



CASE STUDY (066-H-En) **EGYPT – MULTINATIONAL HOTEL GROUP**

**Sea Water Desalination System with
a total capacity of 1000 m³/day**

Project Implementation Date: April 2019
Country: Egypt

PROJECT DESCRIPTION

In a 5-star hotel in Egypt, a Sea Water desalination system treating sea water of 43,000 ppm with a capacity of 1,000 m³/day was put into operation in April 2019, covering the drinking water needs of hundreds of its customers.

CHALLENGES

TEMAK had to adapt and install the complete desalination system in a prefabricated area of the customer in the hotel. TEMAK had to also cooperate and train new people in one week. The seawater is stored in a tank and through the bidirectional feed pump and flow 101.4 m³/h is transferred to the turbidity filters to remove turbidity.

Dosing with antiscalant agent is performed to protect the reverse osmosis membranes. The water then enters the reverse osmosis system producing 42.6 m³/h desalinated water achieving a 42% recovery rate.

The system is equipped with an energy recovery device for maximum energy savings and with a CIP system for rinsing the membranes and for chemical cleaning performance when it will be necessary. Caustic soda is dosed to the product water to adjust the pH and then it is collected in the product water tank, where it is chlorinated before being delivered for consumption. The design temperature is 17-27°C (annual sea water temperature variation for Alexandria).

Since 1980, TEMAK has been at the side of Tourism sector and covering their needs with reliability and consistency, having a full range of certified water treatment products. Thanks to the systems manufacture in Greece and the high expertise of its specialized staff, TEMAK is able to offer total water treatment solutions, from study and design to manufacture and installation of required systems.

The 750.000 m³/day of clean potable water or water for general uses, produced daily from TEMAK's installed systems in Greece and 26 abroad countries, constitute the proof of our experience and know-how in water treatment.