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JJG

NATIONAL METROLOGY VERIFICATION REGULATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJG 1087-2013

Verification Regulation of Oxygen Alarm Detectors for Mining

矿用氧气检测报警器

(English Translation)

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Introduction

This procedure based on JJF1002 "national verification procedures write rules", JJF1001 "common terminology and measurement the definition of "compilation.

Since the mine with oxygen detection alarm with oxygen detection alarm used in terrestrial environment, technical specifications, instrument There is a big difference on the status quo and so on, so this procedure the major technical indicators reference MT704-2008 "coal mine with portable electrochemical oxygen measuring device ", MT447-1995" Mine electrochemical oxygen sensor technology stripe formula Member ", JJG (coal) 10-1998" Oxygen Detection "and other technical regulations.

This procedure is the first release.

Mining oxygen detection alarm verification procedures

1 Scope

The order applies to the mine operating environment used in the measurement range of the oxygen mole fraction (0 to 25)% of electrochemical Mine initial verification principle with oxygen detection alarm (hereinafter referred to as the instrument), the verification and subsequent use of checks.

2 Overview

Instrument for detecting the concentration of oxygen in the mine operating environment, when the oxygen concentration measurement is less than equal to the alarm value it can automatically send out audible and visual alarm signal.

Apparatus main electrochemical oxygen sensing element, the electronic components and the display section, etc., is detected by an electrochemical oxygen Element converts ambient oxygen concentration in the air into electrical signals, then processed by the circuit, and to show the concentration to some instrument also has an oxygen concentration corresponding electrical signal output.

Depending on the use of the instrument can be divided into portable (mining industry, commonly referred to as alarm or measuring) and fixed (mining industry, commonly called a sensor).

3 metering performance requirements

3.1 Indication error Indication error of mole fractions of, shall not exceed ± 0.7%.

3.2 Repeatability

The relative standard deviation of <=1.0%.

3.3 Response Time

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Response time <=60s.

3.4 Drift

Zero drift and span drift more than indication error should not be one-half.

4 General technical requirements

4.1 Appearance and structure

4.1.1 Each instrument mechanical adjustment member should be able to operate normally should be no loose fasteners.

4.1.2 The instrument shall not affect their normal work and explosion safety of injury, new manufacturing coatings should not have obvious Yen Color unevenness and peeling, the components should be smooth junction.

4.2 Signs and identification

4.2.1 The instrument shall indicate the name and instrument manufacturing units name, model, serial number, date of manufacture, proof mark and the number of mine safety signs and numbers.

4.2.2 The instrument shall specify the measurement range, the measurement error and other major technical indicators nameplate.

4.3 energizing check After the instrument is powered, should be able to work properly, the display portion should be clear and complete. Each key shall be able to operate and control

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