File Ref : WB(W) 266/32/28(99) VI

LEGISLATIVE COUNCIL BRIEF

Waterworks Ordinance
(Chapter 102)

WATERWORKS (AMENDMENT) REGULATION 1999

INTRODUCTION

At the meeting of the Executive Council on 20 April 1999, the Council ADVISED and the Chief Executive ORDERED that the A Waterworks (Amendment) Regulation 1999, at Annex A, should be made under section 37 of the Waterworks Ordinance to -

(a) reduce the specified minimum volume of flushing cisterns from 9 litres to 7.5 litres;

(b) repeal the provisions relating to the control on unvented electric water heaters which duplicate those in the Electrical Products (Safety) Regulation; and

(c) update the references to certain obsolescent standards for water heaters to align with the latest standards.

BACKGROUND AND ARGUMENT

Control on Flushing Cisterns

2. Water Supplies Department (WSD) has conducted a study on the minimum volume of flushing cisterns and consulted overseas water authorities, consultants, relevant Government departments and suppliers. The findings are -

(a) the trial use of 7.5-litre flushing cisterns was satisfactory;

(b) the relevant parties mentioned above all supported the use of 7.5-litre flushing cisterns which were more economical and environmentally friendly;

(c) many European countries were moving towards the use of smaller flushing cisterns; and

(d) the suppliers had no problem to make available 7.5-litre flushing cisterns in the market.

3. As an administrative measure, WSD has exercised the right of the Water Authority and issued a Circular Letter under regulation 25(1) of the Waterworks Regulations to all Authorised Persons, Licensed Plumbers, Government departments and trade associations, informing them to use 7.5-litre flushing cisterns with effect from 1 September 1996. Appropriate amendments need to be made to the Waterworks Regulations.

Control on Unvented Electric Water Heaters

4. It was the original intention to pass the control on unvented electric water heaters to the Electrical Products (Safety) Regulation when it was drafted. The first part of the Electrical Products (Safety) Regulation (sections 2, 9 and 10, and Schedules 4 and 5) came into operation on 24 October 1997 and the relevant part controlling unvented electric water heaters had been scheduled to come into operation in May 1998 (the actual commencement date of Part II, and Schedules 1 and 2 was 29 May 1998). The Waterworks Regulations were planned for consequential amendment in late 1997 for implementation in May 1998.

5. However, concerns were expressed in mid-1997 over whether the Provisional Legislative Council (PLC) had exceeded its power in performing some of its acts, in particular, whether the laws considered by the PLC were absolutely necessary. The proposed amendments to the Waterworks Regulations did not meet the essentiality test and were not introduced into the PLC. As a result, when the relevant part of the Electrical Products (Safety) Regulation came put into operation on 29 May 1998, there were two Regulations administrated by two Government departments on the control of the same product. The relevant controls under the Waterworks Regulations should be repealed and transferred to the Electrical Products (Safety) Regulation as soon as possible to avoid public confusion.

Updating of Standard Specifications

6. There are also certain obsolescent standards for water heaters in the Waterworks Regulations which need to be updated to align with the latest standards.

THE REGULATION

7. The minimum flushing volume of flushing cisterns specified in **paragraph 2 of Part V of Schedule 2** to the Waterworks Regulations should be amended to 7.5 litres. A copy of the relevant part of the Waterworks Regulations is at Annex B.

B

8. The relevant controls on unvented electric water heaters are specified in paragraphs 1(2)(d) and 11 of Part IV of Schedule 2 to the Waterworks Regulations. **Paragraph 1(2)(d)** should be amended to refer to the Electrical Products (Safety) Regulation, and **paragraph 11** should be repealed. The reference to certain obsolescent standards in **paragraphs 8(a) and 9** of Part IV of Schedule 2 to the Waterworks Regulations should be updated. The relevant extracts from the Waterworks Regulations are at Annex C and the relevant extracts from the Electrical Products (Safety) Regulation are at Annex D.

C

D

LEGISLATIVE TIMETABLE

9. The legislative timetable will be as follows –

Publication in the Gazette	30 April 1999
Tabling at the Legislative Council	5 May 1999

HUMAN RIGHTS IMPLICATIONS

10. The Department of Justice advises that the proposed amendments are consistent with the human rights provisions of the Basic Law.

BINDING EFFECT OF THE LEGISLATION

11. The Department of Justice advises that the proposed amendments will not affect the current binding effect of the Ordinance.

FINANCIAL AND STAFFING IMPLICATIONS

12. There is no financial or staffing implications.

ECONOMIC IMPLICATIONS

13. The local suppliers of flushing cisterns have no difficulties to make available 7.5-litre flushing cisterns in the market. The amendments concerning unvented electric water heaters are consequential to the coming into effect of the relevant part of the Electrical Products (Safety) Regulation.

