

Clean Air...

ODOUR CONTROL SYSTEM FOR 21 AREA PUMPING STATIONS SALALAH, OMAN



To eliminate odours from waste water pumping stations located in Salalah, Oman, biological odour control systems for different air flow rates were installed.

Biofilter odour control systems were considered for efficient removal of odours as well as removal of Hydrogen Sulphide and other contaminants.

The biofilters are of the same type with a chimney, but with different bed sizes, i.e. filter areas of 2, 5 and 8 m².

To prove the efficiency of the systems, olfactometric odour measurements for 3 of 21 biofilters have been performed in July 2002. The required efficiency of reducing

the odorant concentrations has to be more than 95 %. Furthermore, the slurry character of the raw gases out of the slurry pumping stations must be eliminated.

The analysed biofilters clean the waste air from Area Pumping Stations (APS) Nos. 6-1 / 8-2 / 11-1.

The results of the measurements are shown on the table below :

Pos.	Biofilter of APS	Filter area [m ²]	Odour removal efficiency
1	11-1	5	98,8 %
2	8-2	5	97,8 %
3	6-1	8	95,9 %

Furthermore, it has been proved that no waste water typical odour could be detected in the clean gas. The Hedonic of the treated air had been described as neutral with a tendency to rain forest environment.

The cleaning efficiency of the biofilters regarding Hydrogen Sulphide (H₂S) and Mercaptanes is in the limits under the performed process conditions. H₂S and Mercaptanes were not detectable in the clean gas.

Due to these very good results regarding odour degradation additional pumping stations in the Salalah waste water scheme have now been equipped with our biofilters.