

ICS 27.120.30

CCS F 09



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 15146.10-2001

**Nuclear criticality safety for fissile materials outside reactors -
Safety requirements for the use of fixed neutron absorbers**

反应堆外易裂变材料的核临界安全 固定中子吸收体的应用安全要求

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Foreword

This document was issued on 24 October 2001 by the General Administration of Quality Supervision, Inspection and Quarantine, and took effect on 1 April 2002.

It is a first edition and replaces no earlier document.

Classification: ICS 27.120.30, CCS F 09.

It is a GB standard without the /T suffix: compliance is mandatory in China.

1 Scope

This part of GB 15146 covers the fixed neutron absorbers - borated plate, boron carbide, cadmium and similar materials built permanently into racks, tanks and transport packages - that are relied upon to keep a configuration subcritical. Because the safety case depends on the absorber still being there and still working decades later, the standard sets the general safety considerations, the design requirements, the safety evaluation, and the verification and inspection needed to confirm the absorber's presence, position and areal density over the life of the installation. Issued on 24 October 2001, in force since 1 April 2002; first edition. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the edition it replaces are taken from there. The clause text, the tables and the numeric limits are not reproduced on this page - they are in the document itself, which is delivered in full in

English translation.

About this edition

GB 15146.10-2001 is the current edition. It was issued on 24 October 2001 and has been in force since 1 April 2002.

The interval between issue and effect is the transition period. It exists so that producers, laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

Classification and status

GB 15146.10-2001 is classified under ICS 27.120.30. ICS is the International Classification for Standards, the same scheme used by ISO and by the national bodies of most countries, which is what allows a Chinese standard to be placed beside its foreign counterparts on subject rather than on number.

Its Chinese Standard Classification code is CCS F 09. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB prefix marks a mandatory national standard. Compliance is required by law within China: it applies to what is made, sold or imported there, and an inspection body will judge a product against it whether or not a contract names it.

How a Chinese national standard is set out

Chinese national standards are drafted to the rules of GB/T 1.1, which fixes the order in which a standard is set out. The document opens with a foreword recording the issuing bodies, the relationship to any previous edition and the technical committee responsible for it. Clause 1 is the scope. Clause 2 lists the normative references - the other standards that have to be applied together with this one, and without which its requirements cannot be met. Clause 3 gives the terms and definitions. The technical clauses follow: the requirements themselves, the test or measurement methods by which conformity is established, the inspection rules that say how a lot is sampled and judged, and, for a product standard, the provisions on marking, packaging, transport and storage. Annexes, normative or informative, come last.

GB 15146.10-2001 runs to 15 pages in the English translation. What is delivered is the complete document in that order: every clause, every table, every figure and every annex of the Chinese original, with the same numbering, so that a reference to a clause number in a contract or a test report points to the same place in both languages.

About this English translation

The English edition of GB 15146.10-2001 is a full translation of the official Chinese text, not a summary, an abstract or a machine rendering left unchecked. Clause and subclause numbers, table and figure numbers and annex letters are those of the original, because they are what a specification, a purchase order or a test report cites.

Technical terms are translated against the vocabulary standards of the same field, so that a term used in GB 15146.10-2001 reads the same way as in the other Chinese standards it is used beside. Where a term has an established English form in an ISO or IEC document on the same subject, that form is used; where China's term has no foreign counterpart, it is translated literally and the Chinese is kept alongside it rather than replaced by an approximation.

Quantities, units and symbols are carried over unchanged. Chinese standards use SI, so a value in the translation is the value in the original document, not a conversion, and a limit read from the English text is the limit that will be applied by a Chinese inspection body reading the Chinese one.

This page is compiled from the official publication record: the standard number and both titles, the issuing bodies, the dates of issue and effect, the ICS and CCS classification. The requirements, limits, tables and test conditions are in the document itself.