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Bright steel made from case hardening steel

Technical delivery conditions

DIN 1652 Part 3

Blankstahl; technische Lieferbedingungen;
Blankstahl aus Einsatzstählen

This standard, together with DIN 1652 Parts 1, 2 and 4, November 1990 editions, supersedes DIN 1652, May 1963 edition.

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

See Explanatory notes for connection with International Standard ISO 683-18 : 1976, published by the International Organization for Standardization.

The symbol ● denotes items which shall, the symbol ●● denoting items which may, be agreed upon at the time of ordering.

1 Field of application

This standard specifies requirements for bright steel made from case hardening steel covered in DIN 17 210. Other requirements with which bright steel is expected to comply are specified in DIN 1652 Part 1.

2 Concepts

See DIN 1652 Part 1 for concepts.

3 Product forms, dimensions and tolerances

Product forms, dimensions and tolerances shall be as specified in DIN 1652 Part 1.

4 Mass

Cf. DIN 1652 Part 1.

5 Designation

See tables 1 to 3 for material designations and numbers, and heat treatment conditions.

The standard designation of steel covered in this standard shall include the following items:

a) the term 'steel';
b) the DIN number;
c) the material designation or number;
d) the symbol denoting degree of hardenability (hardenability band), where applicable;
e) the code letter denoting heat treatment condition.

Examples:

Steel DIN 1652 – 16 MnCr 5 HH K + BG
Steel DIN 1652 – 1.7131 HH K + BG

6 Steel grades

The steel grades covered in this standard are given in subclause 6.1 of the September 1986 edition of DIN 17 210.

7 Requirements

7.1 Manufacturing process

The steelmaking process, the casting process and the process of shaping the product shall be at the manufacturer's discretion.

●● In special cases, these processes may be the subject of agreement at the time of ordering.

7.2 Heat treatment condition

The steel shall be supplied in one of the heat treatment conditions specified in table 1, further requirements being specified in DIN 1652 Part 1.

7.3 Separation by cast

Products belonging to one consignment shall be separated by cast.

7.4 Chemical composition

7.4.1 Chemical composition, as determined by ladle analysis, shall be in compliance with table 2 of DIN 17 210.

7.4.2 The amounts by which the chemical composition in the product analysis may deviate from the limiting values specified for the ladle analysis (cf. table 2 of DIN 17 210) shall be as specified in table 3 of DIN 17 210.

7.5. Mechanical properties

7.5.1 ●● Table 1 gives a summary of the requirements regarding chemical composition and mechanical properties, as a function of the heat treatment condition, with which the steel is expected to comply.

Actual values and guideline values for mechanical properties and hardness are specified in table 2, those for hardenability of stainless steel being specified in table 4 of DIN 17 210.

Continued on pages 2 to 6

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