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Replacing GB/T 2684-2009

Test methods for foundry sands and molding mixtures

铸造用砂及混合料试验方法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 2684-2009 "Test methods for foundry sand and mixtures". Compared with GB/T 2684-2009, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows.

- a) The scope of application of the test methods for foundry sand and mixtures has been changed (see Chapter 1, Chapter 1 of the 2009 edition);
- b) Added the terms and definitions of circularity and deleted the terms and definitions of foundry sand (see Chapter 3, Chapter 3 of the 2009 edition);
- c) The accuracy requirements of the water content measuring device have been changed (see 5.1.2, 5.1.1 of the 2009 edition);
- d) Added the allowable difference requirements for moisture content determination (see 5.1.6);
- e) The mud content determination procedure requirements have been changed (see 5.2.4, 5.2.4 of the 2009 edition);
- f) Added the allowable error requirements for mud content determination (see 5.2.6);
- g) The determination method of acid consumption value has been changed (see 5.4, 5.8 of the 2009 edition);
- h) The requirements for the loss on ignition determination procedure have been changed (see 5.5.3, 5.7.3 of the 2009 edition);
- i) Added circularity determination method (see 5.6);
- j) Added conductivity measurement method (see 5.7);
- k) The specimen preparation in strength determination has been changed (see 6.6.3, 5.6.2 of the 2009 edition);
- l) Added the method for determining fluidity (see 6.8).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Casting Standardization Technical Committee (SAC/TC54).

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This document was first issued in 1981, revised for the first time in 2009, and this is the second revision.

1 Scope

This document describes the sampling of foundry sands and mixes, test methods for foundry sands and test methods for mixes.

This document is applicable to the determination of properties of foundry sand and mixtures.

2 Normative references

GB/T 601

GB/T 603

GB/T 5611

GB/T 6682

3 Terms and definitions

The terms and definitions defined in GB/T 5611 and the following apply to this document.

3.1 Mixture [molding mixture] moldingmixture

The material made by mixing casting sand, binder and other additives in a certain proportion meets the requirements of modeling (core making).

Note. Including clay sand, resin sand, water glass sand, etc.

3.2 circulardegree

Characterize the closeness of the particle projection to the circle to infer the roundness of the particle shape of the foundry sand.

4 Sample selection

4.1 The average sample of the same batch of raw sand for casting should be selected. The average sample of bulk raw sand is collected in train carriages, ship cabins, cars, sand storages and sand piles.

From the corners and the center of the sand. 200mm~300mm away from the edge and surface, use a sampler to select; the average sample of 50kg bag of raw sand The average sample of raw sand in bags of more than 1000 kg is selected from 1% of the bags in the same batch, but There shall be no less than three bags, and the total weight shall not be less than 5kg (and the amount may be increased according to different test items).

If there is any doubt about the quality of a part of the raw sand, it should be sampled and tested separately, and the agglomerates (the aggregation of sand particles can be clearly seen) should not be selected.

And remove visible impurities.

4.2 Samples of recycled sand or regenerated sand may be regularly taken from the sand outlet of relevant equipment or from the conveyor, and the quantity shall be determined according to the inspection items.

4.3 Mixture samples should be collected regularly according to the characteristics of the mixing equipment and process requirements. If the mixture is transported by a belt conveyor, the samples can be collected from the conveyor.

Take three samples at regular intervals and mix them evenly. The number depends on the