

UNDERWATER OXYGEN DISSOLVING APPARATUS AND UNDERWATER OXYGEN DISSOLVING METHOD USING THE SAME

ABSTRACT

There is provided an underwater oxygen dissolving apparatus and an underwater oxygen dissolving method using such an underwater dissolving apparatus where bubbles can be efficiently generated and the movement of oxygen contained in the bubbles into a fluid can be accelerated while suppressing an amount of power consumption due to the simplified configuration.

The underwater oxygen dissolving apparatus includes: a cylindrical tank where a fluid filled into the cylindrical tank forms a vortex; a cylindrical descending pipe including: an inner pipe having a side wall in which a plurality of suction holes are formed; and an outer pipe disposed around the inner pipe, forming a closed space between the outer pipe and the inner pipe, and provided with an air supply unit which supplies air into the closed space; a box-type reservoir where the fluid in which the bubbles are formed falls into and is stored in the reservoir; and an ultrasonic oscillator immersed in the fluid stored in the reservoir, the ultrasonic oscillator emitting the ultrasonic wave to the fluid stored in the reservoir thus crushing the bubbles.

Fig. 1