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High Strength Abrasion Resistant Steel Plates for Construction Machine

工程机械用高强度耐磨钢板

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Foreword

Annex A of this standard is informative.

This standard was proposed by China Iron & Steel Association.

This standard shall be under jurisdiction of China Steel Standardization Technical Committee.

Main drafting organizations of this standard: Jigang Group Co., Ltd., China Metallurgical Information Standardization Research Institute, Wuyang Steel & Iron Co., Ltd., Hunan Hualing Lianyuan Steel & Iron Co., Ltd.

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High Strength Abrasion Resistant Steel Plates for Construction Machine

1 Scope

This standard specifies designation, size, appearance, weight and allowable deviation, technical requirements, test method, test rules, packaging, mark and quality certificate of high strength abrasion resistant steel plates for construction machine.

This standard is applicable to steel plates, which the thickness is not larger than 80mm and used for abrasion resistant structural component of construction machine (mining area, construction, agriculture, etc.). The abrasion resistant steel plate this standard specifies are also applicable in other fields.

2 Normative References

The following standards contain the provisions which, through reference in this text, constitute the provisions of this standard. For dated reference, subsequent amendments (excluding corrigendum) or revisions of these publications do not apply. However, the parties who enter into agreement according to these specifications are encouraged to study whether the latest editions of these references are applicable. For undated references, the latest edition of the normative document is applicable to this standard.

GB/T 222 Permissible tolerances for chemical composition of steel products

GB/T 223.3 Methods for chemical analysis of iron, steel and alloy - The diantipyrylmethane phosphomolybdate gravimetric method for the determination of phosphorus content

GB/T 223.9 Iron steel and alloy - Determination of aluminium content - Chrom azurol S photometric method

GB/T 223.11 Iron steel and alloy - Determination of chromium content - Visual titration or potentiometric titration method

GB/T 223.12 Methods for chemical analysis of iron, steel and alloy - The sodium carbonate separation-diphenyl carbazide photometric method for the determination of chromium content

GB/T 223.13 Methods for chemical analysis of iron, steel and alloy - The

ammonium ferrous sulfate titration method for the determination of vanadium content

GB/T 223.14 Methods for chemical analysis of iron, steel and alloy - The N-benzoy-N-phenylhydroxylamine extraction photometric method for the determination of vanadium content

GB/T 223.17 Methods for chemical analysis of iron steel and alloy - The diantipyrylmethane photometric method for the determination of titanium content

GB/T 223.23 Iron steel and alloy - Determination of nickel content - The dimethylglyoxime spectrophotometric method

GB/T 223.26 Iron steel and alloy - Determination of molybdenum content - The thiocyanate spectrophotometric method

GB/T 223.54 Methods for chemical analysis of iron, steel and alloy - The flame atomic absorption spectrophotometric method for the determination of nickel content

GB/T 223.58 Methods for chemical analysis of iron, steel and alloy - The sodium arsenite-sodium nitrite titrimetric method for the determination of manganese content

GB/T 223.59 Methods for chemical analysis of iron, steel and alloy - The reduced molybdoantimonyl phosphoric acid photometric method for the determination of phosphorus content

GB/T 223.60 Methods for chemical analysis of iron, steel and alloy - The perchloric acid dehydration gravimetric method for the determination of silicon content

GB/T 223.61 Methods for chemical analysis of iron, steel and alloy - The ammonium phosphomolybdate volumetric method for the determination of phosphorus content

GB/T 223.62 Methods for chemical analysis of iron, steel and alloy - The butyl acetate extraction photometric method for the determination of phosphorus content

GB/T 223.63 Methods for chemical analysis of iron, steel and alloy - The sodium(potassium) periodate photometric method for the determination of manganese content

GB/T 223.64 Iron steel and alloyed - Determination of manganese content - Flame atomic absorption spectrometric method

GB/T 223.67 Iron steel and alloy - Determination of sulfur content - Methylene blue spectrophotometric method

GB/T 223.68 Methods for chemical analysis of iron, steel and alloy - The potassium iodate titration method after combustion in the pipe furnace for the determination of sulfur content

GB/T GB/T223.69 Iron steel and alloy - Determination of carbon contents - Gas-volumetric method after combustion in the pipe furnace

GB/T 223.71 Methods for chemical analysis of iron, steel and alloy - The gravimetric method after combustion in the pipe furnace for the determination of carbon content

GB/T 223.72 Iron steel and alloy - Determination of sulfur content - Gravimetric method

GB/T 223.75 Iron steel and alloy - Determination of boron content - Methanol distillation-curcumin photometric method

GB/T 223.76 Methods for chemical analysis of iron, steel and alloy - The flame atomic absorption spectrometric method for the determination of vanadium content

GB/T 223.78 Methods for chemical analysis of iron, steel and alloy - Curcumin spectrophotometric method for the determination of boron content

GB/T 228 -2008 Metallic materials - Tensile testing at ambient temperature (GB/T 228- 2002, eqv ISO 6892:1998)

GB/T 229 Metallic Materials - Charpy Pendulum Impact Test Method (GB/T 229-2007, ISO 148-1:2006, MOD)

GB/T 231.1 Metallic materials - Brinell hardness test - Part 1: Test method (GB/T 231.1-2009, ISO 6506-1:2005, MOD)

GB/T 247 General Rule of Acceptance - Package, Mark and Certification for Steel Plates (Sheets) and Strips

GB/T 709 Dimension, shape, weight and tolerances for hot-rolled steel plates and sheets

GB/T 2975 Mechanical Test Sampling Location and Sample Preparation for Steel and Steel Products (GB/T 2975-1998, eqv ISO 377:1997)

GB/T 4336 Standard test method for spark discharge atomic emission spectrometric analysis of carbon and low-alloy steel (routine method)

GB/T 17505 Steel and steel products General technical delivery requirements (GB/T 17505-1998, eqv ISO 404:1992)

GB/T 20066 Steel and iron - Sampling and preparation of samples for the

determination of chemical composition (GB/T 20066-2006, ISO 14284:1996, IDT)

YB/T 081 Rule for rounding off of numerical values and judgment of testing values for technical standards of metallurgy

3 Order content

For placing order, the party shall provide the following information:

a) Code name of this standard;

b) Product name;

c) Designation;

d) Dimension;

e) Condition of delivery;

f) Weight;

g) Other special requirements.

4 Designation Denotation

Steel designation shall be composed of "NM" [initial letters of the Pinyin "Naimo" (abrasion proof in English)], and the Brinell hardness number shall be specified.

For example: NM500

5 Dimension, Shape, Weight and Tolerance

5.1 The dimension, shape, weight and tolerance of steel plate shall meet the requirements of GB/T 709.

5.2 The steel plates of other dimension, shape or tolerance may be supplied based on the mutual agreement of the supply and demand parties.

6 Technical Requirements

6.1 Designation and chemical composition

6.1.1 The designation and chemical composition (heat analysis) of steel shall meet the requirements of Table 1.

Annex A

(Informative)

Reference value of carbon equivalent

The reference value of steel plate carbon equivalent is detailed in Table A.1.

Table A.1

Designation	Thickness /mm	CEV, not larger than
NM300	≤ 80	0.45
NM360	≤ 80	0.48
NM400	≤ 50	0.57
	>50~80	0.65
NM450	≤ 50	0.59
	>50~80	0.72
NM500	≤ 50	0.64
	>50~80	0.74
NM550	≤ 50	0.72
NM600	≤ 50	0.84

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