

## **150 M3/DAY EXTENDED AERATION BASED SEWAGE TREATMENT PLANT IN OMAN**



**STP AERATION TANK IN MSEP**



### ***Client***

Gulfar Engineering and Contracting, Muscat, Oman

### ***Project Joint Venture***

Celar Water Equipment Co., LLC, Sharjah, UAE  
EarthCAD Environment FZ-LLC, RAK, UAE

### ***Scope of Services***

- Design, Engineering, Supply of Containerized Plant of 200 m3/day capacity including all Electrical & Mechanical Works based on Extended Aeration Technology

# Innovative Water Technologies



## Project Name

The Package and Containerized Sewage Treatment Plant (STP) of 200 m<sup>3</sup>/Day based on Extended Aeration Technology is located at the Halaniyath Labor Camp and caters to the wastewater treatment requirements of the Labor Camp.

## Client

Galfar Engineering & Contracting SAOG, Oman

## Project Joint Venture

Celar Water Equipment Co., LLC, Sharjah, UAE  
EarthCAD Environment FZ-LLC, RAK, UAE

## Scope of Services

### Scope of Work under this project includes:

- Design, Engineering, Supply of Package Sewage Treatment Plant of 200 m<sup>3</sup>/day capacity based on Extended Aeration Technology including all Electrical & Mechanical Works

## Treatment Technology

In **Extended Aeration** system the biological process is Aerobic and the raw sewage after screening is first sent to the aeration tank for digestion of organic matter and its treatment. The treated effluent thereafter undergoes secondary treatment and is sent to the settling tanks which have Hopper Bottom clarifiers for solid/liquid separation.

The treated water will be disinfected with Sodium hypochlorite solution and then pumped into to the Multi Media filters for tertiary treatment thereby making the final treated sewage effluent of high quality standards.

## Design Basis

The Package EAS STP has been designed taking into consideration the wastewater flow (200 m<sup>3</sup>/day) and characteristics as given below.

### Inlet Wastewater Characteristics

Parameters	Designed (Maximum)
BOD	250 mg/L
COD (Total)	600 mg/L
TSS	250 mg/L
Temperature	20 °C- 35 °C

pH	7-8
----	-----

## Design and Process Flow Scheme

The Design and Process Flow Scheme of the 200 m<sup>3</sup> per day EAS STP is as follows:

- Manual Coarse Screen
- Balancing/Equalization Tank
- Raw Sewage Lift Pumps
- Turbine Flow Meter
- MSEP Aeration Tank
- Fine Bubble Diffusers for Aeration Tank
- MSEP Settling Tank with Hopper Bottom
- Sludge Recirculation/Air Lift Pumps
- Sludge Motorized Valve
- Sludge Tank in GRP
- Filter Feed Tank is GRP
- Hypochlorite based Chlorination System
- Dual Media Filters
- Filter Feed Pumps
- Backwash Pump
- Interconnecting Piping, Valves and Fittings
- Interconnecting Cables and Fittings
- Electrical Control Panel

## Outlet Parameters

### Wastewater Characteristics

Parameters	Designed (Maximum)
BOD	<15 mg/L
COD (Total)	<100 mg/L
TSS	<15 mg/L
ph	7-8