



LARGE PACKAGE SEWAGE TREATMENT PLANTS WITH MBR TECHNOLOGY IN AFRICA

In 2014 DEWISE ENGINEERING S.A. participated in an International Tender to Design and Build seven (7) advanced MBR Package Sewage Treatment Plants for "A.A.W.S.A" (Addis Ababa Water and Sewage Authority) and won the project over strong competition. The aim was to provide an efficient and cost effective solution for the treatment of sewage originating from the new decentralized condominiums in the capital of Ethiopia, Addis Ababa, with the purpose of water reuse for irrigation.

DEWISE is building **Package MBR plants** that are the **first of their kind in Ethiopia**. With capacities ranging from 1,000 to 4,300 m³/d, the STPs were constructed in 2015-2016, combining civil works & the smart DEWISE containerized units, achieving excellent water effluent quality. The treatment process comprises of the following stages:

- Coarse screening & Lift Pump Station
- Pre-treatment Combined Units
- Flow Equalization and Aeration Tanks
- Primary Clarification Pre-Treatment Stage
- Secondary Biological Treatment
- Fine Screening and Tertiary Treatment, using MBR Technology
- Sludge Dewatering using Containerized Systems

The **DEWISE 'Ultra Clear'** units that were used in these installations, incorporate the most up to date technologies in wastewater treatment and demonstrate the below advantages:

- "Plug and Play" prefabricated units
- Smart engineering for easier operation and maintenance
- Modular design with parallel treatment lines in order to offer flexibility in operation and higher degree of back up service
- Fully automatic operation able to handle hydraulic & waste load fluctuations

In these Package MBR Plants, DEWISE used first class materials from European manufacturers with the Membrane Modules being supplied by KOCH Membrane Systems. The STPs are furnished with a SCADA system, which enables remote monitoring by DEWISE O&M department, for optimum performance and programmed plant maintenance.



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