BS 2HR 51:2010

BSI Standards Publication

AEROSPACE SERIES

Specification for high expansion heat-resisting steel billets, bars, forgings and parts (Ni 25.5, Cr 15, Ti 2, Mn 1.5, Mo 1.25, Si 0.7, V 0.3) (Solution treated at 980 °C)

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Foreword

Publishing information

This British Standard is published by BSI and came into effect on 31 January 2009. It was prepared by Panel ACE/61/-/48, *Heat resisting alloys*, under the authority of Technical Committee ACE/61, *Metallic materials for aerospace purposes*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This standard supersedes BS HR 51:1973, which is withdrawn.

Information about this document

This is a full revision of BS HR 51, and introduces the following principal changes.

a) Change in title.

b) Requirements are stated in tabular format in accordance with EN 4500-1 and EN 4500-3.

Hazard warnings

WARNING. This British Standard calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

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This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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1 Scope

This British Standard specifies requirements for nickel-chromium-titanium-manganese-molybdenum-silicon-vanadium heat-resisting steel supplied in the following forms, and as parts.

a) Bars for machining: solution treated and precipitation treated, designation HR 51A.

b) Billets and bars for forging: hot or cold worked and subsequently machined or ground, designation HR 51B.

c) Forgings: solution treated and precipitation treated, designation HR 51C.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS HR 100, *Procedure for inspection, testing and acceptance of wrought heat-resisting alloys*

3 Technical requirements

3.1 Material to this standard shall conform to Table 1, Table 2 and Table 3.

NOTE The format and symbols used in Table 1, Table 2 and Table 3 are derived from EN 4500-1 and EN 4500-3.

3.2 Parts finally heat-treated after machining shall conform to Section **1** and Section **8** of BS HR 100.

3.3 Parts shall be supplied in the solution treated and precipitation treated condition.

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