

Major Changes in the Code of Practice for Prevention of Legionnaires' Disease (2012 Edition)

Old clause (2007)	New clause (2012)	Major Change
Forward	Forward	To replace “spas and the handling of garden soils” in the 3 rd para. by “hot and cold water supply systems, use of spas and other general updates”.
Table of Contents	Table of Contents	<p>To revise heading of section 4 from “Centralized Hot Water Systems” to the more generic heading of “Hot Water Supply System”</p> <p>To change the term “Centralized Hot Water Systems” to “Centralized Hot Water Supply Systems” under new s.4.4.1</p> <p>To create a new section 4.4.2 with heading of “Localized Water Heater for Hot Water Supply”</p> <p>To create a new section 4.7.1 with heading of “General” under section 4.7 “Spa Pools (Whirlpools)”</p>
Table of Contents Annex 1	Table of Contents Annex 1	To replace “QUARANTINE AND PREVENTION OF DISEASE ORDINANCE (Cap. 141)” by “PREVENTION AND CONTROL OF DISEASE ORDINANCE (Cap. 599)”
Section 3 - The Hong Kong Situation		
3.4	3.4	<p>To add “(subsequently replaced by the Prevention and Control of Disease Ordinance (Cap. 599) in July 2008)” after “(Cap. 141)”</p> <p>To replace “the said Ordinance” by “the Prevention and Control of Disease Ordinance”</p>
3.5	3.5	<p>To replace “62” by “150” and “2007” by “2011” in the first sentence.</p> <p>To add no. of Legionnaires' disease (LD) cases for years from 2008 to 2011 in Table 1.</p>
Section 4 - Guidelines on Design, Operation and Maintenance of Water Using Apparatus		
Clauses in 4.4 and 4.5	Clauses in 4.4 and 4.5	<p>To streamline common terms for consistency for sections 4.4 and 4.5 by changing from :</p> <ul style="list-style-type: none"> (i) “Hot Water System” to “Hot Water Supply System” (ii) “hot water holding tanks” to “hot water storage devices” (iii) “Hot water holding tanks” to “Hot water storage devices” <p>To unify "portable water storage tanks", "cold water storage tanks", "any water storage tanks" and "water tanks" to a standard term "fresh water storage tanks" under section 4.5 for cold water supply system.</p> <p>To amend "portable water supply systems" under s.4.5.2 to "cold water supply systems".</p>
4.4	4.4 and 4.4.1	<p>To add a new section 4.4 with heading of “Hot Water Supply System”</p> <p>To change the term “Centralized Hot Water Systems” to “Centralized Hot Water Supply Systems” under new s.4.4.1</p>

Old clause (2007)	New clause (2012)	Major Change
4.4.1 (a)	4.4.1.1 (a)	<p>To change the design operating temperature of hot water storage device from “60°C” to “60°C or above”</p> <p>To change the required temperature of hot water before reaching mixing valve or tap outlet from “around 50°C” to “at least 50°C”</p> <p>To include the following hot water supply outlet temperature requirement for places with persons with decreased self-care by moving a similar requirement from old s.4.4.1 (e):</p> <p>“However, in places where persons with decreased self-care ability may use hot water (such as paediatric, geriatric and psychiatric wards of hospitals elderly homes, Residential Care Homes for Persons with Disabilities, etc.), the hot water supply temperature at outlets shall not exceed 43°C to prevent accidental scalding.”</p>
NA	4.4.1.1 (e)	<p>To add a new clause specifying the location of cold and hot water junction as follow:</p> <p>“The junction where cold and hot water mixes before reaching the outlet (e.g. at the thermostatic mixing valve) shall be installed as near to the tap outlets as possible.”</p>
4.4.1 (e)	4.4.1.1 (f)	<p>To move the hot water outlet supply temperature requirement for places with persons with decreased self-care to new s.4.4.1.1 (a) as above.</p>
4.4.1 (e) (ii)	4.4.1.1 (f) (ii)	<p>To replace “patients” by “users”</p>
4.4.1 (i)	4.4.1.1 (i)	<p>To add “(i.e. below 60°C)” after “...temperature”</p>
4.4.1 (j)	4.4.1.1 (j)	<p>To add “to a temperature at 60 °C or above” after “...is adequately heated”</p>
4.4.1 (k)	4.4.1.1 (k)	<p>To replace “shower outlet” by “water outlets”</p> <p>To replace “routinely” by “regularly”.</p>
4.4.1 (g)	4.4.1.1 (l)	<p>To add detailed requirements of cleaning and disinfection for new piping systems and hot water storage devices, including existing systems undergoing major extensions or alterations as follow:</p> <p>“All new piping systems and associated hot water storage devices, including existing systems undergoing major extensions or alterations subsequently, shall be flushed clean to remove rust, sludge and sediment and disinfected upon commissioning. Where a system is not brought into use immediately after commissioning, it shall also be disinfected before bringing into use unless it has been flushed at regular intervals of up to 30 days.”</p>
NA	4.4.1.1 (m)	<p>To add a new clause on cleaning and disinfection of new piping system and hot water storage devices to follow Water Supplies Department (WSD)'s guidelines with hyperlink.</p>
4.4.2	4.4.1.2	<p>To change the operating temperature of hot water storage device from “60°C” to “60°C or above”</p> <p>To change the required temperature of hot water before reaching mixing valve or tap outlet from “around 50°C” to “at least at 50°C”</p>
NA	4.4.1.2 (c) (iv)	<p>To add a new clause on requirement for weekly purging of unavoidable spurs or stagnant points in hot water supply system as follow:</p> <p>“To provide purge valves at the pipe ends of all unavoidable spurs or stagnant points in the pipework for draining/purging the dead ends for a minimum period of one minute at least on a weekly basis.”</p>

