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

JJF 1458-2014

**Calibration Specification for Magnetic Yoke Detectors
(English Translation)**

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Introduction

This specification based on the national measurement specifications JJF 1071-2010 "National Calibration Specifications writing rules" JJF 1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", JJF 1001-2011 "universal metering and fixed term Meaning "prepared to develop.

This specification is the first release.

Yoke type magnetic particle testing machine calibration specification

1 Scope

This standard applies to magnetic yoke-type magnetic detection machines, cross yoke (rotating magnetic field) testing machine calibration. Not applicable AC, DC (half-wave rectification or full-wave rectification) magnetic particle testing machine calibration.

2. References

This specification refers to the following documents.

JJF 1273-2011 magnetic particle inspection machine calibration specification GB/T 5097-2005 destructive testing - Penetrant testing and magnetic particle testing - Viewing conditions GB/T 15822.3-2005 destructive testing equipment Magnetic particle testing - Part 3 JB/T 4730.4-2005 Nondestructive Testing pressure equipment Part 4 Magnetic particle testing JB/T 6065-2004 Nondestructive Testing magnetic detection test piece for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments) applies to this specification.

3 terminology and units of measurement this specification uses quantities and units specified in GB 3102.5.

3.1 magnetizing current Rms ac current yoke type magnetic flaw detector is working properly. DC magnetic yoke-type magnetic detection machines to work the current average. Unit. ampere (A).

3.2 yoke magneticyoke Part of the magnetic circuit, its main function is to provide a low reluctance magnetic flux path.

Note: The yoke widely used relatively high permeability soft iron, A3 steel, and soft magnetic alloys to produce, in some special occasions, but also the yoke Useful ferrite material manufactured.

3.3 Cross yoke crossed yoke on the same plane (or surface), having a certain phase difference (not equal to 0° or 180°) and cross-cutting Angle (not equal to 0° or 180°) of the two-phase sinusoidal alternating magnetic field superimposed on each other, and in the plane (or surface) on the rotating magnetic field of the magnetic detection devices.

3.4 Lifting force when the solenoid yoke pole at maximum distance, the magnetic flux density which produces a peak magnetic field of ferromagnetic workpieces Testing appeal.

NOTE: For engineering practice, with respect to the exchange of electromagnetic yoke, lifting force equal to its average suction yoke poles. Newtons (N).

4 Overview

Magnetic particle inspection is to detect ferromagnetic material surface and near-surface defect detecting method used. When the workpiece is