ENVIRONMENTAL IMPLICATIONS

14. Reducing the minimum volume of flushing cisterns will help reduce the consumption of flushing water and the amount of effluent from new installations, which is more environmentally friendly. The repeal of the provisions relating to the control on unvented electric water heaters in the Waterworks Regulations and the updating of the obsolescent standard specifications have no environmental implications.

PUBLIC CONSULTATION

15. Public consultation is not necessary because the existing users of flushing cisterns and unvented electric water heaters would not be affected by the proposed amendments. Products complying with the proposed amendments are available to potential users.

PUBLICITY

16. A press release will be issued on 29 April. A spokesman will be available for answering media enquires.

ENQUIRIES

17. For enquiries, please contact Mr H I Kwong, Chief Assistant Secretary (Technical Services), Works Bureau at phone number 2848 6223.

Works Bureau
April 1999

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WATERWORKS (AMENDMENT) REGULATION 1999

ANNEXES

Annex A	**-**	**Waterworks (Amendment) Regulation 1999**
Annex B	**-**	**Extract of Waterworks Regulations, Schedule 2, Part V, Paragraph 2**
Annex C	**-**	**Extract of Waterworks Regulations, Schedule 2, Part IV, Paragraphs 1(2)(d), 8(a), 9 and 11**
Annex D	**-**	**Extract of Electrical Products (Safety) Regulation, Schedule 2, Item 6**

Annex A

WATERWORKS (AMENDMENT) REGULATION 1999

(Made by the Chief Executive in Council under section 37 of the Waterworks Ordinance (Cap. 102))

1. Commencement

This Regulation shall come into operation on 10 June 1999.

2. Pipes and fittings

Regulation 19 of the Waterworks Regulations (Cap. 102 sub. leg.) is amended -

(a) in subregulation (1), by repealing "and (5)" and substituting", (5) and (6)";

(b) by adding -

"(6) The amendments to Schedule 2 effected by section 2 of the Waterworks (Amendment) Regulation 1999 (L.N. of 1999) shall not apply to any water heater installed before the commencement of that section, and no person shall be required to alter or renew any such water heater by virtue of those amendments unless such water heater is in the opinion of the Water Authority so defective or in such condition as to cause, or be likely to cause, waste, undue consumption or pollution of the supply.".

3. Schedule amended

Schedule 2 is amended -

(a) in Part IV -

(i) by repealing paragraph 1(2)(d) and substituting -

"(d) unvented thermal storage type electric water heaters which comply with the safety requirements under the Electrical Products (Safety) Regulation (Cap. 406 sub. leg.).";

(ii) in paragraph 8(a), by repealing "or with BS 1565, Part 2 for galvanized mild steel indirect cylinders";

(iii) in paragraph 9, by repealing "BS 843" and substituting "BS 3456, Part 102, Section 102.21";

(iv) by repealing paragraph 11;

(b) in Part V, in paragraph 2, by repealing "9" and substituting "7.5".

Clerk to the Executive Council

COUNCIL CHAMBER

1999

Explanatory Note

This Regulation amends the Waterworks Regulations (Cap. 102 sub. leg.) to -

(a) update the safety requirements for unvented electric water heaters under the Regulations in the light of the Electrical Products (Safety) Regulation (Cap. 406 sub. leg.);

(b) replace the obsolescent standard specifications for water heaters with the British Standard Specifications currently in force;

(c) reduce the minimum flushing volume specified for flushing cisterns from 9 litres to 7.5 litres.

[附屬法例]

8. 容量不少於 100 升的熱水鼓或水缸——

(*a*) 如以軟鋼製造，必須符合 BS 417 第 2 部有關鍍鋅軟鋼蓄水池、水缸及水鼓的規定中，或 BS 1565 第 2 部有關鍍鋅軟鋼間接水鼓的規定中，有關水鼓或水缸的規定(視屬何情況而定)；及

(*b*) 如以銅製造，必須符合 BS 699 有關住宅用銅水鼓或 BS 1566 第 1 及 2 部有關銅製間接水鼓的規定。

9. 貯水式或熱能轉換式熱水爐，必須分別符合 BS 843 有關固定非即熱式電熱水爐或 BS 853 有關熱能轉換式熱水器的規定。

10. *(由 1992 年第 320 號法律公告廢除)*

11. 無獨立排氣管而又不屬於第 1(2)(*a*) 段所描述類型的貯水式電熱水爐，必須裝有下列設備——

(*a*) 最高溫度可調校於 80°C 的恒溫器，以控制存水的加熱；

(*b*) 符合 BS 3955 規定並把溫度調校於 85°C 的熱熔斷路器，如存水加熱至超過該溫度時，便會切斷電力供應；該與恒溫器串連的器件，須用人手重新調校，但只有在拆除熱水爐的外罩時，才能夠重新調校；及

