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

**GB/T 15825.8-2008**

Replacing GB/T 15825.8-1995

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**Sheet metal formability and test methods - Part 8: Guidelines  
for the determination of forming-limit diagrams**

金属薄板成形性能与试验方法 第8部分：成形极限图(FLD)测定指南

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## Foreword

GB/T 15825 "Performance and test methods for sheet metal forming" is divided into eight sections.

- Part 1. formability and indicators;
- Part 2. General test procedures;
- Part 3. drawing and drawing load test;
- Part 4. reaming test;
- Part 5. bending test;
- Part 6. Cone cup test;
- Part 7. Test lug;
- Part 8. Forming Limit Diagram (FLD) Determination Guide. This part of GB/T 15825 Part 8. This Part replaces GB/T 15825.8-1995 "Sheet metal formability and test methods - Forming Limit Diagram (FLD) tests." Section compared with the GB/T 15825.8-1995, major changes in the following.
- Added "directory" and "Introduction";
- 1 title was changed to "Range";
- Increasing the normative references ISO 12004.1997 and ISO /T R14936.1998;
- Modify the provisions of 4.1;
- Amend the provisions of

## 1 Scope

GB/T 15825.8-2008 is the Chinese national standard on sheet metal formability and test methods - part 8: guidelines for the determination of forming-limit diagrams, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 23 December 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2009. Classification: ICS 77.040.10, CCS J32. 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 issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB/T 15825 in the provisions of this part of the laboratory testing sheet metal forming limit diagram (forming limit diagrams, Acronym FLD) of Setting Method. This section applies to the thickness of the sheet metal of 0.20mm ~ 3.00mm.

## 2 Normative references

The following documents contain provisions which, through reference

GB/T 15825 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 15825.2-2008 sheet metal formability and test methods - Part 2. General test procedures

ISO 12004.1997 Determination of metal material FLD Guide ISO /T R14936.1998 metallic material strain analysis report 3 symbols, names and units The symbols used in this section, name and unit are shown in Table 1. Table 1 symbol, name and unit  
 Symbol Name  
 Unit FLD Forming Limit Diagram FLC FLC Dd die diameter mm Fc BHF N Fp punch force  
 N epsilon1, epsilon2's principal strain Like strain hardening index

### 4.3 Column item

a) and b), but also increased the column item 4.3c);

--- Modify the provisions of 5.3;

--- 6 title was changed to "6 grid strain analysis Preparation";

- Modify the provisions of 6.1, and added note;
- Added Figure 2, after drawing number in ascending order along the row;
- Replace the contents of the original standard of Figure 2, and Figure 3 revised figure number;
- Modify the provisions of 6.3;
- Increased 7.1;
- Modify the original standard 7.1 and 7.2, and revised its provisions;
- Increased by 7.3,
- 7.2 Recursive original standard was 7.4;
- Original standard "

#### **8.1 Lubrication and contact conditions"; Add text "no special requirements as"**

8.2.1 Provisions at the beginning;

- Modify the provisions of 8.3;
- Modify the introductory phrase

9.1 pairs of column item;

10.1 increase at the beginning of the word "use strains in the mesh method for determination of ultimate strain on the specimen";

--- Increased 10.6;

--- The original standards were revised to

10.7 and 10.8, and amended their provisions;

--- Increased by 11.3, then the terms of numbers in ascending order along the row;

11.5 and 11.6, respectively (

11.5 the original standards) provisions; Experimental determination based on the increase in the effective

11.6 Text "is. adjacent or close to three critical grid round the major axis or the minor axis of the foot Inch difference may not be greater than 10% are average ";

- Figure 5 (the original standard 4) in exchange of b) of the position shown;