Technical specifications

The raw waste water is entered to Manual coarse screen with bar space 30 mm and Mechanical fine screen with bar space 5 mm. one Manual Medium screen with bar space 15 mm is considered as mechanical fine screen stand by. Coarse screens are used to protect mechanical fine screens. The mechanical fine Screens are used in place of or following coarse screen where greater removal of solids are required to protect process equipment.

Collected screening is transferred to rubbish mobile container through belt conveyor. The screened wastewater is entered to selector tank located before the anoxic tank in which the incoming wastewater is mixed with returned activated sludge. Both selector and anoxic tanks are equipped with submersible mixers.

Anoxic tank effluent is carried to aerobic tank that allows continuous inflow of wastewater into the treatment tanks in order to remove BOD, and nitrogen during nitrification, and aeration.

The adopted aeration system is diffused aeration with fine tubular diffusers and blowers. Biological treatment unit effluent is transferred to sedimentation unit by gravity. Produced sludge is collected by traveling-bridge type collector into the hopper and then it is entered to sludge pump station by gravity. Returned activated sludge is pumped to selector tank and wasted activated sludge is transferred by pumps to aerobic digester. Clarified effluent is sent to clarified wastewater tank. Required air is supplied by aerobic biological unit blowers and then is pumped to chlorine contact tank. Chlorine gas is considered as disinfectant agent. Chlorine contact tanks provide required contact time between wastewater and chlorine solution for effective disinfection.

The sludge is fed to aerobic digester. The adopted aeration system is diffused aeration with fine diffusers and aerobic digester blowers. Each basin is equipped by a set of digester diffusers.

Digested sludge is pumped to belt filter press system which consists of polymer feed equipment, sludge conditioning tank, belt filter press, sludge cake conveyor and support systems (wash water pumps and air compressors). Drying beds are considered as standby for belt filter presses. In drying beds, sludge is placed on the bed in a 200 to 300 mm layer and allowed to dry. Drying beds are equipped with lateral drainage lines. Dewatering unit supernatant (BFP or drying bed) is delivered to selector inlet channel through supernatant pumps.