

Septech Presents a Solution for Treating Greywater

Greywater is wastewater generated from domestic activities such as washing dishes, laundering clothes or bathing. Essentially, any wastewater, excluding toilet wastes (also called black water or sewage water) and highly concentrated kitchen wastes, draining from a household is greywater. Greywater comprised about 50 percent to 60 percent of domestic wastewater. **Sharjah Electricity & Water Authority (SEWA)** has made it mandatory for new establishments to have a Greywater Recycling Plant before issuing approvals for service connections (electricity, water, gas). This is part of SEWA's water conservation campaign. In compliance with the requirements of SEWA, **Septech** designed a physico-chemical treatment process to treat the greywater coming from the labor accommodation of TEKAB warehouse and render it suitable for reuse for toilet flushing and similar application whilst meeting SEWA's stringent effluent standards.

Besides, Septech's Grey Water Recycling Plant design is based on four stages of treatment. After collecting the greywater into a holding tank it is then pumped it into a pipe flocculator where chemicals are dosed to react with the greywater (first stage). The chemically treated greywater then passes through a sand filter to separate the coagulated/flocculated solids from the clear water (second stage). The clear water then passed through an activated carbon filter for color and odor removal (third



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stage). The filtered water is stored in a treated water holding tank where sodium hypochlorite is dosed to sanitized (fourth stage) the treated water and to control the biological activities and maintain a minimum chlorine residual as required by SEWA standards.

Furthermore, the treated greywater effluent is pumped by centrifugal end-suction pumps from the underground holding tank into two overhead tanks, one for each building accommodation of TEKAB Warehouse. The pumps are designed to ensure continuous supply of treated greywater into each building accommodation for reuse. ■