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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 32994-2026

Replacing GB/T 32994-2016

Rotary kilns for the cement industry

水泥工业用回转窑

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 32994-2016 "Rotary Kilns for Cement Industry". Compared with GB/T 32994-2016, the main differences are structural adjustments and... Aside from editorial changes, the main technical changes are as follows:

a) The requirements for kiln shell plates have been changed (see 5.3.1.1,

4.3.1.1 in the.2016 version);

b) The technical requirements for the large gear ring have been revised (see 5.3.2,

4.3.2 in the.2016 version), and magnetic particle testing requirements have been added (see 5.3.2, 5.3.5). 5.3.7, 5.3.8);

c) The technical requirements for support rollers, tires, and retaining rollers have been changed, and material requirements and magnetic particle testing requirements for forged support rollers, tires, and retaining rollers have been added. (See 5.3.5, 5.3.7, 5.3.8, and 4.3.5, 4.3.7,

4.3.8 in the.2016 edition);

d) The material requirements for the main heat-resistant steel components of the rotary kiln have been increased (see 5.3.13);

e) The section on defect handling for cast steel parts has been revised (see 5.3.14,

4.3.13 in the.2016 version);

f) The contents of the monitoring device have been changed (see 5.3.15,

4.3.14 in the.2016 version);

g) Changes were made to the assembly and installation details (see 5.4,

4 Model and Basic Parameters

4.1 Model The model designation method for rotary kilns is as follows:

4.2 Basic Parameters The basic parameters of rotary kilns for cement industry (hereinafter referred to as rotary kilns) are shown in Table 1.

5.1 Basic Requirements

5.1.1 Rotary kiln products shall comply with the provisions of this document and be designed and manufactured in accordance with the approved design drawings and technical documents.

5.1.2 The limit deviations of un-specified tolerances for machined parts on the drawing shall conform to the m-grade requirements in GB/T 1804-2000.For non-machined parts... The limit deviations of unspecified dimensional tolerances for machined parts shall conform to the requirements of grade V in GB/T 1804-2000.Unspecified dimensions of machined parts... The positional tolerance should not be lower than the K-grade specification in GB/T 1184-1996.

5.1.3 Welded parts shall comply with the provisions of JC/T 532.

5.1.4 Carbon steel welding electrodes, low alloy steel welding electrodes and welding wires shall comply with the provisions of GB/T 5117, GB/T 5118 and GB/T 8110 respectively.

5.1.5 The design of the rotary kiln shell lining should comply with the provisions of JC/T 2196-2013.For rotary kilns used in co-processing, the shell and lining should preferably be in close contact. Take anti-corrosion or isolation measures.

5.1.6 The thin oil lubrication system of the main reducer shall comply with the provisions of GB/T 38275-2019.

5.1.7 The hydraulic system for the thrust rollers shall comply with the provisions of GB/T 3766.

5.2 Overall Machine Requirements

5.2.1 The basic parameters of the rotary kiln shall conform to the provisions of Table 1 or the design drawings and relevant technical documents.

5.2.2 The rotational speed of the main drive of the rotary kiln should be adjustable, and the adjustment ratio should not be less than 1.10.

5.2.3 Heat insulation devices shall be installed between the roller bearing assembly, the

thrust roller device, the transmission device and the cylinder.

5.2.4 Lubrication devices should be installed on the contact surfaces between the tire and the support roller and the retaining roller, and lubrication devices should preferably be installed between the tire and the pad.

5.3.1 Cylinder

5.3.1.1 The mechanical properties of the cylindrical plate shall not be lower than those specified in Q235C of GB/T 700-2006.

5.3.1.2 The surface quality of the cylindrical plate shall comply with the requirements of

5.6 in GB/T 3274-2017.

5.3.1.3 For plates with a thickness of not less than 38mm or a rolled width exceeding 1900mm, the edge width of the finished product should be 60mm after cutting. Ultrasonic testing of the area should meet the quality level of Grade II in Table 4 of GB/T 2970-2016.

5.3.1.4 Except for the transition plates under the tire and on both sides of the tire, the width requirements for the cylinder plates are as follows:

a) The distance between the circumferential weld of the lower section of the gear ring and the weld connecting the spring plate should not be less than 100mm;

b) The distance between the circumferential weld and the edge of the manhole should not be less than 100mm.

5.3.1.17 The length deviation of the large section leaving the factory is ±0.025% of the length of the section.

5.3.1.18 The welding bevels at both ends of the factory-delivered section should be machined at the factory.

5.3.1.19 The requirements for the pad plate under the tire cylinder are as follows:

a) The weld for fixing the backing plate and the backing plate itself should not overlap with the longitudinal weld of the cylinder, and the distance between the edges of the two welds should not be less than 50mm;

b) The backing plate should be tightly fitted to the cylinder before welding;

c) After the pad is welded to the cylinder, the outer surface of the pad should be machined;

d) The longitudinal weld seam where it meets the positioning block welded to the cylinder should be ground smooth.

5.3.2 Large gear ring

5.3.2.1 The mechanical properties of the large gear ring material shall not be lower than