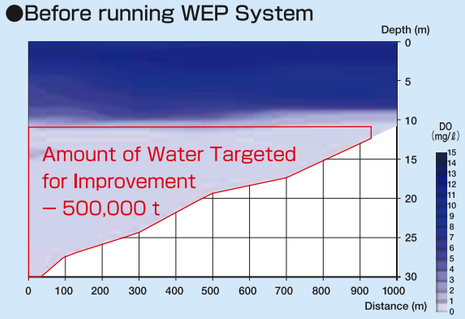
●Example of Its Use

It has been proven that there is a massive difference in the condition of the lake water during the time of year when the water quality deteriorates, between the years when WEP System was used and not used (April — August, 2005 - 2006, S Dam).

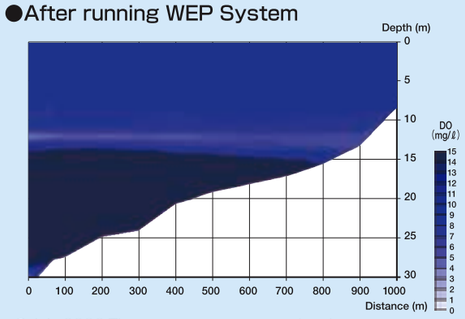
Improvement of Oxygen-poor State

●Before running WEP System



●July 2005:The amount of water in oxygen-poor state targeted for improvement was 500,000 t.

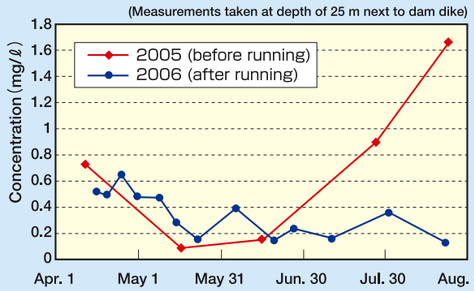
●After running WEP System



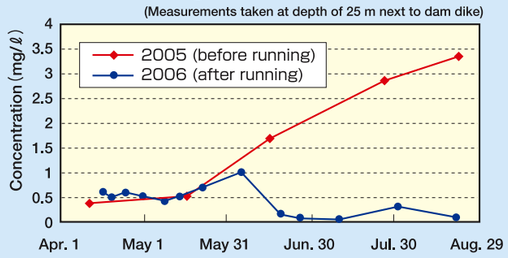
●July 2006:The water was oxygenated and oxygen-poor water of the deeper strata of the lake was almost completely improved.

Controlling Metallic Elution

●Comparing Iron Concentration before and after running



●Comparing Manganese Concentration before and after running



Effect after Running WEP System

●Oxidized layer on surface of Bottom mud

●Presence of organisms confirmed

Developed and Manufactured by **Matsue Doken Co., Ltd.**

Jointly Developed by Public Works **Research Institute**

Sales and Installation

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Restoring "Nature" with High Concentration Dissolved Oxygen Water

WEP

Water Environmental Preservation System

A liquid-gas dissolving apparatus for supplying high concentration dissolved oxygen water

NETIS Registered Technology CG-050013-A

Jointly Patented with The Public Works Research InstitutePatent No. 3849986

Matsue Doken Co., Ltd.

Extremely Effective, Energy Efficient and Low Maintenance.

Water Environmental Preservation System

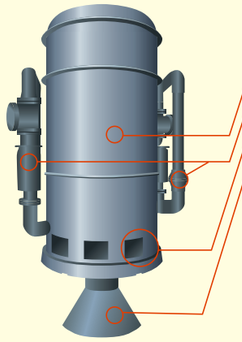
For the highly effective preservation of water quality in dam reservoirs, lakes and sea areas

Improving deterioration of water quality due to formation of a layer of oxygen-poor water.

In many dam reservoirs, lakes and sea areas, a layer of oxygen-poor water forms on the bottom as the result of oxygen consumption through decomposition of organic matter. This layer of oxygen-poor water causes elution of nutrient salts and metals from the sediment becoming one of the reasons for the deterioration of water quality, and causing problems for aquatic life. It can also be the cause of unpleasant smells.

The Water Environmental Preservation (WEP) System is an underwater liquid-gas dissolving apparatus jointly developed by Matsue Doken Co., Ltd. and the Public Works Research Institute, which can improve the problems of formation of a oxygen-poor water layer by efficiently supplying high concentration dissolved oxygen water within this layer. We can answer to your needs and expectations for a reliable method of preserving the environment of dam reservoirs, lakes and sea areas.

●WEP System
The Structure, Specifications and Functions of the "Underwater Liquid-Gas Dissolving Apparatus"



- Dissolving tank
- Submersible Pump
- Outlet for DO Water
- Water inlet

Pump Output (m^3/h)	PSA Oxygen Output (Nm^3/h)	Rated Output (kw)
80	4.0	16.5
120	6.0	22.5

(PSA:Oxygen Generating Device)

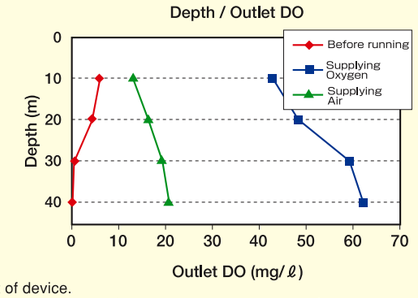
* The rated output may vary slightly depending on the on-site system layout.

