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NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE

PEOPLE'S REPUBLIC OF CHINA

JJF 1812-2020

Calibration Specification for Apparatus to Measure Water Permeability of Concrete

混凝土抗渗仪校准规范

(English Translation)

Implemented on: April 17, 2020

Issued by: State Administration for Market Regulation

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8 Recalibration interval (3)

Appendix A Impermeability Meter Calibration Record Format (4)

Appendix B Internal page format of calibration certificate (5)

Appendix C Uncertainty Evaluation Example of Pressure Indication Calibration (7)

Introduction

This specification is based on JJF 1071-2010 "Rules for the Compilation of National Metrology and Calibration Specifications", JJF 1001-2011 "General Measurement terms and definitions", JJF 1059.1-2012 "Evaluation and Expression of Measurement

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Uncertainty" and JJF 1094-2002 the "Quality Evaluation of Measuring Instruments" is a basic series of specifications.

This specification refers to JJG52-2013 "Elastic element type general pressure gauge, pressure vacuum gauge and vacuum gauge", JJG875-2005 "Digital Pressure Gauge" and JG/T 249-2009 "Concrete Impermeability Tester" are compiled.

This specification is released for the first time.

Calibration Specification for Concrete Impermeability Tester

1 Scope

This specification applies to the calibration of concrete impermeability instruments with a measuring range of (0~4) MPa, as well as the calibration of mortar impermeability instruments.

2 Reference documents this specification refers to the following documents.

JJG52-2013 elastic element type general pressure gauge, pressure vacuum gauge and vacuum gauge JJG875 Digital Pressure Gauge JG/T 249-2009 Concrete Impermeability Tester for dated reference documents, only the dated version applies to this specification; for undated reference documents, the latest version (including all amendments) is applicable to this specification.

3 overview

Concrete Impermeability Tester (hereinafter referred to as Impermeability Tester) is used to detect the waterproof performance of concrete after hardening, and to determine its impermeability marking measuring instrument. The impermeability meter applies Pascal's law, and the pressure at all points in the static sealed container is equal everywhere the principle of (the water level difference is negligible), the whole system is pressurized with a water pump, and the pressure gauge and electrical controller are used to the pressure is indicated and controlled to realize the penetration of water from bottom to top into the test piece press-fitted in the test mold to determine the test the anti-permeability performance of the piece and the instrument to calculate its anti-permeability mark.

The impermeability instrument is composed of pressure control instruments, pressure sensors and other main measuring instruments, valves, and connecting pipelines, and is equipped with There are 6 mold bases for installation and test molds. The impermeability instrument is pressurized by an electric plunger pump, and is connected to the water supply capacity through a hydraulic pipeline.

The pressure gauges and electrical control systems in the pipeline are connected to each pressure point of the anti-permeability instrument.

The adjustment control can make the impermeability tester perform a constant pressure test within the specified pressure range of (0.1~4) MPa. anti-the 6 test mold bases included

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in the osmometer, the middle hole of each mold bottom is used as a water pressure output port, and each output port can enter Line independent control and measurement. The structure of the impermeability instrument is shown in Figure 1.

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