

ICS 71.100.10

CCS Q 52



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

GB/T 26294-2010

**Carbonaceous materials used in the production of aluminium -- Cold-ramming
paste -- Determination of effective binder content and aggregate content by
extraction with quinoline, and determination of aggregate size distribution**

**铝电解用炭素材料 冷捣糊中有效粘合剂含量、骨料含量及骨料粒度分布的测定
喹啉萃取法**

(English Translation)

Issued on: January 14, 2011

Implemented on: November 1, 2011

Issued by: Standardization Administration of China

Table of Contents

Foreword
Introduction
1 Scope
2 Normative references
3 PRINCIPLE OF THE METHOD
4 Definitions
5 Reagents

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard is identical with ISO/T S14423.1999 "carbonaceous materials used in aluminum electrolysis cold ramming paste the content of the binder and the aggregate and effective Aggregate size distribution of quinoline extraction. " This standard is identical with ISO/T S14423.1999 Foreword when its directory and delete.

The standard proposed by China Nonferrous Metals Industry Association.

This standard by the national non-ferrous metals Standardization Technical Committee (SAC/TC243) centralized.

Introduction

In order to determine the aggregate distribution of cold ramming paste, no adhesive obtained aggregate is necessary, the best method is to use common solvents mention Take adhesive. Coal tar and asphalt, the binder is the most common and effective quinoline. Most of the tar is not completely dissolved in quinoline, A small portion of insoluble materials, the insoluble matter mainly contains particles smaller than 50µm solid char particles. These insolubles are cold ramming paste aggregate the actual component is measured by this method. Effective adhesive defined as quinoline dissolved part.

In the current method is the most effective quinoline solvent. Its disadvantage is that expensive and high boiling point, due to the high boiling point, according to the drying place Processing procedure, quinoline completely removed from the residue extracted is very difficult. However, when the need to maximize the separation of the binder from the aggregate, Quinoline is the best choice, given the use of the standard method of quinoline.

NOTE: this applies in dichloromethane technical standards, simply remaining on the filter to remove

quinoline prior to drying.

Carbonaceous materials used in aluminum electrolysis Cold ramming pastes effective binder content and aggregate content.

And determination of aggregate size distribution Quinoline extraction

1 Scope

This standard specifies the Cold ramming pastes effective binder content, aggregate content and determination of aggregate size distribution.

This standard applies to coal tar or asphalt binder cold ramming paste do not apply to the binder resin as cold ramming paste.

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, undated references, the latest edition (including any amendments) applies to this document.

ISO 565 Test sieves metal woven wire mesh, plate and electroformed sheet aperture nominal size (Testsieves-Metal wirecloth, perforatedmetalplateandelectroformedsheet-Nominalsizesofopenings) ISO 2591.1 - Part 1 screening test screening test methods for metal wire cloth and perforated metal plate (Test for sieving-Part 1. Methodsusingtestsievesofwovenwireclothandperforatedmetalplate) ISO 14422 Carbonaceous materials used in aluminum cold ramming paste sampling method (Carbonaceousmaterialsusedintheproductionof aluminium-Cold-rammingpastes-Methodsofsampling)

3 PRINCIPLE OF THE METHOD

In a flask equipped with a reflux pipe with quinoline dissolved in cold ramming paste sample binder, dissolution was complete, the mixture was poured onto a fine aperture the sieve, sieve material is a major component of aggregate, rinse the residual aggregate with quinoline, and then dried and weighed. Sieve with filter paper Next thing, in very fine aggregate particles remaining on the filter paper, is the sum of the aggregate content on the screen and residues on the filter paper, and quinoline solubles Content obtained by subtraction.

Test sieve residue after the particle size distribution by sieve test set is determined.

4 Definitions

Effective binder content Quinoline complexes in the proportion of the total, expressed in mass fraction.

5 Reagents

Warning. See reagent supplier on quinoline, the use of methylene chloride in the process of safety, health instructions.

Quinoline 5.1. AR (purity not less than 98%).

5.2

dichloromethane. AR (purity not less than 98%).