Old clause (2007)	New clause (2012)	Major Change
4.4.2 (d)	4.4.1.2 (d)	<p>To revise the minimum frequency of flushing of infrequently used hot water outlets from monthly to weekly, and add precaution during the purging operation as follow:</p> <p>“.....on a weekly basis and before use. It is important that this procedure is carried out with minimum production of aerosols, e.g. additional piping may be used to purge contaminated water to drain.”</p> <p>To delete the following sentence which is enhanced to become a new clause 4.4.1.2(c)(iv) above:</p> <p>“Any spurs, dead ends or stagnant points in the pipework shall also be purged regularly.”</p>
NA	4.4.2	To add a new section on localized water heater (including instantaneous type or storage type) for hot water supply.
4.5.1(c)	4.5.1(c)	To align wordings of use of materials in cold water system with those for hot water supply system under s.4.4.1.1(h).
4.5.1 (d)	4.5.1 (d)	To add " Dead legs and stagnant corners in the cold water pipework shall be avoided"
4.5.1 (e)	4.5.1 (e)	<p>To add detailed requirements of cleaning and disinfection for new piping system and fresh water storage tanks, including existing system undergoing major extension or alteration as follow:</p> <p>“All new piping systems and associated fresh water storage tanks, including existing systems undergoing major extensions or alterations subsequently, shall be flushed clean to remove rust, sludge and sediment and disinfected upon commissioning. Where a system is not brought into use immediately after commissioning, it shall also be disinfected before bringing into use unless it has been flushed at regular intervals of up to 30 days.”</p>
NA	4.5.1 (f)	To add a new clause to provide hyperlink to WSD’s current guideline on cleaning and disinfection of water supply system.
4.5.2 (a)	4.5.2 (a)	<p>To revise details on routine cleaning of fresh water storage tank as follow:</p> <p>“Fresh water storage tanks shall be drained and cleaned regularly to avoid contamination, sludge, slime, algae, fungi, rust, scale, dust, dirt and other foreign materials. The tanks are recommended to follow WSD's current guidelines on cleaning and disinfection. The frequency of cleaning of fresh water storage tanks shall be on a quarterly basis, or more frequent depending on the level of corrosion, sludge and sediment experienced.”</p> <p>To provide hyperlink to WSD’s current guideline.</p>
NA	4.5.2 (c)	<p>To add a new clause on requirement of weekly flushing of infrequently used cold water outlets as follow:</p> <p>“Cold water outlets which are infrequently used or are connected to stagnant water supply pipework shall be flushed at full flow for a minimum period of one minute at least on a weekly basis and before use.”</p>
NA	4.5.2 (d)	<p>To add a new clause on requirement of removal of redundant pipework as follow:</p> <p>“Redundant pipework that may lead to stagnant water shall be removed.”</p>
4.5.2 (d)	4.5.2 (e)	<p>To add purging requirement for unavoidable spurs or stagnant points as follow:</p> <p>“Purge valves shall be provided at the pipe ends of all unavoidable spurs or stagnant points in the pipework for draining/purging the dead ends for a minimum period of one minute at least on a weekly basis.”</p>

Old clause (2007)	New clause (2012)	Major Change
4.7	4.7.1 (a)	To move the introductory paragraph on spa pools to new s.4.7.1 (a) with heading of “General”. To add” “Spa pools are drained, cleaned or refilled regularly.”
NA	4.7.1 (b)	To add a new clause to introduce equipment on whirlpool baths for personal use as follow: “There are whirlpool baths for personal use in commercial or residential premises, which are designed for one or two users and to be filled and emptied after each use.”
4.7.1 (a)	4.7.2 (a)	To add “The pipework surface area shall be smooth to minimize colonization by biofilm bacteria.”
4.7.1 (b)	4.7.2 (b)	To add “Dead legs of pipework, which cause stagnant water, shall be avoided to prevent microbial growth.”
4.7.2 (a)	4.7.3 (a)	To delete the word “good”. To add “It is recommended to maintain a pH value of 7.2 to 7.8 for chlorinating disinfectants.”
4.7.2	4.7.3	To add a note for supplementary reference to “Guidelines on Management of Commercial Spa Pools” (2008) published by the Centre for Health Protection of the Department of Health.
NA	4.7.4	To add a new clause on disinfection requirement for whirlpool baths as follow: “Whirlpool bath water is normally untreated and is drained after each session. It is recommended to disinfect the baths at least daily for commercial use or weekly for residential use by water with 20 ppm of chlorine for at least 2.5 hours”
Section 5 - Collection of Water Samples from Water Using Apparatus for Testing Legionella, Heterotrophic Colony Count (HCC), and Other Water Quality Parameters		
5.4 and 5.5	5.4 and 5.5	To add “the latest version of” before “internationally recognised standards” in section 5.4 and delete the publication years of the standards in sections 5.4 and 5.5.
Section 9 - Reference		
		To add new references: [11] Management of SPA Pools: Controlling the Risk of Infection, Health Prevention Agency, UK, 2006 [12] National Guidelines for the Control of Legionellosis in Ireland, 2009, Health Protection Surveillance Centre, Ireland, 2009 [13] BS 6700:2006+A1:2009 Design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages Specification, The British Standards Institution, UK, 2009
Annex		
Annex 1	Annex 1	To replace Form 2 of “QUARANTINE AND PREVENTION OF DISEASE ORDINANCE (Cap. 141)” by Form 2 of “PREVENTION AND CONTROL OF DISEASE ORDINANCE (Cap. 599)”.
Figures		
Figure 3B	Figure 3B	To update the format of composition of PLDC and provide hyperlink to the updated Membership List.