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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 13006-2013

Replacing GB/T 13006-1991

NPSH for centrifugal,mixed flow and axial flow pumps

离心泵、混流泵和轴流泵 汽蚀余量

Issued on: December 17, 2013 **Implemented on: October 1, 2014**

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Standardization Administration of China

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 13006-1991 "centrifugal, mixed flow and axial pumps NPSH" and GB/T 13006-1991 phase Ratio, in addition to editorial changes outside the main technical differences are as follows:

--- Revised Chapter 3 (see 3, 1991 edition of 3);

--- Added Appendix A. The standard proposed by China Machinery Industry Federation. This standard by the National Standardization Technical Committee pump (SAC/TC211) centralized. This standard was drafted. Shenyang Blower Works Group Co., Ltd., Shenyang corrosion resistant alloy pump Ltd., Shanghai Liancheng (Group) Ltd., Seiko Boshan Pump Co., Ltd., Shanghai Electric Power Plant Co., Ltd. built, Hai Kai-chuen, Pump (Group) Co., Ltd. Haikai Disabilities than the pump Ltd., Ebara Great Pumps Co., Ltd., Hunan Changsha Pump Electric Co., Ltd., Hefei Xinhu Canned Motor Pump Company Limited Division Jiangsu Wu New Pump Manufacturing Co., Tongtai Pump Co., Ltd., Zhejiang, Shandong Yanshanpumps Co., Ltd. Shandong Bo pump technology shares have Ltd., Zhejiang Pump Technology Co., Ltd., Shenyang Institute of pumps. The main drafters of this standard. in one hundred Fang, , Song Qingsong, Li Juan, Zheng Yu, Lu Xining, then Pan Bing, Qu King, Li Qian, Wang thin right, Liujin Kun, covered snow crystal, Han Feng Jie, Dilu Tao, Chen Qian, Joe obtuse. This standard replaces the standards previously issued as follows:

--- GB/T 13006-1991. Centrifugal, mixed flow and axial pumps NPSH

1 Scope

GB/T 13006-2013 is the Chinese national standard on npsh for centrifugal,mixed flow and axial flow pumps, in the field of fluid systems and general-purpose components. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in

practice is how most foreign buyers meet it. It was issued on 17 December 2013 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 October 2014. Classification: ICS 23.080, CCS J71. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the centrifugal, mixed flow and axial pumps (hereinafter referred to as the pump) NPSH NPSH3 indicators. This standard applies to single-phase liquid delivery pump.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 7021 centrifugal Terminology

3 Terms and Definitions

GB/T 7021 defined by the following terms and definitions apply to this document.

3.1 NPSH

3 The first stage lift pump NPSH fell 3% as the reference standard used to represent the performance curves. 4 NPSH NPSH3

4.1 NPSH3 standard is based on the reference value of clean cold water for the specified test point, the scope of application of the pump is.

a) general centrifugal pump. specific speed ns = 50 ~ 300 (or type the number of K = 0.26 ~ 1.55), single-stage lift H = 6m ~ 180m;

b) the condensate pump. single suction flow rate Q = 20m3/h ~ 1800m3/h (or double suction flow rate Q = 40m3/h ~ 3600m3/h), speed n = 500r/min ~ 3500r/min;

c) mixed flow and axial pumps. specific speed ns = 250 ~ 1400 (or type the number of K = 1.29 ~ 7.25), head H = 1.2m ~ 30m.

4.2 NPSH3 value should be based on the structure of the pump is determined by the following provisions.

a) single-suction cantilever pump NPSH3 values \u200b\u200bshown in Figure 1 or 2;

b) axis through the suction port of the pump impeller single-suction NPSH3 values \u200b\u200bshown in Figure 3 or 4;

c) double-suction pumps NPSH3 values \u200b\u200bshown in Figure 5 or 6;

d) the following three axes through the impeller inlet condensate pump NPSH3 values \u200b\u200bshown in Figure 7. For single-suction cantilever impeller Fig. 7, when the flow Less than or equal to 90m3/h, the flow should be divided by 1.2; when the flow is greater than 90m3/h, the flow should be divided by 1.15;

e) single-suction mixed flow and axial NPSH3 value of Figure 8 or 9.

4.3 When you press 1, 3, 5 and 8 investigation NPSH

3 Fig value of less than 2m, NPSH3 its value should be less than 2m.

4.4 When you press Figs. 1, 3 and 5 check ns < 50 (or K < 0.26) of NPSH3 value, its value should not be greater than NPSH3 ns = 50 (or K = 0.26) value. Richard NPSH3 value of

4.5 should be accurate to the first decimal place.

4.6 NPSH3 value should be less than or equal to determine the provisions required NPSH NPSHR.

5 Application Method

5.1 Figs. 1, 3, 5 and 8 are based on the known head and specific speed (or type number), make a vertical line head with specific speed (or type