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

GB/T 32858-2016

Shaft straightening machines - General specification

轴类校直机 通用规范

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. Please note that some of the contents of this document may involve patents. The release of this document The Agency does not assume responsibility for identifying these patents. This standard is proposed by the China Machinery Industry Federation. This standard by the National Testing Machine Standardization Technical Committee (SAC/TC122) centralized. The drafting of this standard unit. Changchun Institute of Mechanical Science and Technology Co., Ltd., China Heavy Machinery Research Institute of shares, FAW Jiefang Automobile Limited company axis teeth center. The main drafters of this standard. Zhang Jinwei, Sun Yanming, Zhao Xihan, Sun Shaocheng. General specification for shaft alignment machine

1 Scope

China's national general specification for shaft straightening machines. It specifies the basic and general technical requirements for these machines, and it applies to the design, manufacture, inspection and acceptance of manual and automatic shaft straighteners. A shaft comes off a machining line straight and comes out of heat treatment bent. That is the problem the machine exists to solve: quenching a long slender part cools it unevenly, the transformation stresses are not symmetrical about its axis, and it emerges with a run-out that may be a few hundredths of a millimetre or a few tenths. Grinding it straight would mean removing material until the low side cleans up, which on a hardened shaft removes the case where it is thinnest and leaves the part weaker where it was already weakest. So the shaft is bent back instead, which sounds crude and is in fact a controlled operation: the machine measures the run-out, finds the high point, applies a load at the right place to take the shaft just past its yield point in the opposite direction, releases it, and measures again. The standard divides the machines by whether that cycle is performed manually or automatically, and covers the accuracy of the measuring system, the loading system, the safety requirements, and the inspection and acceptance. Electrical safety follows GB 5226.1 and the general testing machine requirements follow GB/T 2611. Issued on 29 August 2016 and in force since 1 March 2017.

This standard specifies the basic and general technical requirements for shaft alignment machines. This standard is applicable to the design, manufacture, inspection and acceptance of various types of manual shaft alignment machine and automatic shaft straightening machine (hereinafter referred to as straightening machine).

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 2611-2007 General technical requirements for testing machines Mechanical electrical safety machinery - Electrical equipment - Part 1. General technical requirements

GB 5226.1-2008 Graphical symbols for use in electrical equipment - Part 2. Graphical symbols

JB/T 6147-2007 testing machine packaging, packaging signs, storage and transportation technical requirements

3 series of straight machine and the main parameters of the series

3.1 Classification

3.1.1 by work can be divided into.

a) manual straightening machine. manually set the alignment displacement or loading force, the workpiece straightening, by manual or automatic access to test data Straightening machine

b) automatic straightening machine. automatically set the alignment displacement or loading force, and automatically correct the workpiece and test results to determine the straightening machine. In addition to the full function of the automatic straightening machine, but also with automatic, cutting and automatic sorting function of the straightening machine is usually called the whole Automatic calibration machine.

3.1.2 by load control can be divided into.

a) mechanical straightening machine. the use of motor as a power source, through the mechanical system to send the load force of the straightening machine;

b) hydraulic straightening machine. the use of hydraulic cylinder as a power source, through the hydraulic system to send capacity of the straightening machine.

3.2 Main parameters

3.2.1 The main parameters of the straightening machine are the maximum loading force, in kilowatts (kN).

3.2.2 calibration machine master parameters should be selected in accordance with Table 1. Table 1 straightening machine master parameter series Straightening machine master parameter series Maximum loading capacity kN 10, 20, 50, 100,.200 (300), 500, 1000,.2000 (3000), 5000,

Note. The parameters in "()" are parameters that are not recommended first.

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