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

HJ 2538-2014

**Technical requirement for environmental protection products
Grit removal equipment in grit chamber
(English Translation)**

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Foreword

To implement the "People's Republic of China Environmental Protection Law", to ensure product quality and cyclone grit removal device, development of this standard.

This standard specifies the technical requirements cyclone desander devices, test methods, inspection rules, marking, packaging, transportation and storage Deposit and other requirements.

This standard is the first release.

This standard is developed by the Ministry of Environmental Protection Science, Technology organization.

This standard drafting units. China Environmental Protection Industry Association (Water Pollution Control Commission), Jiangsu Tianyu Environmental Group Ltd., Spring Creek Yixing Environmental Protection Equipment Co., Ltd., Jiangsu prosperous Environmental Engineering Technology Co., Ltd.

This standard MEP June 20, 2014 for approval.

This standard since September 1, 2014 implementation.

The standard explanation by the Ministry of Environmental Protection.

Environmental protection product cyclone grit removal device

1 Scope

This standard specifies the technical requirements cyclone desander devices, test methods, inspection rules, marking, packaging, transportation and storage.

This standard applies to urban sewage treatment works, industrial waste water treatment works in cyclone desander devices.

2 Normative references

The standard content of the following documents cited in the articles. For undated references, the effective version applies to this standard.

GB/T 191 Packaging - Pictorial signs GB 4208 housing protection (IP Code) GB/T 4942.1 and the overall structure of the rotary motor protection (IP Code) classification GB/T 6388 transport package shipping mark GB 8923 steel surface before painting Rust grades and grade GB/T 9969 General Instructions industrial products GB/T 10894 separate mechanical noise test method GB/T 13306 signs GB/T 13384 mechanical and electrical products packaging General technical conditions Determination of GB/T 13452.2 Paints and varnishes thickness GB/T 18449.1 metallic materials Knoop hardness test Part I. Test methods JB/T 5943 construction machinery welding parts General technical requirements JB/T 5994 Assembly General technical requirements

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Cyclone desander device

The use of hydraulic and mechanical power flow control state and the velocity of the stream, and the use of the density difference and solidarity principle, sand sewage sand sedimentation, Wastewater pretreatment unit separated (hereinafter. Desanding means).

3.2 Equivalent diameter

Diameter and a sand volume of spherical particles of the same shall be the equivalent sand grain size.

3.3 Removal efficiency

Desanding means under certain flow pattern and flow conditions, the unit volume of water equivalent diameter greater than a value proportional to remove grit.

4.1 Classification

Ranked according to the different ways of sand, grit removal device can be divided into stripping desilting and pumping in two forms, the general mounting structure in the form of Appendix A.

4.2 Naming

Desanding model by means of cyclone desander pinyin abbreviation (XCS), desilting way classification pinyin abbreviation (Q stands for "gas Mention row sand ", B stands for" pump

suction sand ") and treated water (m³/h) in Arabic numerals.

Example. XCSQ-1080 represents the processing capacity of 1080m³/h of exhaust gas stripping sand cyclone desander devices.

5.1 Conditions

Medium temperature 5.1.1 grit removal device should 0-40 °C.

5.1.2

grit removal device applicable power. 380V, 50Hz.

5.1.3

should be set before the pre-grid grit removal apparatus, the gap is not more than 10mm.

5.1.4

grit removal device can remove the minimum sand equivalent diameter of 0.2mm.

5.2 Structure and Function

5.2.1

grit removal device consists of drive mechanism, agitator shaft, impeller, sand suction head or sand pump and other components. Stripping row of sand in the form of stirring shaft mining with a hollow shaft, suction pump sand in the form of stirring shaft may be hollow or solid shaft. Desanding device structure shown in Figure 1.

Figure .1a stripping row sand cyclone desander device Schematic diagram .1b pumping sand cyclone desander device structure diagram row

1. The drive mechanism; 2. the agitator shaft; 3. impeller; 4 sand suction assembly; five rows of sand pump sand tube to 5.2.2 grit removal device shall have the following functions.

Sand sewage tangentially into the grit chamber forming a vortex flow pattern, by rotation of the stirring impeller to help move, up to a certain flow rate and strengthen the swirl flow pattern. The use of the density difference and the principle of centrifugal force, organic matter with the water away, sand settle to the bottom of the grit chamber discharge.

5.2.3

The actuator should be sealed and reliable, it can not leak, flexible operation, stable and reliable, no abnormal noise.

5.2.4

agitator shaft, impeller, sand suction head made of stainless steel. Stainless steel not less than GB 0Cr18Ni9.

5.2.5

When the agitator shaft with hollow shaft wall thickness not less than 8mm; impeller diameter at 1500mm and above, the blade thickness of not less than 8mm; impeller diameter is less than 1500mm, the blade thickness not less than 6mm; blade angle is preferably 30 °.

5.3 Processing requirements

Production 5.3.1 Desanding device shall comply with the standards, and procedures approved by the drawings and technical documents manufacture in accordance with prescribed.

5.3.2

welds should be smooth, without cracks, pores, slag and other defects. Welding and pre-processing operations should be consistent with JB/T 5943 standard Requirements.

5.3.3

stirring shaft and impeller should be finishing. Its precision machining and assembly of. mixing shaft coaxial deviation should be less than 0.2mm; stir Concentricity deviation mix shaft and transmission should be less than 0.1mm; concentricity deviation stirring shaft and impeller should be less than 0.2mm; impeller Stirring axis vertical deviation should be less than 0.2mm.

Transmission gear tooth surfaces subject to heat treatment 5.3.4 transmission mechanism on its tooth surface hardness greater than HRC55.

5.3.5

Type and connection structure between the various components should be reasonable, easy to install and repair the split. Parts should be a tight fit in the work under vibration the case of dynamic and impact, should have sufficient strength, rigidity and positioning sexual, should meet the requirements of JB/T 5994 technical requirements.

5.3.6

Desanding means rust grade should reach GB/T 8923 provisions Sa2 1/2 grade, rust and paint operations should be consistent with GB/T 13452.2 standard regulation.

5.3.7

The total film thickness of not less than 200μm.

5.4 Installation Requirements

5.4.1

impeller and wall assembly clearance should be controlled at between 10mm ~ 30mm, sand suction head and the bottom of the assembly should be controlled in the pitch