

The invention relates to devices for complex electrophotocatalytic purification of natural and man-caused waters from stable organic compounds and pathogenic microorganisms and can be used in the processes for water treatment, water supply and environment protection from pollution.

The installation for complex electrophotocatalytic purification of water from stable organic compounds includes an auxiliary capacity for polluted water (15), a cylindrical body (1) made of quartz glass with ultra-violet lamps (27) with reflector (2), a branch pipe (6) for outlet of the purified water, a branch pipe (4) for oxidant admission with valve (5), connected to the base of the body (1). Coaxially to the body there is installed a ceramic porous membrane (7), covered with a photocatalytically active layer, connected at the inlet to the auxiliary capacity for polluted water (15) by a pipeline (11), equipped with a valve (12), a pump (14) and a flowmeter (13), and at the outlet – by a pipeline (16), equipped with a valve (18) and a manometer (17). At the bottom of the body (1) it is placed a spherical magnetized charge (21), and in the upper part of the body (1) it is placed a filter (20) with floating granular charge, between which there are distributed highly dispersed particles (22). On the outside of the body (1), in the zone of placement of the spherical magnetized charge (21), there is installed a solenoid (23) with current regulator (24).

Novelty of the invention consists in that inside the membrane (7) it is coaxially installed a cylindrical titanium anode (8), plated with ruthenium dioxide, and on the outside of the membrane (7) it is installed with clearance a cylindrical perforated cathode (9), the electrodes being connected to a constant-current source with the possibility of separate unipolar treatment of water. Inside the body (1) there are fixed cylinders of quartz glass (25), wherein there are installed ultra-violet lamps (27), connected to an actuating starter (28).

Claims: 1

Fig.: 1