(*c*) 下列兩者其中之一——

(i) (A) 符合 BS 6283 規定而不能重新調校的減溫閥，調定溫度為 90°C，並設有人手測試減壓裝置；及

(B) 符合 BS 6283 規定的減壓閥，調定壓力不高於熱水爐設計上可承受的最大壓力或 1 000 千帕斯卡，並設有人手測試減壓裝置；或

(ii) 符合 BS 6283 規定而不能重新調校的減溫及減壓閥，調定溫度為 90°C，調定壓力不高於熱水爐設計上可承受的最大壓力或 1 000 千帕斯卡，並設有人手測試減壓裝置。 *(1990 年第 286 號法律公告)*

12. 裝有貯水式電熱水爐的系統，必須設有——

(*a*) 在熱水爐頂部以上位置的供水管分出的支管或其他器件，以防止供水來源中斷時，水從熱水爐倒流；

(*b*) 符合 BS 6282 規定的防真空閥或其他器件，以防止加熱後的水藉虹吸作用倒流至供水管；及

(*c*) 一個容器，以容納受到設於熱水爐入口的止回流閥或類似器件的壓抑而膨脹的熱水。 *(1990 年第 286 號法律公告)*

(1977 年第 252 號法律公告)

第 V 部

沖廁器具

1. 沖廁水箱必須為無閥虹吸式，但獲水務監督另作批准者，則屬例外。另須在容易接觸的位置裝設斷流閥，以便控制水箱的供水。

2. 水廁設備及污水盆的沖廁水箱，必須可以在該等設備每次使用時，排放不少於 9 升但不多於 15 升的沖廁用水。

認可活頁版，由香港特別行政區政府印務局局長印刷及發行

[Subsidiary]

8. Every hot water cylinder or tank of a capacity of not less than 100 litres shall—

(*a*) if made of mild steel, comply with the requirements for cylinders or tanks, as the case may be, of BS 417, Part 2 for galvanized mild steel cisterns, tanks and cylinders or with BS 1565, Part 2 for galvanized mild steel indirect cylinders; and

(*b*) if made of copper, comply with BS 699 for copper cylinders for domestic purposes or with BS 1566, Parts 1 and 2 for copper indirect cylinders.

9. Every water heater of thermal storage type or the calorifier type shall comply with the requirements of BS 843 for stationary non-instantaneous electric water heater or with BS 853 for hot water calorifiers respectively.

10. *(Repealed L.N. 320 of 1992)*

11. Every electric water heater of the thermal storage type that is not of the type described in paragraph 1(2)(*a*) and is not provided with an individual expansion pipe shall be fitted with—

(*a*) a thermostat with a maximum setting temperature of 80°C to control the heating of the stored water;

(*b*) a thermal cut-out complying with BS 3955 and set at 85°C to cut off the supply of electricity if the stored water is heated above that temperature, the device being wired in series with the thermostat and requiring manual re-setting that is only possible when the enclosure of the water heater is dismantled; and

(*c*) either—

(i) (A) a non-resettable temperature relief valve complying with BS 6283, having a set temperature of 90°C, and being provided with manual test easing gear; and

(B) a pressure relief valve complying with BS 6283, having a set pressure not greater than the maximum designed pressure of the water heater or than 1 000 kPa, and being provided with manual test easing gear; or

(ii) a non-resettable temperature and pressure relief valve complying with the requirements of BS 6283, having a set temperature of 90°C and a set pressure not greater than the maximum designed pressure of the water heater or than 1 000 kPa, and being provided with manual test easing gear. *(L.N. 286 of 1990)*

12. Every system incorporating an electric water heater of the thermal storage type shall be provided with—

(*a*) a supply pipe that branches off from the feed pipe at a point above the top of the water heater, or some other device to prevent the water from draining down from the water heater if there is a failure at the source of water supply;

(*b*) an anti-vacuum valve complying with BS 6282 or some other device to prevent heated water from being syphoned back to the supply pipe; and

(*c*) a vessel to accommodate the expansion of heated water where that expansion is constrained by a non-return valve, or a similar device, incorporated at the inlet of the water heater. *(L.N. 286 of 1990)*

(L.N. 252 of 1977)

PART V

FLUSHING APPARATUS

1. Every flushing cistern shall be of the valveless syphonic type unless otherwise approved by the Water Authority. A stop valve shall be fixed in a readily accessible position so as to control the supply to the cistern.

2. Flushing cisterns for water-closet fitments and slop sinks shall be capable of giving a flush of not less than 9 litres and not more than 15 litres of water on each occasion such fitment is used.

