

ICS 45.080
CCS S 11

TB

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

TB/T 2995-2000

**Railway wheels and tires for ultrasonic inspection
(English Translation)**

Issued on: July 15, 2011

Implemented on: August 1, 2011

Issued by: Ministry of Railways of the PRC

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1 Scope

This Standard specifies the type dimensions and tolerances, technical requirements, test methods, inspection rules, marking and quality certificate, quality assurance, etc. of the rails.

This Standard applies to 60 kg/m hot-rolled rails for high speed railway operating at speeds of 200 km/h and above. Rails for railway operating at speeds greater than 160 km/h and less than 200 km/h may refer to it for implementation.

2 Normative references

The following documents are indispensable for the application of this document.

For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 223.14 Methods for Chemical Analysis of Iron, Steel and Alloy - The N-Benzoyl-N-Phenylhydroxylamine Extraction Photometric Method for the Determination of Vanadium 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 223.62 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 223.68 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 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 223.82 Steel and iron - Determination of hydrogen content - Thermal conductivity/infrared method after fusion under inert gas

GB/T 226 Test method for macrostructure and defect of steel by etching

GB/T 228 Metallic materials - Tensile testing at ambient temperature

GB/T 231.1 Metallic materials - Brinell hardness test - Part 1: Test method

GB/T 3075 Metallic materials - Fatigue testing - Axial-force-controlled method

GB/T 4161 Metallic materials - Determination of plane-strain fracture toughness

GB/T 4336 Carbon and low-alloy steel - Determination of multi-element contents - Spark discharge atomic emission spectrometric method (routine method)

GB/T 6398 Metallic materials - Fatigue testing - Fatigue crack growth method

GB/T 10561-2005 Steel - Determination of Content of Nonmetallic Inclusions

- Micrographic Method Using Standards Diagrams

GB/T 11261 Steel and Iron - Determination of oxygen content - The pulse heating inert gas fusion-infra-red absorption method

GB/T 13298 Inspection methods of microstructure for metals

GB/T 19001 Quality management systems - Requirements

GB/T 20066 Steel and Iron - Sampling and Preparation of Samples for the
Determination of Chemical Composition

GB/T 20124 Steel and iron - Determination of nitrogen content - Thermal conductimetric method after fusion in a current of inert gas

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

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Heat

All slabs cast from a furnace of molten steel; but excluding the first slab cast from the next furnace of molten steel entering into tundish casting.

3.2 Sequence

Continuous casting of the same designation by molten steel of different heats in tundish.

3.3 Transition area

The part cast by a mixture of two furnaces of molten steel.

4.1 Grading

The nonmetallic inclusions in the steel are divided into two grades, A and B.

4.2 Selection

This Standard specifies two steel designations of U71MnG and U75VG. High speed railways above 250 km/h and high speed passenger railways of 200 km/h

~ 250 km/h shall select U71MnG rails. High speed passenger and freight mixed railways of 200 km/h ~ 250 km/h shall select U75VG rails.