

FRP STRUCTURES FOR WASTEWATER TREATMENT PLANT

CLIENT	MARKET LEADER IN THE WASTE WATER MANAGEMENT INDUSTRY IN HUNGARY
LOCATION	JÁSZFÉNYSZARU (JÁSZ-NAGYKUN-SZOLNOK COUNTY - CENTRAL HUNGARY)
USE	FLOORINGS, STAIRWAYS, PARAPETS FOR DIFFERENT AREAS OF A WASTEWATER TREATMENT PLANT
PRODUCT	PARAPETS IN PULTRUDED PROFILES, PREFABRICATED STAIRWAYS, OPEN GRATINGS TYPE SCH38/38 _ IFR
SERVICE	DEVELOPMENT OF TAILORMADE STRUCTURES (PREFABRICATED MODULES AND KITS), DESIGN OF 2-D DETAIL AND INSTALLATION DRAWINGS SUPPORTED BY STRUCTURAL CALCULATIONS



OBJECTIVE

- The enlargement of the existing wastewater treatment plant of the town is part of a wider plan of enhancement of the water management system carried out by the Client. The renovation of the plant foresees the construction of two new buildings where the water disinfection is implemented.
- This concrete buildings' construction for the enhancement of the capacity of the existing plant required chemically resistant structures in order to allow a **safe access to the machinery**.
- The environment in waste water treatment plants, even in open air areas, is chemically aggressive, as the purifying process is carried out by means of chemical additives. The end Customer required structurally and chemically resistant structures, as well as an **easy installation** in order to allow the other parts of the plant to work.

SOLUTIONS

- M.M. designed and produced new FRP structures, keeping in mind not only the safety of workers during installation and use - ensuring structural resistance to the elements while respecting the deformation limits in accordance with UNI EN ISO 14122 norms - but also the required flexibility for an easier adaptation to the site. The structures were designed, in fact, for different areas of the plant; in particular for the cyclator building M.M. produced parapets and a tailor-made staircase.
- Therefore, the staircases have been designed as **prefabricated modules**, in order to reduce on-site operations. On the other hand, the **parapets** have been **supplied in a "kit"** mode, with ready-made vertical posts and horizontal bars to be cut on site in order to obtain a tailor-made solution.
- The installer is part of M.M.'s qualified network: a group of companies that are able to install our FRP structures in an excellent way thanks to our technicians' support, who assist them during every step of on-site installation.
- In fact, for this project, M.M. provided not only the **2-D detail drawings** supported by structural calculations, especially concerning the custom-made system which supports the staircase, but also **remote support** for the perfect installation of the parapets.
- Concerning the gratings, their concave antiskid meniscus top features a R13 V10 level of the DIN 51130 norm: therefore, the gratings are certified as non-slippery surface, even in wet conditions.