

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Amendment No. 3
to
AS/NZS 2712:2007
Solar and heat pump water heaters—Design and construction

REVISED TEXT

The 2007 edition of AS/NZS 2712 is amended as follows; the amendment(s) should be inserted in the appropriate place(s).

SUMMARY: This Amendment applies to the Preface, Clauses 1.1, 1.4, 1.5.7, 2.8, 4.2.2, 4.4.2, 4.4.4, 4.5.3, 4.7, 6.2.1, 7.4.2, 7.4.3.1, 8.2.1, 8.2.2, 8.4.2, 8.4.4, 8.4.5.1, 8.4.7, 8.5.2 and Appendices A, C, D, F and H.

Published on 2014-11-05.

Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on 18 July 2014.

Preface

Add the following text at the end of the objective paragraph:

and heat pump hot water supply systems.

Clause 1.1

- 1 Note 5, *delete* ‘Clauses 7 and 8.42’ and *replace* with ‘Clauses 7.4.2 and 8.2.2’.
- 2 Note 6, *delete* ‘solar water heaters’ and *replace* with ‘solar and heat pump water heaters’.
- 3 Note 6, Item (c), *delete* ‘AS/NZS 3350.2.40’ and *replace* with ‘AS/NZS 60335.2.40’.
- 4 Note 6, Item (f), *delete* ‘NZS 5262’ and *replace* with ‘NZS/AS 3645.1 and NZS/AS 3645.2’.

Clause 1.4

- 1 *Add* the following after the listing of AS 3498:
AS 4055 Wind loads for housing
- 2 *Delete* the listing for referenced documents ATS 5200.461 and ATS 5200.471 and *replace* with the following:
5200 Plumbing and drainage products
5200.053 Part 053: Stainless steel pipes and tubes for pressure applications
- 3 *Move* the listing for referenced document AS 2984 from the AS/NZS group to the AS group.
- 4 *Delete* the listing for referenced document AS/NZS 3350.2.40.
- 5 *Add* the following after the listing of AS/NZS 60335.2.21:
60335.2.40 Part 2.40: Safety—Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers

AMDT
No. 3
NOV
2014

AMDT
No. 3
NOV
2014

AMDT
No. 3
NOV
2014

- 6 Add the following referenced documents before the listing of NZS 3501:
- | | |
|--------|--|
| NZS/AS | |
| 3645 | Essential requirements for gas equipment |
| 3645.1 | Part 1: Essential safety |
| 3645.2 | Part 2: Certification |
- 7 Delete the listing for referenced document NZS 5262.
- 8 Delete the existing title of ISO 9806 and *replace* with the following:
Solar energy—Solar thermal collectors—Test methods
- 9 Delete the listing for referenced document ISO 9806-2.
- 10 Delete the listing for referenced document ASTM G26 and *replace* with the following:
- | | |
|------|--|
| G155 | Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials |
|------|--|

Clause 1.5.7

Add the following new term and definition as Clause 1.5.7 and *renumber* the existing Clauses 1.5.7 to 1.5.24 as 1.5.8 to 1.5.25.

1.5.7 Collector area, gross

Maximum projected area of a complete solar collector excluding any integral means of mounting and connecting fluid pipework.

For an array or assembly of flat plate collectors, evacuated tubes or concentrating collectors, the gross area includes the entire area of the array, and the borders and the frame.

Clause 2.8

Item (b), *delete* ‘NZS 5262’ and *replace* with ‘NZS/AS 3645.1 and NZS/AS 3645.2’.

Clause 4.2.2

Item (b), *delete* ‘AS 1769, ATS 5200.461, ATS 5200.471’ and *replace* with ‘AS 1769 or AS 5200.053’.

Clause 4.4.2

Delete existing text and *replace* with the following:

The thickness of any glazing of flat plate collectors shall comply with the relevant requirements of AS 1288 or NZS 4223.1 and NZS 4223.4, as appropriate, for any location at which it is intended that the collector be installed.

Based on AS 4055 and the mechanical load test of ISO 9806, a design wind pressure of 2.4 kPa shall be the minimum required design wind pressure for the AS 1288 glass thickness calculation.

For 3 mm toughened glazing, the AS 1288 maximum allowable span shall be calculated from that for 4 mm toughened glazing by multiplying the result by 0.762 (the approximate ratio of allowable spans between four-edge supported annealed 3 mm and 4 mm glazing with aspect ratio 2 subjected to the same design wind pressure).

AMDT
No. 3
NOV
2014

AMDT
No. 3
NOV
2014

AMDT
No. 3
NOV
2014

AMDT
No. 3
NOV
2014

AMDT
No. 3
NOV
2014

Clause 4.4.4

Second paragraph, *delete* the text ‘ASTM G26’ and *replace* with ‘ASTM G155’.

AMDT
No. 3
NOV
2014

Clause 4.5.3

Item (a), *delete* the comma after the word ‘damage’ in the last sentence and *add* the following at the end of the sentence:

(a) to (c).

AMDT
No. 3
NOV
2014

Clause 4.7

Delete the last paragraph and *replace* with the following:

When collectors are tested in accordance with Appendix D, after being subjected to the stagnation test described in Appendix B, the total increase in the mass of the collector after the three tests shall not exceed 30 g/m² of the gross collector area.

AMDT
No. 3
NOV
2014

Clause 6.2.1

1 *Delete* the first paragraph and *replace* with the following:

Materials used shall perform adequately over the expected lifespan of the system in respect of erosion, corrosion, contamination and mechanical properties at conditions experienced in service and permitted by any safety device in the system.

2 *Delete* the following sentence:

Pumps shall not cause excessive noise or vibration.

AMDT
No. 3
NOV
2014

Clause 7.4.2

Delete the existing text, including Notes, and *replace* with the following:

The thermal performance of solar water heater systems can be evaluated by using the following methods:

(a) AS 2984 may be used for outdoor testing.

(b) AS/NZS 4234 may be used for performance evaluation by computer simulation.

NOTE: The basis of assessing thermal performance should be clearly stated in any documentation identifying the performance of systems.

AMDT
No. 3
NOV
2014

Clause 7.4.3.1

Delete the second paragraph and *replace* with the following:

Manufacturer’s supplied sets of equipment comprising collector, pump and controller, intended for installation to existing hot water supply systems, shall be tested in accordance with the requirements of Appendix F as part of a vented or unvented system, as appropriate, using a storage tank of the minimum volume specified in the manufacturer’s instructions.

AMDT
No. 3
NOV
2014

Clause 8.2.1

Add the following new heading underneath the existing heading of Clause 8.2:

8.2.1 General