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[附屬法例]

10. 使用於鹹水的排水龍頭、閥門及閥用浮體，必須盡量符合適用於淡水裝置的英國標準及其他有關規定；此外，該類裝置必須以可抵擋鹹水腐蝕作用的材料製造。

11. 除非按照第 21 條的規定經過測試，或獲水務監督批准，否則不得安裝或使用排水龍頭或閥門。 *(1992 年第 320 號法律公告)*

(1977 年第 252 號法律公告)

第 III 部

冷水蓄水池

1. 除獲水務監督書面許可外，不得安裝或使用貯存冷水的蓄水池，而最大的許可容量由水務監督指明。

2. 蓄水池必須不滲水、有足夠強度、適當支撐及以混凝土、鍍鋅軟鋼或其他認可材料建造。 *(1992 年第 320 號法律公告)*

3. 容量不超過 5 000 升的軟鋼蓄水池，必須符合 BS 417 第 2 部有關鍍鋅軟鋼蓄水池的規定。

4. (*a*) 蓄水池必須設置在能使存水受到污染的危險減至最低的地方，並須安裝適當的緊合而可上鎖的但非不透氣的水池蓋。水池蓋必須放在適當位置以利便檢查與清洗。
(*b*) 凡非飲用水蓄水池所處位置與可飲用水蓄水池毗鄰時，兩個蓄水池中間須留有空間。

5. 如利用水壓供水，蓄水池必須安裝由浮球閥控制的入水口，如屬泵壓供水，則須有自動控制開關。當貯水的水平在溢流管倒拱以下 25 毫米時，浮球閥或控制開關必須切斷供水。入水管倒拱或浮球閥出水口與溢流管頂部相距不得少於 25 毫米。

6. 每個蓄水池須裝有較入水管大一個商品管徑、在任何情況下直徑不少於 25 毫米而伸展至一個顯眼位置終止的溢流管。溢流管不得接駁至排水渠、下水道或其他蓄水池的溢流管。

7. 每個蓄水池的出口必須設有斷流閥，並須有排水管的設備，以便排清蓄水池內存水。

8. 未經水務監督書面許可，貯存由水務設施供應的淡水的蓄水池，不得進行接駁以致該池可被用來貯存由水務設施以外系統所供應的用水。

9. 蓄水池的安裝，必須使人容易通往進行清洗或修理。凡蓄水池安裝於建築物內，及由於可用淨空有限，蓄水池固定的地方，與天花板或屋頂底面相距間隙有限時，必須使用可快捷拆除的裝置，使其能容易被除去作清洗及修理用途。

10. 所有蓄水池必須備有牢固的永久梯子或隨時可用的活動梯子作為安全通道。

(1977 年第 252 號法律公告)

第 IV 部

熱水爐

1. (1) 在符合第 (2) 節的規定下，熱水爐須由冷水蓄水池獲得供水。

Annex C
附件 C

[Subsidiary]

10. Draw-off taps, valves and valve floats for use with salt water shall, where applicable, comply with the British Standard and other requirements for such fittings for use with fresh water and shall, in addition, be manufactured from materials capable of withstanding the corrosive effect of salt water.

11. No draw-off tap or valve shall be installed or used unless it has been tested in accordance with regulation 21 or otherwise approved by the Water Authority. *(L.N. 320 of 1992)*

(L.N. 252 of 1977)

PART III

COLD WATER STORAGE CISTERNS

1. No cistern for the storage of cold water shall be installed or used except with the permission in writing of the Water Authority who shall specify the maximum permitted capacity.

2. Every cistern shall be watertight, of adequate strength, properly supported and shall be constructed of concrete, galvanized mild steel or other approved material. *(L.N. 320 of 1992)*

3. A cistern of mild steel not exceeding 5 000 litres capacity shall comply with BS 417, Part 2 for galvanized mild steel cisterns.

4. (*a*) Every cistern shall be located so as to minimize the risk of contamination of the stored water and shall be fitted with suitable close fitting lockable covers which shall not be air-tight. Covers shall be positioned so as to facilitate inspection and cleaning.
(*b*) Where a storage cistern for non-potable water is placed adjoining to a storage cistern for potable water there shall be an air space between such storage cisterns.

5. Cisterns shall be fitted with a ball valve controlled inlet in the case of a gravity supply or with an automatic control switch in the case of a pumped supply. The ball valve or control switch shall shut off the supply when the water level is 25 mm below the invert of the overflow pipe. The invert of the inlet pipe or the face of the outlet nose of the ball valve shall be not less than 25 mm above the top of the overflow pipe.

6. An overflow pipe of one commercial size larger than the inlet pipe, and in no case less than 25 mm diameter, shall be fitted to each cistern and shall be extended to terminate in a conspicuous position. No overflow pipe shall be connected to a drain, sewer or to the overflow pipe from any other cistern.

7. A stop valve shall be provided on the outlet of every cistern and provision shall be made for a drain-off pipe to enable the cistern to be emptied.

8. No cistern for the storage of fresh water supplied from the waterworks shall, without the written permission of the Water Authority, be so connected that it can be used for the storage of any water other than that supplied from the waterworks.

