## **CASE STUDY**







## COMPLETE PACKAGED LEACHATE TREATMENT PLANT FOR THE SOLID WASTE FACILITY OF EPIRUS MUNICIPALITY

**DEVISE ENGINEERING S.A.** designed, constructed and commissioned in 2019 a complete Packaged Leachate Treatment Plant for the **leachates originating from an MBT (Mechanical Biological Treatment Facility)** in the prefecture of Epirus, which was built by the contracting company TERNA ENERGY.

The scope of the works of DEVISE included the **Design & Engineering of the whole Treatment Plant** and the **Supply, Installation and Commissioning of all equipment including the Containerized Cross-Flow UF system**, for the Leachate Treatment Plant coming from the MBT Solid Waste Treatment Facility.

The design capacity of the Treatment Plant is **55 m³/d** and requires to treat up to 504 Kg COD/day and 62,5 Kg NH4-N/day.

In order to deal with this heavy polluted wastewater arising from this Municipal Solid-Waste Management Facility DEVISE has incorporated an extensive two-stage biological process, using MBR philosophy where the separation of the 'bio-solids' was achieved using **DEVISE's advanced system** (exMBR), incorporating cross-flow tubular UF membranes. The UF membrane modules complete with feed and recycling pumps, auto-mechanical pre-filter, CIP system, automation, instrumentation and LMCC were installed in a specially modified 40' ISO container.

The total WWTP was designed by DEVISE which also supplied the Containerized exMBR Unit, achieving the effluent quality required by the client (COD <  $1300 \text{ mg/l} - \text{BOD} < 25 \text{ mg/l} - \text{TN} \le 45 \text{ mg/l}$ , TSS < 5 mg/l).

The facility is currently operating successfully and the Leachate Treatment Plant (LTP) is fully monitored and controlled through an advanced PLC & SCADA system to ensure reliable and efficient operation.





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