



Technical Bulletin No 2

Primary Treatment Biofilter

The existing treatment works at Sutton Bridge received pumped sewage that was subjected to chemical treatment prior to settlement and discharge to a nearby tidal estuary. SEWACO Ltd were contracted to construct a new pre-treatment plant to improve the quality of final effluent and reduce cost of treatment by eliminating the need for chemicals. A new 11.4 mt x 6.0 mt plan, single stage HYRATE Biofilter was constructed and packed with some 287 m³ of modular plastic media to a depth 4.2 mts. The structure has spare capacity to receive a further 82 m³ to cope with future expansion. The new treatment plant receives up to 50 l/sec of coarse screened crude sewage. via an HydroBrake regulator.



Incoming flow passes through a 1.5 mm wedge wire drum screen. Separated solids are discharged via the solids compactor to a skip for off site disposal. Screened liquor enters the Primary Chamber where Duty/Assist pumps feed one part of the DUAL HYCOVER static distribution system. Returning flow from the biofilter enters the Second Chamber where a second set of pumps return part of the flow to the second half of the Dual distribution system, thus providing further treatment and maintenance of effective wetting to the media during times of low flow. Treated effluent is then pumped to existing settlement tanks prior to discharge. Full electrical control of the new Works is provided in a Form 4 Control Panel contained in a walk-in kiosk.



An inclined stairway provides access to the static HYCOVER distribution system. This leads via a raised inspection walkway to media level walkways allowing easy access for routine cleaning of each nozzle. Nozzles are fitted with special HYCOVER splashplates to ensure effective distribution of effluent onto the media surface. A 'quickstrip' rodding cap is positioned over each nozzle to facilitate routine cleaning for removal of accumulating biomass. Local isolating valves are provided on each lateral, together with washout end caps. Our AUTOCLEANSE pneumatic cleaning system can be retro-fitted to all systems where access is restricted or maintenance limited.