9. Every cistern shall be installed so that it is easily accessible for cleaning or repair. Where a cistern is installed inside a building and, due to limited headroom available, it is fixed with limited clearance from the ceiling or underside of the roof, a quickly detachable fitting must be used to enable it to be easily removed for cleansing and repair.

10. Safe access shall be provided to all cisterns by means of a secure permanent ladder or readily available portable ladder.

(L.N. 252 of 1977)

PART IV

WATER HEATERS

1. (1) Subject to subparagraph (2), a water heater shall be supplied with water from a cold water storage cistern.

[附屬法例]

(2) 如獲水務監督的書面許可，下列類型的熱水爐可直接接駁至總水管——
(a) 非壓力式熱水爐，而在入口控制閥以外的水流不得受阻；
(b) 附設水箱式熱水爐；
(c) 即熱式熱水爐，熱水爐保證試驗壓力最少為熱水爐靜水壓的 $1\frac{1}{2}$ 倍；
(d) 貯水式電熱水爐——
(i) 貯水容量不超過 200 升；
(ii) 保證試驗壓力最少為熱水爐靜水壓的 $1\frac{1}{2}$ 倍；及
(iii) 並無設置獨立的排氣管，但符合第 11 段的規定。 *(1990 年第 286 號法律公告)*

(3) 凡熱水爐直接接駁至總水管——
(a) 熱水爐的每一個取水點，比熱水爐所供應的容器頂端的最低部分須高出不少於 15 毫米；
(b) 如屬燃燒氣體的熱水爐，熱水爐的構造必須使氣體不會洩漏進水中；
(c) 如屬用電的熱水爐，熱水爐的構造必須符合有關的英國標準。

2. 凡安裝有混合閥、淋浴裝置或冷熱水混合器時，這些裝置的冷水供水，須來自供水予熱水爐的同一冷水蓄水池或總水管，而安裝方法，必須使在供水中斷時，熱水水流比冷水水流較早停止。

3. 除第 1(2)(*d*) 段指明類型的電熱水爐外，貯水式的熱水爐，必須在最高點設有獨立排氣管，此排氣管須連續向上伸展，不受障礙，並在蓄水池之上保留足夠高度，可供排氣及防止熱水從該處不斷流出。 *(1990 年第 286 號法律公告)*

4. 凡水龍頭或其他排水裝置(但用以將系統內的水排清，作清洗或修理用途而附有可移動栓的螺旋塞除外)，不得接駁至低於熱水鼓頂部的熱水系統的任何部分，以致熱水鼓內存水水位降低。

5. 用作輸出熱水的水龍頭，其安裝位置與熱水爐或熱水箱、水鼓或水缸，或與流出及回流系統的距離(沿水龍頭獲供水喉管的軸心量度)，不得大於以下列表所顯示的該喉管任何部分的最大內直徑的適當距離——

列表

喉管最大內直徑	距離(米)
(a) 不超過 20 毫米	12
(b) 超過 20 毫米，但不超過 25 毫米	8
(c) 超過 25 毫米	3

6. 如熱水爐沒有止回流閥的裝置，必須於熱水爐入口安裝活皮心水閥；但這項規定不適用於沒有獨立排氣管的貯水式電熱水爐。 *(1990 年第 286 號法律公告)*

7. 用以輸送熱水的喉管，必須以鍍鋅鋼、銅或某種抗腐蝕的合金製造：
但內直徑不少於 50 毫米的鑄鐵管，如已有配備適應其膨脹者，則可使用。 *(1992 年第 320 號法律公告)*

認可活頁版，由香港特別行政區政府印務局局長印刷及發行

[Subsidiary]

(2) The following types of water heaters may, with the written permission of the Water Authority, be connected direct to a main—
(a) non-pressure type water heaters where no restriction of flow can be effected beyond the inlet control valve;
(b) cistern type water heaters;
(c) instantaneous water heaters where the guaranteed test pressure of the water heater is at least $1\frac{1}{2}$ times the static head available at the water heater;
(d) electric water heaters of the thermal storage type—
(i) having a storage capacity not exceeding 200 litres;
(ii) having a guaranteed test pressure at least $1\frac{1}{2}$ times the static head available at the water heater; and
(iii) not being provided with an individual expansion pipe but complying with paragraph 11. *(L.N. 286 of 1990)*

(3) Where a water heater is connected direct to a main—
(a) every draw-off point of the water heater shall be not less than 15 mm above the lowest part of the top edge of the receptacle supplied from the water heater;
(b) if it is a water heater burning gas, the construction of the water heater shall be such that no leakage of gas into the water can occur;
(c) if it is a water heater using electricity, the construction of the water heater shall be according to the relevant British Standards.

2. Where mixing valves, showers or water blenders are installed, the cold water supply to these fittings shall be from the same cold water storage cistern or main that supplies the water heater and the installation shall be such that the hot water flow will stop before that of the cold water in the event of a failure in the water supply.

