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MACHINERY INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

ICS 25.200

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JB/T 9204-2008

Replacing JB/T 9204-1999

Metallographic examination of induction hardened steel parts

钢件感应淬火金相检验

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Foreword

This Standard replaces JB/T 9204-1999 *Metallographic examination of induction hardened steel parts*.

Compared with JB/T 9204-1999, the main changes in this Standard are as follows:

- specified and labelled various information on the cover;
- adjusted and populated the relevant elements in the Foreword;
- improved the introduction of "Normative references" and gave the identification of the project;
- the previous edition divided the "microscopic organization classification map" into 1~10 levels which were represented respectively with 10 figure numbers from "Figure 1 ~ Figure 10"; this Standard divided the "microscopic organization classification map" as Figure 1 and the figure numbers are "a) ~ j)" (see 3.3, Table 1, Figure 1).

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Heat Treatment of Standardization Administration of China (SAC/TC 75).

Main drafting organizations of this Standard: Beijing Mechanical and Electrical Research Institute, First Automobile Group Corporation.

Main drafters of this Standard: Wu Bingshu, Liu Kejun, Xu Xiangqiu.

Versions of standard substituted by this Standard are:

- ZB J36009-1988;
- JB/T 9204-1999.

Metallographic examination of induction hardened steel parts

1 Scope

This Standard specifies the technical requirements and corresponding inspection methods for metallographic examination of induction hardened steel parts.

This Standard is applicable to the examination of mechanical parts made of medium carbon structural steel and medium carbon alloy steel with metallographic structure and effective hardened layer depth after high and medium induction hardening.

2 Normative references

The following standards contain the provisions which, through reference in this Standard, constitute the provisions of this Standard. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to this Standard. However, the parties who enter into agreement based on this Standard are encouraged to investigate whether the latest versions of these documents are applicable. For undated reference documents, the latest versions apply to this Standard.

GB/T 5617, *Determination of effective depth of hardening after induction or flame hardening of steel* (GB/T 5617-2005, ISO 3754:1976, NEQ)

3 Technical requirements

3.1 The surface hardness of the part and the effective hardened layer depth shall comply with the provisions of the product drawings.

3.2 After the parts are quenched, there shall be no defects such as cracks or burns on the surface.

3.3 After quenching and low temperature tempering ($\leq 200^{\circ}\text{C}$), the metallographic structure is evaluated according to Figures 1a) ~ j). See Table 1 for rating description.

When the drawing specifies that the lower limit of hardness is higher than or

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