

ICS 77.040.10
CCS H 23



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

GB/T 246-2017

**Metallic materials -- Tube -- Flattening test
(English Translation)**

Issued on: July 12, 2017

Implemented on: April 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

Table of Contents

Foreword	3
1 Scope	4
2 Symbols, Names and Units	4
3 Test Principle	4
4 Test Equipment	5
5 Specimen	5
6 Test Procedures	5
7 Test Report	6

1 Scope

This Standard specifies the flattening test method for determining the plastic deformability of metal tube with circular cross-section, it can also be used for revealing the tube defects.

Except for the provisions of relevant product standards, this Standard is applicable to the metal tubes with outer diameter no greater than 600mm, and wall thickness no greater than 15% outer diameter.

2 Symbols, Names and Units

The symbols, names and units used in this Standard can refer to Table 1 and Figure

1.

Table 1 -- Symbols, Names and Units

Symbols Names Units a a

Wall thickness of tube mm b Inner width of specimen after flattening mm

D Outer diameter of metal tube mm

H Distance between two pressure plates under force mm

L Specimen length a such parameter can also be expressed by other symbols in the steel tube standards.

3 Test Principle

The Force IS APPLIED TO the specified-length metal tube specimen cut from the direction perpendicular to the longitudinal axis of the metal tube OR specimen on metal tube end to

perform flatten test [see Figure 1a) and Figure 1b)] till the distance between two pressure plates under such force reaches the value specified in the relevant product standard.

If it is closed flattening, the width of contact area on the inner surface of the specimen shall be at least half of the width b of the specimen after normal flattening [see Figure 1c)].