3. Every water heater of the thermal storage type, other than an electric water heater of the type specified in paragraph 1(2)(*d*), shall be provided with an individual expansion pipe taken from its highest point and shall continuously rise without obstruction until it discharges to atmosphere above the storage cistern at a sufficient height to prevent a constant out-flow of hot water therefrom. *(L.N. 286 of 1990)*

4. No tap or other means of drawing off water (other than a screwed plug with a removable key for emptying the system for cleansing or repair) shall be connected to any part of the hot water system below the top of the hot water cylinder in such a way that the level of the water in the cylinder can be lowered.

5. No tap used for the purpose of drawing hot water shall be fixed at a greater distance (measure along the axis of the pipe by which the tap is supplied) from a water heater or hot water cistern, cylinder or tank, or from a flow and return system, than the distance appropriate to the largest internal diameter of any part of the said pipe as shown in the following table—

TABLE

Largest internal diameter of pipe	Distance in metres
(a) Not exceeding 20 mm	12
(b) Exceeding 20 mm but not exceeding 25 mm	8
(c) Exceeding 25 mm	3

6. A loose jumper type valve shall be fitted on the inlet of every water heater if a non-return valve is not incorporated in such water heater; but this requirement does not apply to an electric water heater of the thermal storage type that is not provided with an individual expansion pipe. *(L.N. 286 of 1990)*

7. Pipes used for conveying hot water shall be of galvanized steel, copper, or of some corrosion-resisting alloy:
Provided that cast iron pipes of not less than 50 mm internal diameter may be used if suitable provision for their expansion is made. *(L.N. 320 of 1992)*

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[附屬法例]

8. 容量不少於 100 升的熱水鼓或水缸——

(*a*) 如以軟鋼製造，必須符合 BS 417 第 2 部有關鍍鋅軟鋼蓄水池、水缸及水鼓的規定中，或 BS 1565 第 2 部有關鍍鋅軟鋼間接水鼓的規定中，有關水鼓或水缸的規定(視屬何情況而定)；及

(*b*) 如以銅製造，必須符合 BS 699 有關住宅用銅水鼓或 BS 1566 第 1 及 2 部有關銅製間接水鼓的規定。

9. 貯水式或熱能轉換式熱水爐，必須分別符合 BS 843 有關固定非即熱式電熱水爐或 BS 853 有關熱能轉換式熱水器的規定。

10. *(由 1992 年第 320 號法律公告廢除)*

11. 無獨立排氣管而又不屬於第 1(2)(*a*) 段所描述類型的貯水式電熱水爐，必須裝有下列設備——

(*a*) 最高溫度可調校於 80°C 的恒溫器，以控制存水的加熱；

(*b*) 符合 BS 3955 規定並把溫度調校於 85°C 的熱熔斷路器，如存水加熱至超過該溫度時，便會切斷電力供應；該與恒溫器串連的器件，須用人手重新調校，但只有在拆除熱水爐的外罩時，才能夠重新調校；及

(*c*) 下列兩者其中之一——

(i) (A) 符合 BS 6283 規定而不能重新調校的減溫閥，調定溫度為 90°C，並設有人手測試減壓裝置；及

(B) 符合 BS 6283 規定的減壓閥，調定壓力不高於熱水爐設計上可承受的最大壓力或 1 000 千帕斯卡，並設有人手測試減壓裝置；或

(ii) 符合 BS 6283 規定而不能重新調校的減溫及減壓閥，調定溫度為 90°C，調定壓力不高於熱水爐設計上可承受的最大壓力或 1 000 千帕斯卡，並設有人手測試減壓裝置。 *(1990 年第 286 號法律公告)*

12. 裝有貯水式電熱水爐的系統，必須設有——

(*a*) 在熱水爐頂部以上位置的供水管分出的支管或其他器件，以防止供水來源中斷時，水從熱水爐倒流；

(*b*) 符合 BS 6282 規定的防真空閥或其他器件，以防止加熱後的水藉虹吸作用倒流至供水管；及

(*c*) 一個容器，以容納受到設於熱水爐入口的止回流閥或類似器件的壓抑而膨脹的熱水。 *(1990 年第 286 號法律公告)*

(1977 年第 252 號法律公告)

第 V 部

沖廁器具

1. 沖廁水箱必須為無閥虹吸式，但獲水務監督另作批准者，則屬例外。另須在容易接觸的位置裝設斷流閥，以便控制水箱的供水。

2. 水廁設備及污水盆的沖廁水箱，必須可以在該等設備每次使用時，排放不少於 9 升但不多於 15 升的沖廁用水。

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[Subsidiary]

8. Every hot water cylinder or tank of a capacity of not less than 100 litres shall—

(*a*) if made of mild steel, comply with the requirements for cylinders or tanks, as the case may be, of BS 417, Part 2 for galvanized mild steel cisterns, tanks and cylinders or with BS 1565, Part 2 for galvanized mild steel indirect cylinders; and

(*b*) if made of copper, comply with BS 699 for copper cylinders for domestic purposes or with BS 1566, Parts 1 and 2 for copper indirect cylinders.

