



The totally enclosed sewage treatment plant at Dubai Sports City

EAGLE ELECTROMECHANICAL & AL HIJAZ MECHANICAL EQUIPMENT CO. L.L.C.

Wastewater is the asset

Reclaimed wastewater is a viable water source which can offload the demand on expensive desalinated seawater and limited extracted groundwater

RECLAIMED water, i.e. effectively treated wastewater, is a precious resource which has numerous potential reuse options having a very significant socio-economic bearing, especially in the freshwater scarce Middle East and North Africa (MENA) region facing a growing population and industrialisation. Reclaimed wastewater is a viable water source, which can offload the demand on expensive desalinated seawater and limited extracted groundwater. Ultimately, wastewater reuse should depend on the cost of recycled water relative to substitute supplies of potable water.

Reuse alternatives for reclaimed water include agriculture, landscaping, and groundwater recharge, industrial and non-potable municipal water applications. The greatest opportunities are for agriculture, 85 per cent of the region's water consumption and district cooling. However, economic conditions and regulations, for health and aesthetic reasons, dictate the extent to which treated wastewater is reused in each country.

Large-scale water reuse success can only be achieved through enforcement



Mina Al Arab sewage treatment plant

of local and international regulations and guidelines e.g. World Health Organisation (WHO), public education (particularly for farmers highly reliant on wastewater), public acceptance and appropriate technology selection and implementers.

Eagle Electromechanical Co. L.L.C. has successfully reclaimed water for several projects, such as for district cooling systems. Moreover, at the Dubai Sports City membrane bioreactor (MBR) wastewater treatment plant 100 per cent of the wastewater is reused. A fraction (10 per cent) of the treated water is further processed within a Reverse Osmosis (RO)

system generating drinking water quality; the balance is recycled within the development for irrigation.

This reclaimed water has a superior effluent quality compared to standard treatment systems especially pertaining to suspended solids and bacteria removal. "We are in a very strong position to generate any desired effluent quality or 'water product' for various application as our solutions are flexible, cost competitive and technologically customised, from conventional plants through to MBRs," says Mohamed Hijaz, General Manager/ Partner at Eagle.