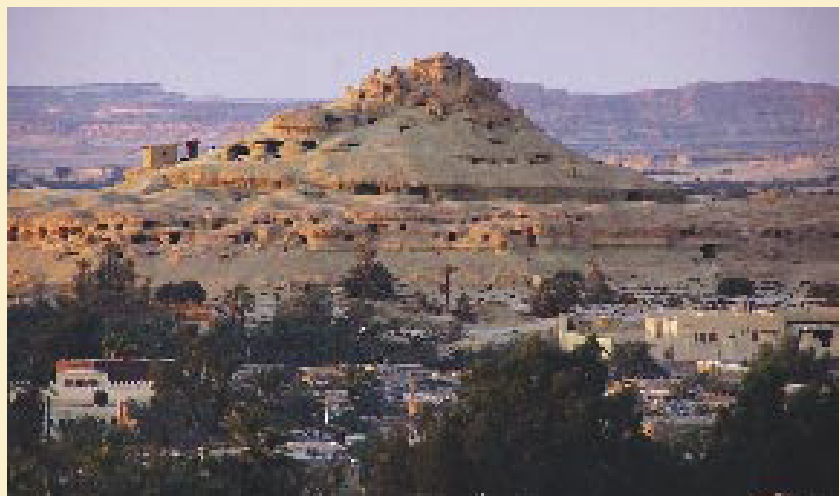


image and its logo, which includes the symbols for the sun, water and palm trees. In addition to their "design", the "appeal" of the new PET containers results from the accuracy and precision with which Smiform has created the moulds used to produce them. SMI actually has a large workshop dedicated to creating the moulds in special aluminium alloy and mechanical components, where 12 connected CNC work centres produce up to 15,000 moulds per year using FMS.



# Siwa oasis

a mirage in the middle of the desert.



was carts pulled by donkeys. The new asphalt road which connects Siwa to the city of Marsa Matruh, to the North-East, brought with it big changes, transforming the oasis into a tourist destination of great acclaim. The ruins of Shali, the ancient city of mud bricks, overlook the main square of modern Siwa, filled with luxury hotels and famous restaurants. In 1926 an exceptional barrage of rainfall, which continued uninterrupted for three days, caused substantial

■ It springs up out of nowhere with its palms and trees which shimmer like a mirage in the arid desert: this is the Siwa Oasis, a patch of lush vegetation rich with orchards which extends, at 50 km from the border with Libya, between the Qattara Depression and the Egyptian Sand Sea. In the oasis, located on the ancient trade route for dates which terminates at Memphis, there are over 300 freshwater springs which water thousands of date palms and large olive plantations. Between Siwa and the capital Cairo, nothingness reigns, or

rather 550km of sand. Famous in ancient times for the presence of the Temple of the Oracle of the God Amun, consulted by the Macedonian King, Alexander the Great, the oasis combines, in a charming way, peace, beauty and inaccessibility. During the course of its long history, it has remained largely isolated from events which took place on the banks of the Nile and has developed independently from the rest of Egypt. Until the 1980s, the most common means of transport





damage to the city. The highly concentrated salt content in the sands of the oasis dissolved due to the rain, damaging the old mud brick houses and forcing the population to leave the citadel. The many affected houses were completely abandoned after the flood, although it is still possible to explore the maze of alleyways in the old town. The oasis is located in a depression, whose depth reaches 60 metres below sea level, which stretches for around 82 km. The Siwa depression and its lakes, one of the most spectacular places in Egypt, are the remains of an ancient sea which later evaporated and which extended up to here.

## ■ THE WORD TO THE CUSTOMER Interview with Gen. M. Moawad of Safi Bottling Water - NSPO (National Service Products Organization)

*SAFI - National Co. for Producing and Bottling is a significant business enterprise for Egypt. What is the key to success both at home and abroad?*

“The main aim of our company is to completely satisfy consumers.

In order to achieve this, we offer them high quality natural water which is recognised and valued across the country.

The demand for bottled water is growing strongly which has made it necessary for us to make major investments in new production technologies to increase our commercial capacity.

In recent years, Safi Bottling Water has significantly expanded its own plants, where, amongst other things, one of the largest water treatment units of the Middle East has been installed.

Demonstrating the fact that the quality of our product is our company's main aim, Safi natural water has obtained two important certifications:



**Left:** Gen. M. Moawad of Safi with Mohamed A. Elhamid of International Packaging System

the ISO 9001: 2008 and the ISO 22000:2005, both issued by certification bodies of undoubted prestige, Centerior and Saiglobal International.

We have also improved our commercial distribution network in order to make the uncontaminated water from the oasis available in any area of Egypt.”



**From the left:** El Hassane Taissat, SMI Sales Area Manager, Gen. M. Moawad of Safi, Mohamed A. Elhamid of International Packaging System and Fabio Chiesa, SMI Project Manager.

What were the main factors that led SAFI - National Co. for Producing and Bottling to invest in a new 6,000 bph bottling line?

“Primarily, the strong increase in demand for Safi water. In order to bring our production capacity in line with market demand, it was absolutely essential to purchase a new 6,000 bottles per hour PET line, which included a 4 cavity Smiform stretch-blow moulder for producing containers of 0.2/0.66/1.5 L. The new facility will allow Safi to increase sales in Egypt and also to satisfy

demand coming from abroad.”

What role must a supplier play during this process of company growth?

“During the process of growth of any company it is absolutely essential to have at your side an established and well-organised supplier, which guarantees that our company achieves maximum production efficiency in the quickest possible time.”

How important is technological innovation for SAFI? What do you expect from your partnership with SMI?

“Innovation is fundamentally important to our company. The results we obtain in our bottling line are closely linked to the use of the most up to date technologies available on the market.

Thanks to this, we are able to satisfy the demands of our individual consumers.

We expect a great deal from the new 6,000 bph PET line, both in terms of greater efficiency and in optimising production costs.

The technical solutions adopted by SMI for this project were designed with our requirements for rapid returns on investment and maximum energy saving in mind.”