9. Every water heater of thermal storage type or the calorifier type shall comply with the requirements of BS 843 for stationary non-instantaneous electric water heater or with BS 853 for hot water calorifiers respectively.

10. *(Repealed L.N. 320 of 1992)*

11. Every electric water heater of the thermal storage type that is not of the type described in paragraph 1(2)(*a*) and is not provided with an individual expansion pipe shall be fitted with—

(*a*) a thermostat with a maximum setting temperature of 80°C to control the heating of the stored water;

(*b*) a thermal cut-out complying with BS 3955 and set at 85°C to cut off the supply of electricity if the stored water is heated above that temperature, the device being wired in series with the thermostat and requiring manual re-setting that is only possible when the enclosure of the water heater is dismantled; and

(*c*) either—

(i) (A) a non-resettable temperature relief valve complying with BS 6283, having a set temperature of 90°C, and being provided with manual test easing gear; and

(B) a pressure relief valve complying with BS 6283, having a set pressure not greater than the maximum designed pressure of the water heater or than 1 000 kPa, and being provided with manual test easing gear; or

(ii) a non-resettable temperature and pressure relief valve complying with the requirements of BS 6283, having a set temperature of 90°C and a set pressure not greater than the maximum designed pressure of the water heater or than 1 000 kPa, and being provided with manual test easing gear. *(L.N. 286 of 1990)*

12. Every system incorporating an electric water heater of the thermal storage type shall be provided with—

(*a*) a supply pipe that branches off from the feed pipe at a point above the top of the water heater, or some other device to prevent the water from draining down from the water heater if there is a failure at the source of water supply;

(*b*) an anti-vacuum valve complying with BS 6282 or some other device to prevent heated water from being syphoned back to the supply pipe; and

(*c*) a vessel to accommodate the expansion of heated water where that expansion is constrained by a non-return valve, or a similar device, incorporated at the inlet of the water heater. *(L.N. 286 of 1990)*

(L.N. 252 of 1977)

PART V

FLUSHING APPARATUS

1. Every flushing cistern shall be of the valveless syphonic type unless otherwise approved by the Water Authority. A stop valve shall be fixed in a readily accessible position so as to control the supply to the cistern.

2. Flushing cisterns for water-closet fitments and slop sinks shall be capable of giving a flush of not less than 9 litres and not more than 15 litres of water on each occasion such fitment is used.

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Item	Prescribed product	Specific safety requirement
		(7) The word "FUSED" or "FUSE" or equivalent symbol (⊟) together with the information regarding the minimum cross sectional area (referred to in paragraph (4)) of the respective flexible cords for 5A, 13A and 15A shall be marked on the external surface of the socket portion of an extension unit. (8) Safety shutters, to be automatically operated by the insertion of the earthing pin, shall be provided for all the sockets. (9) A main fuse-link of current rating at 5A conforming to BS 646 or BS 1362 shall be provided for the protection of all the 5A sockets in the extension unit. (10) For a 15A extension unit with the design described in paragraph (1)(*c*)(ii)(B), an individual 5A fuse-link conforming to BS 646 or BS 1362 shall be provided for the protection of each of the 5A sockets. (11) The 5A socket shall be designed and constructed to BS 546 and matched with the dimensions of a 5A 3-round-pin plug. (12) The 13A socket shall be designed and constructed to BS 1363 Part 2. (13) The 15A socket shall be designed and constructed to BS 546 and matched with the dimensions of a 15A 3-round-pin plug. (14) The socket portion of an extension unit may be supplied separately provided it can comply with the corresponding safety requirements specified in this Schedule and information regarding the connection of the plug and the minimum cross sectional area (referred to in paragraph (4)) of a flexible cord shall be marked on the external surface of the socket portion.
6.	Any unvented thermal storage type electric water heater which is not provided with an individual expansion pipe.	(1) The electric water heater shall be legibly and durably marked with the number of the standard to which the electric water heater conforms and the storage capacity in litres in addition to such requirements in section 1(2) of the general conditions of the essential safety requirements for electrical products specified in Schedule 1. (2) The electric water heater shall be provided with the manufacturer's installation instructions for the safe installation of the electric water heater. (3) The electric water heater shall have a guaranteed test pressure with at least 1.5 times the static water head at the water heater. (4) The unvented thermal storage type electric water heater shall be fitted with the following— (*a*) a thermostat which shall be fitted to control the heating of the stored water; (*b*) a thermal cut-out which—

