

SYSTEM AND METHOD FOR MAINTAINING WATER QUALITY IN LARGE WATER BODIES

ABSTRACT

Energy saving installation and method for treating large water bodies wherein the method comprises: (a) applying an effective amount of a flocculent to water in the water body to maintain turbidity of the water below 2 NTU, wherein the flocculent flocculates suspended solids in the water into particles that settle to the bottom of the water body. (b) operating a mobile suctioning device to maintain an increase in the black component of the bottom's colour below 30% based on the CMYK scale, wherein the mobile suction device suctions a portion of water from the bottom of the water body containing settled particles, and wherein the device is capable of cleaning at a surface cleaning rate of 10,000m²/24 hours; (c) filtering the water suctioned by the mobile suction device and returning the filtered water to the water body, wherein the water suctioned by the mobile suction device does not exceed 10% of the total water volume of the water body in a 24 hour interval; and (d) operating a degreasing system to maintain a surface water layer having less than about 20 mg/L of floating greases, wherein greases from a surface water flow into the degreasing system are removed by a separation unit comprising a degreaser and the treated water is returned to the water body.

FIGURE 2.