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

GB/T 14263-2010

Replacing GB/T 14263-1993

**Methods for sampling and sample preparation of flotation
copper concentrates in bulk**

散装浮选铜精矿取样、制样方法

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1 Scope

GB/T 14263-2010 is the Chinese national standard on methods for sampling and sample preparation of flotation copper concentrates in bulk, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 23 December 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 September 2011. Classification: ICS 77.120.01, CCS D42. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the procedure and method for sampling, sample preparation and moisture determination of flotation copper concentrates in bulk. This standard is applicable to the taking, preparation and moisture determination of the samples used for chemical composition and moisture determination as well as other physical item inspection of flotation copper concentrates in bulk.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition (including any amendments) of the normative document is applicable to this standard.

GB/T 8170 "Rules of Rounding Off for Numerical Values & Expression and Judgement of Limiting Values"

GB/T 14260-2010 "General Rules for Sampling and Sample Preparation of Heavy Nonferrous Metals Flotation Concentrates in Bulk"

3 Terms and Definitions

For the purposes of this standard, the terms and definitions in GB/T 14260 apply.

4 Requirements

5.4.2 For the sampling with sampling drill rod, the increment sample quantity is approximately 400g.

5.4.3 The taken increment sample quantity shall be basically consistent, and the mass variation coefficient shall not be greater than 20%.

5.5 Sampling methods

5.5.1 Systematic sampling method The systematic sampling method is divided into mass systematic sampling and time systematic sampling. It is to take the increment sample according to certain mass or time interval during the unloading or metering movement process of a lot of concentrates. The sampling interval of the mass systematic sampling shall be calculated according to Formula (1), and reserved the integer part if any decimals. NT 11 (1) Where, T_1 --the sampling mass interval, t; N_1 --the inspection lot, t; n --the increment sample number specified in the standard. The sampling interval of the time systematic sampling shall be calculated according to Formula (2), and reserved the integer part if any decimals. nG NT 60 (2) Where, T_2 --the sampling interval, min; N_1 --the inspection lot, t; n --the increment sample number specified in the standard; G --the handling quantity per hour, t/h. The first increment sample of systematic sampling method may be randomly sampled within the first interval, instead of the start point of the first interval. Then the increment sample shall be taken according to the calculated interval. If the increment sample number to be taken has been taken completely according to the fixed interval, but the concentrate handling is still in progress, the sampling shall be continued according to the specified interval until the whole lot of concentrates is handled completely. For sampling on a conveying belt or at the outlet, the total section of the concentrate flow shall be intercepted. For sampling during the handling and stacking process of such tools as grab bucket and forklift, the sampling shall be carried out on the new exposed concentrate surface during the handling or stacking process or in the handling tool. The sampling points shall be uniformly distributed at each position of the whole lot of concentrates.

5.5.2 Stratified sampling method For the sampling that a lot of concentrates is divide into several layers (at least three layers) during the handling process, the sampling shall be carried out by uniformly distributing points on the new exposed surface in proportion according to the mass of each 6layer. The increment sample number to be taken for each

layer shall be calculated according to Formula (3), and rounded off to the integer if any decimals. 1N Nnn ii (3) Where, n_i --the increment sample number to be taken for each layer; n --the increment sample number specified in the standard; N_i --the mass of each layer, t; N_1 --the inspection lot, t.

5.5.3 Truck sampling method Where a lot of concentrates is delivered by train or automobile, uniformly distribute points in the carriage, take off the surface layer, use a sampling drill rod to vertically insert into the bottom from the new exposed surface, and take the increment sample after rotation. Avoid taking from the surface layer or some local position. This method may not be adopted until it is proved that there is no error after checking according to Appendix C of GB/T 14260. For train delivery, the routine sampling may comply with the increment sample number specified in this standard according to the inspection lot. Where an inspection lot is composed of multiple trucks, the increment sample number to be taken from each truck shall be calculated according to Formula (4), and rounded off to the integer if any decimals. nn 2 (4) Where, n_2 --the increment sample number to be taken from each vehicle; n --the increment sample number specified in the standard; M --the total vehicle number of inspection lot.

Note. Where the loading masses of the trucks are different, the distribution of the increment sample number shall be proportional to the loading capacity. For automobile delivery, if the inspection lot is less than the basic lot, the increment sample number to be taken shall be calculated according to Formula (5) (rounded off to the integer if any decimals); if the inspection lot is not less than the basic lot, sampling may be carried out according to the increment sample number specified in this series standard. Nnn 11 (5) Where, n_1 --the minimum increment sample number to be taken by automobile; n --the minimum increment sample number specified in the standard; N_1 --the inspection lot, t; N --the basic lot, t. Where an inspection lot is composed of multiple automobiles, the increment sample number to be taken by each automobile shall be calculated by reference to Formula (4), and rounded off to the integer if any decimals. For automobile ground sampling...