●Data on the Oxygenation Capability of WEP System

Field-test data in a dam reservoir

Depth	Water Temp.	DO before running	DO after running	
			Oxygen	Air
(m)	(℃)	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)
10	14.4	6.0	43.0	13.0
20	6.0	4.3	48.5	16.4
30	5.4	0.6	59.0	19.0
40	6.7	0.1	62.0	20.6

[DO:Dissolved Oxygen (mg/ℓ)]



* Outlet DO based on measurements taken at outlet of device.
Gas was supplied at 5% and 15% of the Outlet quantity of the pump for oxygen and air respectively.

The Features of WEP System

1 Extremely Effective, Energy Efficient Oxygenation Method Utilizing Water Pressure

The Water Environmental Preservation (WEP) System utilizes the surrounding water pressure where the device is installed to its advantage in oxygenating the water. A pressurization tank is unnecessary making the system highly effective and energy efficient, and easy to operate. It is also possible to choose between oxygen and air for the gas to be mixed with the water.

2 The Horizontal Diffusion of High Concentration Dissolved Oxygen Water

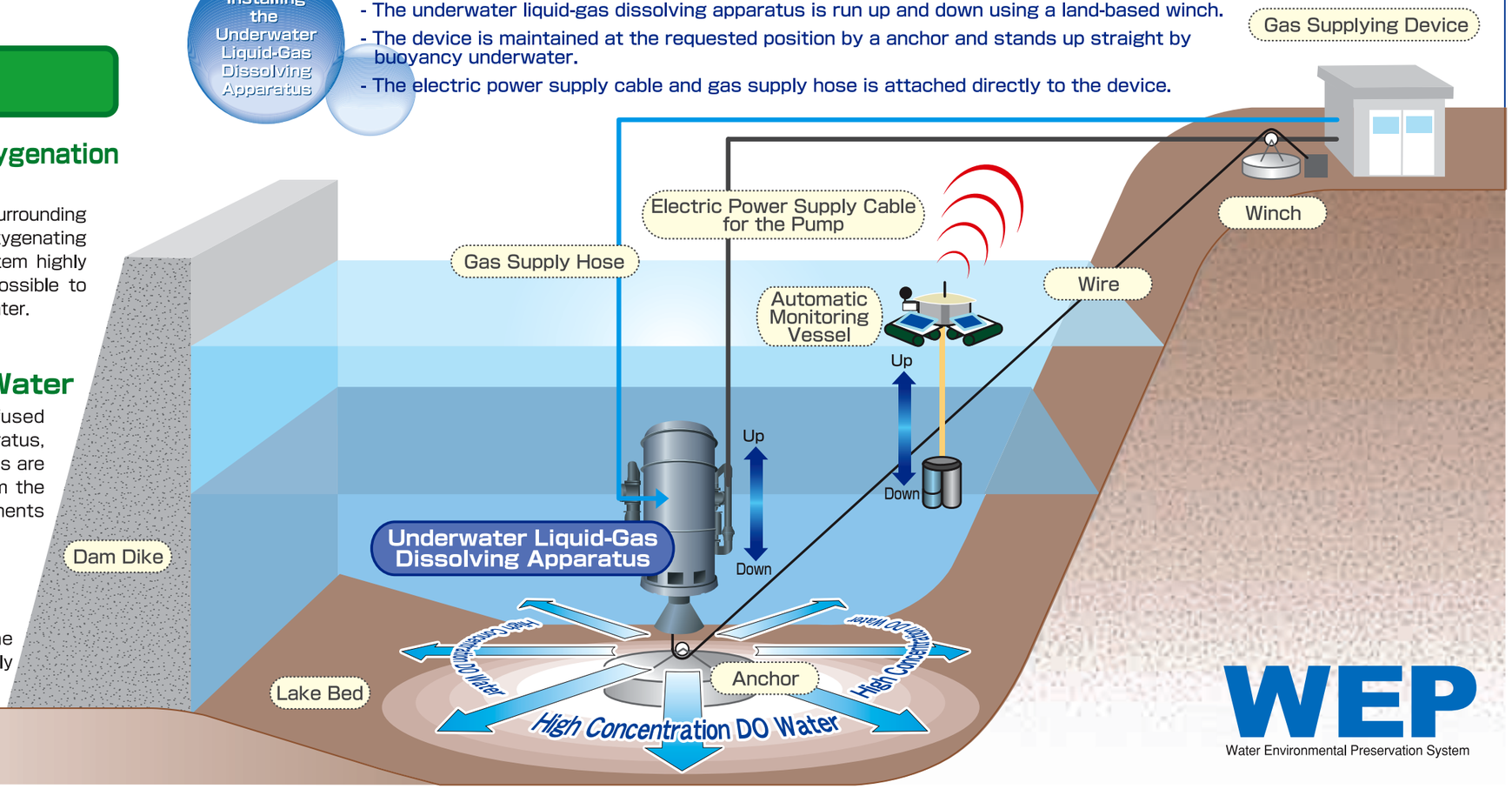
The High Concentration Dissolved Oxygen Water is diffused horizontally in all directions from the liquid-gas dissolving apparatus, enabling efficient oxygenation of the oxygen-poor layer. No bubbles are generated by the device which may cause the water to rise from the bottom. This prevents the traditional problem such as the sediments on the bottom being stirred up.

3 Structural Simplicity Allowing for Easy Maintenance

The underwater liquid-gas dissolving apparatus maintains the same pressure on the inside and outside, making it structurally simple, and therefore easy to operate and maintain. It also has sensors making it possible to monitor itself automatically.

Installing the Underwater Liquid-Gas Dissolving Apparatus

- The underwater liquid-gas dissolving apparatus is run up and down using a land-based winch.
- The device is maintained at the requested position by a anchor and stands up straight by buoyancy underwater.
- The electric power supply cable and gas supply hose is attached directly to the device.



WEP
Water Environmental Preservation System