

The invention relates to the deep treatment of household and industrial sewage water, namely to installations and processes for deep treatment of sewage water, and treated sewage water can be used at enterprises as production water in industrial processes such as cooling of equipment, or in agriculture for irrigation.

The installation and process for deep treatment of sewage water comprise a monoblock tank (1), divided by partitions into four compartments – a primary settler (I) for mechanical treatment of sewage water, anaerobic-anoxic (II) and aerobic (III) bioreactors for combined biological anaerobic-anoxic-aerobic treatment of sewage water, and a secondary settler (IV) for mechanical treatment of treated sewage water. The primary settler (I) consists of two plate or tubular inclined packages (3, 3'), an anaerobic fermenter (4) and a separator (5). Bioreactors (II, III) are made of two parts divided by a partition (9, 14) and in which are placed a rigid filler (11, 11') for the fixation of microflora and a floating filler (15, 15') for the fixation of heterotrophic microorganisms. In the lower part of the bioreactor (III) is placed a pneumatic aeration system. The secondary settler (IV) consists of inclined plastic corrugated plates or thin tubes (19) and a vertical channel (21) for discharge of treated sewage water.

Claims: 7

Fig.: 3

