

ICS 23.080
CCS J 71

HJ

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

HJ 2524-2012

**Technical requirement for environmental protection products.
Single screw pump
(English Translation)**

Issued on: January 1, 1970

Implemented on: January 1, 1970

Issued by: Ministry of Ecology and Environment

Table of Contents

Foreword
1 Scope of application
2 Normative references
3 Terms and definitions
3.1 Single screw pump Single screw pump
4 Basic requirements
4.1 Manufacturing
4.2 Assembly
4.3 Materials and Parts, Parts
4.4 Conditions of use
5.1 Performance
5.2 Vibration
5.3 Stability energy
5.4 Noise
6 Test methods
7 Inspection rules
7.1 Inspection classification
7.2 Factory inspection
8 Noise 5.4 6.8 -- sqrt
8.1 Mark
8.2 Packaging
8.3 Transportation
8.4 Storage

Foreword

In order to implement the Law of the People's Republic of China on Water Pollution Prevention and Control, standardize the production and manufacture of single screw pumps and improve the quality of single screw pumps.

Develop this standard.

This standard specifies the technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of single screw pumps.

This standard is the first release.

This standard was formulated by the Science and Technology Standards Department of the Ministry of Environmental Protection.

This standard is mainly drafted by. China Environmental Protection Industry Association (Water Pollution Control Committee), Hangzhou Xinglong Pump Co., Ltd.

This standard was approved by the Ministry of Environmental Protection on July 31, 2012.

This standard has been implemented since November 1, 2012.

This standard is explained by the Ministry of Environmental Protection.

Environmental protection product technical requirements single screw pump

1 Scope of application

This standard specifies the technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of single screw pumps.

This standard applies to the delivery of single screw pumps containing solid particles and fiber media.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. For undated references, the most the new version applies to this standard.

GB/T 9112 Steel Pipe Flange Types and Parameters GB/T 9115.1 flat, protruding face welded steel pipe flange GB/T 9119 plate type flat welded steel pipe flange GB/T 9124 steel pipe flange technical conditions General technical conditions for GB/T 13384 mechanical and electrical product packaging GB/T 17241.6 integral cast iron flange GB/T 17241.7 Cast iron pipe flange technical conditions JB/T 4297 pump product painting technical conditions JB/T 6880.1 grey cast iron parts for pumps JB/T 6880.2 steel castings for pumps JB/T 8091-1998 Screw pump test method JB/T 8097-1999 Pump vibration measurement and evaluation method JB/T 8098 pump noise measurement and evaluation method JB/T 8644 single screw pump

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1 Single screw pump Single screw pump

a rigid rotor (screw) is rotated around the eccentric circle in the elastic stator (bushing) cavity, thereby continuously the pump that transports media from one end to the other.

4.1 Manufacturing

4.1.1

The single screw pump shall be manufactured in accordance with the product drawings and technical documents approved by the prescribed procedures and in accordance with the provisions of this standard.

4.1.2

The single-screw pump stator and rotor spiral surface should be accurate, the surface should not have defects, and the surface roughness should not be lower than Ra0.8 μm .

4.2 Assembly

4.2.1

The non-machined surface of the single-screw pump that is in contact with the medium to be conveyed shall be rust-proof (except stainless steel) before assembly.

4.2.2

The bearing housing and the universal joint seal sleeve shall be filled with 2/3 cavity grease.

4.2.3

The temperature rise of the bearing should not exceed the ambient temperature of 35 ° C, and its maximum temperature should not exceed 80 ° C.

4.2.4

Single screw pump shaft seals are mechanical or packing seals. Both seals should be interchangeable without replacement of the housing. Shaft seal the corresponding position of the corresponding bearing housing shall be provided with a leakage recovery device interface or a leakage drainage outlet pipe interface. Shaft seal leakage should be in accordance with JB/T Provision of 8644.

4.2.5

After the single-screw pump has been tested, the internal effluent should be removed and the rust-proof treatment should be repeated. Single screw pump metal zero (part) surface coating the paint requirements shall be in accordance with JB/T 4297.

4.3 Materials and Parts, Parts

4.3.1

The main components of the single-screw pump shall be based on the chemical and physical properties of the medium to be transported and the pressure of the pump.

Make a choice.

- a) Zero, parts (inhalation body, discharge body, shaft seal chamber, etc.) in contact with the medium should be made of cast iron, cast steel and stainless steel;
- b) The shaft should be made of 45 high quality carbon steel, 40Cr alloy structural steel or stainless steel;
- c) The materials of the rotor and stator should be selected according to Table 1. Materials that have been tested and verified to not affect performance are also available. Material There should be a certificate of inspection.

Table 1 rotor, stator material table

Conveying medium	stator material	rotor material
Pharmacy	Nitrile rubber (NBR)	EPDM
12Cr18Ni9 (S30210)	06Cr19Ni10 (S30408)	022Cr17Ni12Mo2 (S31603)
40Cr	Send filter	
sludge (with less than 5% mud)	Nitrile rubber (NBR)	Dewatered sludge (15-20% mud)
Wear-resistant rubber	Cr12	Desulfurized lime slurry, desulfurized gypsum
EPDM rubber	022Cr17Ni12Mo2 (S31603)	

4.3.2

The cast iron and cast steel parts of the single screw pump shall comply with the provisions of JB/T 6880.1 and JB/T 6880.2 respectively.

4.3.3

Single screw pump suction and discharge flange connection size should be in accordance with the material and form, respectively, in accordance with GB/T 17241.6, GB/T Provisions of 17241.7, GB/T 9112, GB/T 9115.1, GB/T 9119 and GB/T 9124.

4.3.4

Parts and components (inhalation body, discharge body, sealed chamber) subjected to liquid pressure shall not leak.

4.3.5

The life of the single screw pump should be more than 2 years. The life of the main wearing parts of the stator and rotor should not be less than 1 year.

4.4 Conditions of use

- a) The temperature of the conveying medium is 5 performance requirements

5.1 Performance

5.1.1

Single-screw pumps are classified into miniature, small, medium, large and extra large five-stage according to the flow rate. Flow tolerance of single screw pump it shall not be