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**Technical requirements of assessment for high
efficiency water pollutants control equipment - Rotary
aerator**

高效能水污染物控制装备评价技术要求 旋转曝气机

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Technical requirements of assessment for high efficiency water pollutants control equipment - Rotary aerator

1 Scope

This Standard specifies terms and definitions, assessment requirements, test methods, calculation methods and assessment methods for high efficiency rotary aerator.

This Standard is applicable to rotary aerator of vertical shaft, rotary aerator of horizontal shaft and impeller aerator of self-suction that is driven by motor and used for various industrial wastewater, municipal wastewater treatment processes and water reoxygenation.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 3768, *Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane*

GB 18613, *Minimum allowable values of energy efficiency and energy efficiency grades for small and medium three-phase asynchronous motors*

GB/T 27872, *Submersible aerator*

CJ/T 294, *Rotating disc aerator*

JB/T 8700, *Technical specifications to rotor aerator with horizontal shaft used in oxidation ditch*

JB/T 12579, *Muulti-function high-efficient aerator*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 high efficiency rotary aerator

A rotary aerator with safe and reliable operation, superior oxygenation performance and leading energy efficiency within a comparable range with same kind.

3.2 energy efficiency ratio for rotary aerator

Under specified testing conditions, the ratio of the amount of oxygen delivered to the clean water of which the dissolved oxygen is zero per unit time of the rotary aerator to the total energy consumed by the whole machine.

3.3 rotary aerator of vertical shaft

A surface aerator that the axis of rotation of the aeration impeller is perpendicular to the horizontal plane.

3.4 rotary aerator of horizontal shaft

A surface aerator that the axis of rotation of the aeration impeller is parallel to the horizontal plane.

3.5 impeller aerator of self-suction

An aerator that is installed at the bottom of a pool, the oxygen is filled to water body by means of automatic inhalation.

4 Assessment requirements

4.1 Basic requirements for qualitative assessment

4.1.1 The manufacturer of high efficiency rotary aerator shall meet relevant environmental protection laws, regulations and standards. The quality management system, environmental management system, occupational health and safety management system and energy management system shall be established, implemented and maintained.

4.1.2 The design, manufacture, installation and test methods, inspection rules of high efficiency rotary aerator shall comply with the provisions of JB/T 12579, CJ/T 294, JB/T 8700 and GB/T 27872.

4.1.3 The motor used for high efficiency rotary aerator shall not be less than

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