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

GB/T 38392-2019

**Metallurgical equipment - Couplings - Test methods, inspection
rules and acceptance specification**

冶金设备 联轴器 试验方法、 检验规则及验收规范

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard was proposed and managed by the National Technical Committee for Standardization of Metallurgical Equipment (SAC/TC409). This standard was drafted. Taier Heavy Industry Co., Ltd., China Heavy Machinery Research Institute Co., Ltd., Hefei South Automotive Parts Co., Ltd. Limited company. The main drafters of this standard. Xia Qinghua, Huang Xiangui, Su Jing, Zhang Dezhi, Wang Yucheng, Zhu Changjiang, Yang Fengchan, and Ge Yanfei. Metallurgical equipment coupling test method, Inspection rules and acceptance specifications

1 Scope

China's national standard for the couplings used in metallurgical equipment, covering the test methods, inspection rules and acceptance. A coupling joins two shafts and transmits torque between them while accommodating the misalignment that always exists in a real installation. In a steelworks that duty is severe in a specific way: the torque is enormous, it reverses and shocks rather than being steady, the shafts move relative to one another as the mill housings deflect and as everything heats up, and the environment is hot and full of scale. Gear couplings and universal spindles are the types used, and they are consumable items - a mill spindle is expected to wear and to be changed. The acceptance specification therefore has to cover what a new coupling must be and how it is verified, because a coupling that fails in a rolling mill takes the mill out of service and can wreck the drive train behind it.

This standard specifies the terms and definitions, test methods, inspection rules, and acceptance specifications of couplings for metallurgical equipment (hereinafter referred to as couplings). This standard applies to universal couplings for metallurgical equipment, drum-type gear couplings, diaphragm couplings, safety couplings, elastic couplings, permanent couplings Magnetic coupling. Couplings used in other equipment can also be referred to.

2 Normative references

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

GB/T 1184 Shape and position tolerance

GB 5083 Safety and Health Design Rules for Production Equipment

GB/T 37400.6 General technical requirements for heavy machinery Part 6. Steel castings

GB/T 37400.8 General technical requirements for heavy machinery. Part 8. Forgings

JB/T 8557 Flexible coupling balance classification

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Idling test Test all or part of the coupling, such as vibration and noise, without applying a load.

3.2 Static test Some special tests on the coupling under static conditions to test all or part of the items such as static torsional strength, stiffness, etc. index.

3.3 Dynamic performance test Measurements of all or part of the efficiency, temperature rise, vibration, noise, and tightness of the coupling under the conditions of torque and speed

3.4 Fatigue test Measurement test of the life or durability of the main parts of the coupling.

3.5 Overload test Short-term running test on the coupling by applying a torque exceeding a certain percentage of the rated torque, or continue to apply the torque until the coupling Destructive failure test of some parts of the device.