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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

CJ/T 475-2015

Replacing CJ/T 3015.2-1993

**Measurement of oxygen mass transfer in clean water far fine
bubble diffuser**

微孔曝气器清水氧传质性能测定

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces CJ/T 3015.2-1993 "Aerator water oxygenation performance measurement." This standard compared with CJ/T 3015.2-1993 the main technical changes

are as follows.

- Modify the terminology and definitions of the statement, consistent with the international mainstream statement;
- Increased the first test requirements, limits the commonly used aerator test conditions;
- Use non-linear regression method to calculate the total oxygen mass transfer coefficient, and modify the standard oxygen mass transfer rate calculation;
- Correct the theory of blast aeration power calculation method;
- Increased resistance loss determination;
- Remove the mechanical aerator and jet aerator theoretical power calculation.

This standard proposed by the Ministry of Housing and Urban Standard and Design Institute.

This standard by the Ministry of Housing and Urban Water Supply and Drainage Municipal Standardization Technical Committee centralized.

This standard was drafted. Renmin University of China, Yixing City Product Quality Supervision and Inspection Institute, Jiangsu Philippine Environmental Engineering Co., Ltd., Beijing Bi Fusheng Environmental Engineering Equipment Co., Ltd., Beijing Shihua Kang Da Water Engineering Co., Ltd..

1 Scope

This standard specifies the scope, terms and definitions, principles and methods, apparatus and equipment, testing Steps, data processing and test reports.

This standard applies to different materials, different types of microporous aerator water oxygen mass transfer determination. Other types of aeration water Determination of oxygen mass transfer properties can be used with reference.

2 Terms and definitions

The following terms and definitions apply to this document.

Microporous aerator finebubblediffuser Oxygen is delivered to the water and the resulting aeration air bubble is less than or equal to 3 mm in bubble diameter.

Standard state standardconditions Atmospheric pressure is 101.325kPa, water temperature is 20 °C state.

Test conditions measurementconditions Aeration oxygen mass transfer performance test depth, gas, aeration density.

Oxygen total mass transfer coefficient oxygentransferefficient Characterization of the

aerator in a certain test conditions of the oxygen mass transfer performance characteristics, in units of 1/min, with KLa said. In numerical terms Aeration in the test conditions, the role of unit mass transfer when the unit of water within the unit volume of water delivered the same quality of oxygen.

Standard oxygen mass transfer coefficient standardoxygen transfer coefficient
Characterization of the aerator in the standard state, a certain test conditions of total oxygen mass transfer performance characteristics, in units of 1/min, with KLa said.

In numerical and aerator in the standard state, the test conditions, the unit mass transfer driving force, the unit of time within the unit volume of water transfer the same quality of oxygen.

Standard oxygen mass transfer rate standardoxygen transfer rate Aeration in the standard state, the test conditions, the unit of time to zero dissolved oxygen concentration in the water to pass the oxygen quality, single Bit is kg/h.

Standard oxygen mass transfer efficiency standardoxygen transfer efficiency Aeration in the standard state, the test conditions, the unit of time to the oxygen in the water quality accounted for the percentage of oxygen aeration, Expressed in%.