

The invention relates to devices for purification of industrial and domestic sewage waters from organic toxic impurities and pathogenic microorganisms by photocatalytic destruction.

The proposed photocatalytic reactor includes a capacity for polluted water (16), a body (1) made of quartz glass with a branch pipe (2) for outlet of the purified water, a tubular ceramic membrane (8) covered with a photocatalytically active layer, coaxially fixed to the body and connected at the inlet to the capacity for polluted water (16) by a pipeline (9), equipped with a valve (10), a pump (12) and a flowmeter (11), and at the outlet – by a pipeline (13) for water recirculation in the capacity for polluted water (16), equipped with a valve (14) and a manometer (15). On the outside of the body (1) there are installed ultra-violet lamps (21).

Novelty consists in that the body (1) is equipped in the upper part with a cover (3) with batchmeter (4), and at the bottom it is connected a branch pipe (6) for oxidant admission with valve (7). At the bottom of the body (1) it is placed a spherical magnetized charge (17) and dispersed particles (18), and in the upper part of the body (1), between two supporting nets (19) it is placed a filter (20) with floating granular charge. The ultra-violet lamps (21) are equipped with screens (23) and on the outside of the body (1), in the zone of placement of the spherical magnetized charge it is installed a solenoid (24) with a current regulator (25).

Claims: 2

Fig.: 1

