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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 25047-2016

Replacing GB/T 25047-2010

Metallic materials -- Tube -- Ring-expanding test

金属材料 管 环扩张试验方法

(English Translation)

Issued on: September 2, 2010 **Implemented on: July 1, 2017**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People 's Republic of China

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard instead of GB/T 25047-2010 "metal material tube ring expansion test method", compared with GB/T 25047-2010, the main technical changes are as follows.

Figure 1 to increase the title "ring expansion test diagram" (see Figure 1);

- Chapter 3 The title is amended to read "Test Principle" (see Chapter 3);

- replace Chapter 7 d) "Degree of expansion of the specimen" with "Relative expansion rate" (see Chapter 7).

This standard uses the translation method equivalent to ISO 8495.:2013 "metal material tube ring expansion test method".

This standard has made the following editorial changes.

--- increase the figure in Figure 1.

This standard is proposed by China Iron and Steel Industry Association.

This standard is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183).

The drafting of this standard. Shanghai Entry-Exit Inspection and Quarantine Bureau of industrial and raw materials testing technology center, metallurgical industry information standards Academy.

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1 Scope

This standard specifies the use of conical mandrels to extend the metal tube ring specimen until a fracture occurs to reveal the surface of the metal tube and the tube Test method for defects inside the wall. The method can also be used to assess the ability of a metal tube to undergo plastic deformation.

This standard applies to the outer diameter of 18mm ~ 150mm, wall thickness of 2mm ~ 16mm metal pipe ring.

2 Symbols, names and units

The symbols, names and units used in this standard are shown in Table 1 and Figure 1.

Table 1 Symbols, names and units

Symbol name unit

aa metal pipe wall thickness mm D metal pipe ring original diameter mm Dmmax. The maximum diameter of the conical top core mm the minimum diameter of the conical top core Du The maximum outer diameter of the metal tube after the expansion test mm k The top of the core has a length of the taper portion (ie, the face length) mm L length of metal tube test specimen mm a in the steel pipe standard also used T to represent the wall thickness of the pipe.

Figure 1 Schematic diagram of ring expansion test

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