

Ajman WWTP Sludge to Energy Ajman - UAE

Ajman Sewerage (Private) Company Limited (ASPCL)



Ajman Sewerage (Private) Company Limited (ASPCL) wanted to upgrade their existing Wastewater Treatment Plant with Thermophilic Sludge Digestion Facilities to significantly reduce the sludge quantity transported off site while at the same time improve the sludge quality and use the biogas for electricity generation.

About the Project

The biogas produced in the digester (upgraded plant) and from the UASB Reactors (old plant) is used for electricity generation by CHP's, which requires a constant biogas input. Since the daily biogas production fluctuates, a gasholder is needed to balance the biogas for a constant flow. For safety and emergency situations, the plant also requires a gas flare to burn the biogas in case the CHP's can't handle the amount of biogas.

Scope and Realization

MENA-Water supplied, installed & commissioned the biogas handling a gasholder with a volume of 3400m³ and a gas flare with max. throughput of 1300m³/h.

The gasholder is a double membrane type with PVC coated fabric fungicide treated and UV-resistance, tensile strength – Warp is 7.500N/5cm and tensile strength – Weft is 6.500 N/5cm. The gasholder includes two blowers (duty and standby) with covers for sand and noise protection. As well, it's coming with a level measurement (laser), gas detection sensor, hydraulic overpressure valve, pressure release valve (air side) and inspection window.

The gas flare has 3 steps to ensure operation with different gas flows. It includes a separate control panel and necessary controls, instruments and equipment, like flame detection, pressure switches, shut off & pressure regulating flaps, arrestor and pilot burner. The flame tube has heat resistant insulation up to 1200°C and the base frame is completely covered with wind shields.



PROJECT DATA

Gasholder : 3400m³
Gas flare : 1300m³/h