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

JJG 1140-2017

**Industrial Analyzers
(English Translation)**

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6.4 Test cycle (5)

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Introduction

The rules are based on JJF1002-2010 "national metrological verification rules writing rules", JJF1001-2011 "pass Using measurement terms and definitions "as the basis for the development of norms.

In the development of this procedure, combined with the current industrial analyzer measurement and detection performance, and with reference to the relevant standards Based on the development.

--- Weighing indication error and repeatability selection using the JJG 1036-2008 "electronic

balance" 7.3.5 indicating the value of error Poor and 7.3.4 repeatability requirements;

--- Temperature control error selection using GB/T 212-2008 "method of industrial analysis of coal" 3.1.1, 4.1.1, 5.1.1 Method summary of the requirements; Equivalent stability using the JJF1376-2012 "box resistance furnace school Quasi-norms "in 5.2 on the temperature stability requirements;

--- Equivalent indication error and repeatability of the instrument using GB/T 212-2008 "method of industrial analysis of coal" 4.4 ash determination of precision and 5.6 volatility determination of precision requirements.

This is the first release of this procedure.

Industrial Analyzer verification procedures

1 Scope

This code applies to coal quality analysis of industrial analyzers for the first time test, follow-up test and use of the inspection.

2 reference documents the procedures cited in the following documents.

JJG 1036-2008 electronic balance Box resistance furnace calibration specification GB/T 212-2008 Methods for industrial analysis of coal for dated references, only the dated version applies to this edition; any undated reference the latest version (including all amendments) applies to this procedure.

3 Overview

Industrial analyzer (hereinafter referred to as the instrument) measurement principle of thermogravimetric analysis. Will far infrared heating equipment and weighing the electronic balance with the combination of specific conditions in the atmosphere, the specified temperature, the specified time to weigh the sample in Heat the process of quality changes, in order to calculate the sample moisture, ash and volatile industrial analysis indicators.

Instrument by the control system, test system (including high temperature furnace, electronic balance, thermocouple, etc.), data processing system , Mainly for the analysis of moisture, ash and volatile matter of coal, coke and coal water slurry.

Instrument is divided into one and split two.

4 measurement performance requirements 4.1 weighing indication error and repeatability Weighing indication error should not exceed $\pm 1.0\text{mg}$; Repeatability should not exceed 1.0mg .

4.2 temperature control temperature error and stability Furnace temperature control error and stability should be consistent with the provisions of Table 1.

Burning furnace operating temperature.

- a) Determination of moisture, the furnace temperature (105 ~ 110) °C;
- b) Determination of ash, the furnace temperature (805 ~ 825) °C;
- c) Determination of volatile, the furnace temperature (890 ~ 910) °C.

Table 1 temperature control temperature error and stability °C

Temperature measurement point 107 815 900 Temperature error $\pm 3 \pm 10$ Stability $\pm 2 \pm 10$