

PARAPETS AND WALKWAYS FOR WATER TREATMENT PLANTS

LOCATION

Nador is a small port city in the North-East part of Morocco, in the Berber region called Rif and is situated on the Mediterranean Sea coast (Bou Areg lagoon). This water treatment plant is part of a wider plan for the improvement of the water running on Safi, El Jadida, Errachidia and Nador provinces that aims to reduce the incidence of the water diseases and improve the life quality of the rural population.

CLIENT

National company that produces, supplies and runs potable water plants for customers in over 500 towns.

LOCATION

NADOR - RIF REGION - MOROCCO

USE

GANGWAYS, FLOORINGS,
STAIRWAYS AND PARAPETS

PRODUCT

PULTRUDED PROFILES, GRATINGS
TYPE SCH 38/38_IFR



OBJECTIVE

The structures in the environment of the water treatment plants that remove urban and industrial contaminants from the water, continuously get in contact with organic and non-organic substances get corroded in the years and their functionality could be reduced. The purifying process is made with chemical and biologic additives therefore the Buyer required materials and structures that could resist both to nitrates (in particular organic compounds of carbon and hydrogen structures together with some oxygen, nitrogen, sulfur, phosphorus, silicon bonds) and to non-organic compounds as oxide, carbonate, sulphate and halide groups. If we also consider the location of the plant, the structures must overcome to wind and saltiness. One of the main things required was to drastically reduce maintenance cost of structures and that would not fade with U.V. rays.

SOLUTION

M.M. has designed and built new structures made with FRP pultruded profiles specifically minding to the safety aspect, the stress resistance and the environment corrosion. The on site setting layouts prepared by the technical M.M. staff of the parapets, stairways and gangways have been designed according to the UNI EN ISO 14122 - 1, 2, 3, 4 norms. The gangway floors were made with composite SCH38/38_IFR type gratings which are guaranteed to resist in the years without reducing their mechanical properties. M.M. has carried out tests for heat, cold and humidity cycles according to UNI EN ISO 9142/04 norm and ageing tests made with UV lamps according to ASTM G154-06. The concave antiskid meniscus top reaches the R13 V10 level of the DIN 51130 norm which certifies the non slippery surface even if wet. The integration of the color requirements to the design of the structures made it turn out perfectly combined with the architecture and the landscape.