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項	訂明產品	特定安全規格
		(7) "FUSED" 或 "FUSE" 字樣或相等符號 (⊟) 連同分別有關 5 安培、13 安培及 15 安培的軟電線的最小橫截面面積 (在第 (4) 段所提述者) 的資料，均須在拖板的插座部分的外表面標明。 (8) 所有插座須獲提供藉插入接地插腳而自動操作的安全活門。 (9) 須為保護拖板內所有 5 安培插座而提供一個符合 BS 646 或 BS 1362 的 5 安培額定電流值的總熔斷連桿。 (10) 就具有第 (1)(*c*)(ii)(B) 段所描述的設計的 15 安培拖板而言，須為保護每個 5 安培插座而提供一個符合 BS 646 或 BS 1362 的 5 安培熔斷連桿。 (11) 5 安培插座須按 BS 546 設計和製造，並須配合 5 安培三圓腳插頭的尺寸。 (12) 13 安培插座須按 BS 1363 第 2 部設計和製造。 (13) 15 安培插座須按 BS 546 設計和製造，並須配合 15 安培三圓腳插頭的尺寸。 (14) 拖板的插座部分可分開供應，但插座部分須能符合本附表所指明的相應安全規格，而有關插頭的接駁及軟電線的最小橫截面面積 (在第 (4) 段所提述者) 的資料，均須在插座部分的外表面標明。
6.	任何沒有伸縮管設備的無排氣管儲水式電熱水器。	(1) 電熱水器除須以清楚和耐久的方式標明附表 1 所指明的電氣產品基本安全規格的一般條件中第 1(2) 條的規格外，尚須標明該電熱水器所符合的標準的號碼及儲水量 (以升計)。 (2) 電熱水器須備有製造商供安全安裝電熱水器的安裝說明。 (3) 電熱水器須有保證的測試壓力，最低限度為在熱水器的靜水水壓的 1.5 倍。 (4) 無排氣管儲水式電熱水器須裝有以下配件—— (*a*) 一個恒溫器須予裝置，以控制儲水的加熱； (*b*) 一個過熱斷路器——

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Item	Prescribed product	Specific safety requirement
		(i) shall be fitted to cut off the supply of electricity when the stored water is heated above the temperature setting of the thermostat and before the operation of the temperature and pressure relief valve is initiated; (ii) shall be wired in series with the thermostat referred to in subparagraph (*a*); and (iii) shall require manual resetting when the enclosure of the electric water heater is dismantled; and (*c*) a temperature and pressure relief valve which— (i) shall be fitted with either— (A) a non-resettable temperature relief valve, having a set temperature of 90°C and being provided with manual test mechanism; and (B) a pressure relief valve, having a set pressure not greater than the maximum designed pressure of the electric water heater or than 1 000 kPa, and being provided with manual test mechanism; or (ii) a non-resettable temperature and pressure relief valve, having a set temperature of 90°C and a set pressure not greater than the maximum designed pressure of the water heater or than 1 000 kPa, and being provided with manual test mechanism.

SCHEDULE 3 [s. 6(8)]

WARNING LABEL FOR ELECTRICAL PRODUCTS DESIGNED SOLELY FOR USE AT A VOLTAGE OF LESS THAN 200V ALTERNATING CURRENT SINGLE PHASE

The warning label—

(*a*) shall be in both the English and Chinese languages and contain the following text—

"警告
此產品不應直接接駁香港的電力供應
系統，否則可導致人身受傷
或財產受損。
WARNING
This product should not be connected directly to
the electrical supply system in Hong Kong,
otherwise personal injury or damage
to property may result.";

(*b*) shall be with red text against a white background;

項	訂明產品	特定安全規格
		(i) 以便在儲水加熱超過恆溫器所定的溫度而溫度及壓力減卸閥又未運作之前切斷電力供應； (ii) 該過熱斷路器須與 (*a*) 節所提述的恆溫器以金屬線串聯；及 (iii) 該過熱斷路器在電熱水器外殼拆開時須用人手重新調校；及 (*c*) 一個溫度及壓力減卸閥，該減卸閥須裝有—— (i) (A) 一個不可重新調校的溫度減卸閥，校定溫度為 90°C，並備有由人手操作的測試機制；及 (B) 一個壓力減卸閥，校定壓力不大於電熱水器所設計的最高壓力或不大於 1 000 千帕斯卡，並備有由人手操作的測試機制；或 (ii) 一個不可重新調校的溫度及壓力減卸閥，校定溫度為 90°C，而校定壓力不大於熱水器所設計的最高壓力或不大於 1 000 千帕斯卡，並備有由人手操作的測試機制。

附表 3 [第 6(8) 條]

設計上是只供在低於 200 伏特交流電單相供電電壓的情況下使用的電氣產品的警告標籤

警告標籤——

(*a*) 須載有以下中文和英文字樣——

"警告
此產品不應直接接駁香港的電力供應
系統，否則可導致人身受傷
或財產受損。
WARNING
This product should not be connected directly to
the electrical supply system in Hong Kong,
otherwise personal injury or damage
to property may result.";

(*b*) 須為白底紅字；