

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Amendment No. 1
to
AS/NZS 4692.1:2005
Electric water heaters
Part 1: Energy consumption, performance and general requirements

CORRECTION

The 2005 edition of AS/NZS 4692.1 is amended as follows; the amendment(s) should be inserted in the appropriate place(s).

SUMMARY: This Amendment applies to Clauses 1.3, 2.4.2 and Appendix C.

Published on 21 April 2011.

Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on 1 April 2011.

Clause 1.3

- 1 *Delete* AS 1722, 1722.1 and 1722.2 from the Referenced Documents list.
- 2 *Add* the following new Referenced Documents:

AS ISO

- 7.1 Pipe threads where pressure-tight joints are made on the threads—
Dimensions, tolerances and designation
- 7.2 Pipe threads where pressure-tight joints are made on the threads—
Verification by means of limit gauges

Clause 2.4.2

Delete ‘AS 1722.1 or AS 1722.2’ and *replace* with ‘AS ISO 7.1 or AS ISO 7.2’.

Paragraph C4

- 1 *Delete* Equation C4(1) and *replace* with the following:

$$Q_{\text{loss}} = UA(T_t - T_a) \times t$$

$$= El_{\text{in}} - (E_2 - E_1) \quad \dots C4(1)$$
- 2 *Delete* the definition for El_{in} following Equation C4(1) and *replace* with the following:
 $El_{\text{in}} =$ Electrical energy input over test period, in kilowatt hours (kWh)
- 3 In the definition of E_1 following Equation C4(1) add the words ‘in the container’ after ‘thermal energy’.
- 4 In the definition of E_2 following Equation C4(1) add the words ‘in the container’ after ‘thermal energy’.
- 5 *Add* the following to the list of definitions in Equation C4(1)
 $t =$ Time interval between temperature control cut-outs, in hours
- 6 After Equation C4(2) *delete* definition of t .
- 7 *Delete* Equation C4(3) and preceding paragraph and *replace* with the following:

AMDT
No. 1
APR
2011

AMDT
No. 1
APR
2011

AMDT
No. 1
APR
2011

Standard 24 h standing heat loss, $Q_{\text{loss},55}$, corrected back to a temperature difference of 55 K, is therefore

$$Q_{\text{loss},55} = UA \times 55 \times 24 \quad \dots \text{C4(3)}$$

- 8 Delete Equation C4(4) and *replace* with the following:

$$\begin{aligned} E &= (\rho V C_p \times 10^{-3} + Y C_m) T_H \text{ (J)} \\ &= \frac{(\rho V C_p \times 10^{-3} + Y C_m) T_H}{3.6 \times 10^6} \text{ (kWh)} \end{aligned} \quad \dots \text{C4(4)}$$

- 9 After Equation C4(4) *delete* definition of M .

- 10 After the definition of ' ρ ' following Equation C4(4), *delete* the next line and *replace* with the following:

There are 3.6×10^6 Joules per kWh.

- 11 In List Item (iii), in the first line *replace* Q_{loss} with $Q_{\text{loss},55}$ and *delete* the equation and *replace* with following:

$$\left| \frac{dQ_{\text{loss},55}}{dt} \right| < \frac{0.005 \times Q_{\text{loss},55}}{50} \quad \dots \text{C4(5)}$$

Where $\frac{dQ_{\text{loss},55}}{dt}$ is the slope of a regression line through the heat loss values ($Q_{\text{loss},55}$) as a function of the elapsed time of the test (hours).

NOTE: It is advisable to select a test period that starts and ends with a temperature control cycle that has approximately the same heat loss value in order to minimise random bias of the regression. Paragraph C3.4 specifies that the maximum slope of the heat loss is 0.5 per 50 h.