

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

JJG 1158.2-2018

Rail Thermometers--Part 2: Digital Rail Thermometers (English Translation)

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Introduction

JJG 1158 "Steel Thermometer" consists of the following two parts.

--- Part 1. Bimetal rail thermometer;

--- Part 2. Digital rail thermometer.

In the use of this procedure for the rail thermometer temperature test, the corresponding procedure should be selected according to the type of rail thermometer section.

This regulation is based on TG/GW115-2012 "High-speed railway ballastless track maintenance rules" (trial) Made.

This procedure is the first release.

Rail thermometer test procedure Part 2. Digital rail thermometer

1 Scope

This procedure applies to the first verification, subsequent verification and in-use inspection of digital rail thermometers.

2 Overview

The digital rail thermometer (hereinafter referred to as the rail thermometer) uses a temperature sensor as a temperature sensing element and is displayed by a secondary meter.

A thermometer that shows the temperature of the rail. The gauge of the gauge is (-40~70) °C.

3 Metrological performance requirements 3.1 indication error the maximum allowable error of the gauge is ± 1.0 °C.

3.2 Variation of indication value the indication value of the gauge should be no more than 2 words.

3.3 Working voltage

The operating voltage of the rail thermometer is the voltage specified in the instruction manual. When the battery is low, the display should have a low battery.

Instructions. The indication error of the gauge should not exceed ± 1.0 °C when there is a low battery indication.

3.4 Adsorption force the adsorption force of the rail thermometer should be no less than 1.96N at the first inspection, and the subsequent inspection should be no less than 1.47N.

3.5 resolution

The gauge should show a resolution of no more than 0.1 °C.

4 General technical requirements

4.1 Appearance

The shape of the gauge should be intact, and the digital display panel should not have defects that hinder correct reading.

The layer should not have rust and plating peeling off. The temperature-sensitive working surface should not have local convex and concave phenomenon, and there should be no oxide film or grease stain.

And substances such as dust that affect the accuracy of temperature measurement. The connection between the rail thermometer sensor and the secondary instrument should be reliable.

A rail thermometer in use allows for defects that do not affect accuracy.

4.2 Identification

The gauge should be marked with the name of the manufacturer or the factory standard, the model of the gauge, the factory number, and the temperature unit (°C).

4.3 Digital display

The temperature display of the rail thermometer should be continuous without stacking, uniform brightness, and there should be no phenomenon such as no light, lack of strokes, etc., decimal point the settings are correct.

5 measuring instrument control Metering device controls include initial verification, subsequent verification, and in-use inspection.