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

GB/T 4857.4-2008

Replacing GB/T 4857.4-1992; GB/T 4857.16-1990

**Packaging -- Basic tests for transport packages -- Part 4:
Compression and Stacking tests using a compression tester**

包装 运输包装件基本试验 第4部分：采用压力试验机进行的抗压和堆码试验方法
(English Translation)

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Foreword

GB/T 4857 "Basic tests for transport packages" is divided into the following sections.

- Part 1. The test method for labeling various parts;
- Part 2. Temperature and humidity adjustment process;
- Part 3. Test methods for stacking static load;
- Part 4. Compression and Stacking tests using a method of pressure testing machine;
- Part 5. drop test method;
- Part 6. Test methods for rolling;
- Part 7. sinusoidal vibration test method given frequency;
- Part 9. Water spray test;
- Part 10. Test methods for sinusoidal vibration frequency;
- Part 11. horizontal impact test method;
- Part 12. Test methods for immersion;
- Part 13. Low air pressure;
- Part 14. Test methods for tipping;
- Part 15. Controlled horizontal impact test method;
- Part 17. compilation of performance test of the general principles;
- Part 18. compilation of performance test of quantitative data;
- Part 19. Flow test information recorded;
- Part 20. Test methods for collision;

- Part 21. Test methods for mold;
- Part 22. Unit loads stability test methods;
- Part 23. Test method for random vibration.

This section GB/T 44857 Part of.

This part identical with ISO 12048:1994 "Packaging intact, filled transport packages and using the compression press to heap Code experiment. " this part of ISO 12048:1994 as compared to the main differences are as follows.

- The Note 3, 4, Note 5, Note 6 to formal terms (Excerpts 7.3.1,7.3.2,7.3.5,7.3.6);
- Deletion of Appendix B (for reference only directory. Standard ISO 2234. 1985), placed in Chapter 2.

This Part replaces GB/T 4857.4-1992 "Transport packages Pressure test method" and GB/T 4857.16-1990 "package Loaded transport package stacking test using "pressure tester's.

This portion of the GB/T 4857.4-1992 and GB/T 4857.16-1990 compared to the main changes are as follows.

- Combined the two standards (GB/T 4857.4-1992 Version and GB/T 4857.16-1990 version) Test principle;
- Combined the two standards (GB/T version 4857.4-1992 and GB/T 4857.16-1990 Version) testing machine platen requirements, Georgia Type have been adjusted accordingly;
- Canceled 5.1 to 5.5 (1992 edition), to Chapters 5 and 6 (edition);
- Combined the two standards (GB/T version 4857.4-1992 and GB/T 4857.16-1990 edition) Test methods, increased

Table 1;

- Modify the contents of the test report;

GB/T 4857.4-2008/ISO 12048:1994

- Increased measurement package deformation - load Method Example (see Appendix A).

Appendix A of this section is an informative annex.

This part of the National Packaging Standardization Technical Committee (SAC/TC49) and focal points.

This section drafted by. the Ministry of Railways Institute of Standards and Metrology.

1 Scope

This section GB/T 4857 provisions for transport packages pressure test using the same test equipment and test stacking test Principle experiment, the contents of the device performance, test procedures and test reports with.

This section applies to assess transport package when subjected to pressure, compressive strength and packaging of contents protection. It can make A single experiment can also be used as part of a series of tests.

2 Normative references

The following documents contain provisions which, through reference in this part of the GB/T 4857, constitute provisions of this part. 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 4857.2 Transport packages temperature and humidity conditioning (GB/T 4857.2-2005, ISO 2233:2000, MOD) GB/T 4857.3 Basic tests for transport packages Stacking static load test method (GB/T 4857.3-2008, ISO 2234:2000, IDT)

3 Test principle

The test sample is placed between the press platen, and then choose either method.

- a) In the case of the compressive strength test, carried out until the pressure until the test sample is damaged or reaches a predetermined load and displacement values.
- b) In the case of stacking test, until a predetermined load is applied to the test sample is damaged or until a predetermined time elapses.

4.1 Pressure testing machine

4.1.1

Pressure testing machine driven by a motor, mechanical drive or hydraulic drive, through one or both of the platen to 10mm/min $\pm$ 3mm/min relative speed of uniform movement pressure.

Note 1: The speed is not recommended to other such 12.5mm/min $\pm$ 2.5mm/min and results 10mm/min $\pm$ 3mm/min speed obtained for comparison.

Note 2: For some packages, such as metal drums or wooden box, you may need to use a lower maximum speed to prevent the load exceeds a predetermined load value.

4.1.2

plate shall meet the following requirements.

a) formation.

--- Surface area of $\leq 1\text{m}^2$, the height difference between any two points tolerance value of 0.1%;

--- Surface area greater than 1m^2 , and when placed horizontally, the horizontal surface of the lowest point to the highest point of the height difference should not exceed 1mm;

GB/T 4857.4-2008/ISO 12048:1994