

Water Supplies Department

Development and Implementation

of the Hong Kong Voluntary

Water Efficiency Labelling Scheme (WELS)

Draft Framework of the Voluntary WELS on Water Taps

Framework
of Voluntary Water Efficiency Labelling Scheme (WELS) on Water Taps

1 Overview

- 1.1 The Water Efficiency Labelling Scheme (WELS) on Showers for Bathing was launched on 10 September 2009. To maintain its continuous support for sustainable development and the momentum of WELS to promote public's awareness of water conservation, Water Supplies Department (WSD) is going to extend the WELS coverage to water taps.
- 1.2 At present, the WELS has been implemented or being planned in Australia, New Zealand, Singapore, Taiwan, the U.K. and the U.S. on either a voluntary or a mandatory basis to make effort in saving water resource. An overview on their WELS implementation is shown in Annex A for reference.

2 WELS on "Water Taps"

This WELS on "Water Taps" would be on a voluntary basis. The scheme would be operated under either a Grading Type or Recognition Type system subject to the market survey results. All basin and kitchen sink taps could be applied for registration under this scheme if they can meet the statutory and performance requirements specified in the scheme.

3 Implementation Schedule

- 3.1 Registration under the scheme would commence from 2010 and the registration would expire in end 2012. A review exercise would be conducted in early 2012 to facilitate the consideration whether revision of the scheme is required by late 2012. This exercise would provide WSD with an opportunity to review the market development, the technology advancement on the water taps, the development/revision of relevant testing standards and the scheme's operating procedures.
- 3.2 If the scheme is revised, new applications after 2012 have to meet the revised scheme requirements for registration, while the existing registrations would be reviewed

accordingly. If revision of the scheme is considered not necessary, the existing registrations will be extended automatically.

4 Testing Standard

Statutory Requirement

- 4.1 The water taps should be tested in accordance with and comply with the standard specified for the water taps by the Water Authority.

Scheme Requirements

- 4.2 The water taps are proposed to be tested to AS/NZS 3718:2005 for the following parameters:
- (a) Nominal flow rate; and
 - (d) Flow controller endurance (if equipped with the water taps).

5 Labelling System

- 5.1 If the Grading Type WELS is adopted for water taps, the water taps would be rated to the different grades in accordance with the flow rate test results and subject to the compliance with other statutory and performance requirements mentioned in Section 6 below. The presentation of the grades under the Grading Type labelling scheme is proposed to be the same presentation adopted in the WELS on Showers for Bathing.
- 5.2 If the Recognition Type WELS is adopted, a verification water efficiency label would be allowed to be fixed to those water taps that have met the specified water flow rate requirement and are in compliance with the statutory and other performance requirements as mentioned in Section 6 below.

6 Statutory and Performance Requirements

Statutory Requirement

- 6.1 The water taps shall be approved by the Water Authority.

Performance Requirement

- 6.2 Apart from the flow rate test, it is required to comply with the flow controller endurance test - the maximum difference between highest and lowest average flow

rate should not exceed 2 litres/min. In addition, the flow rate should be within ± 1 litre/min of the nominal flow rate after the endurance test.

7 Requirements on Testing Laboratory

- 7.1 The testing would be carried out either by an independent testing laboratory or by the manufacturers or the importers themselves at their own testing facilities. WSD would accept the results and certificates issued by testing laboratories, which fulfil one of the following criteria as specified in Clause 7.3, 7.4 or 7.5.
- 7.2 The laboratory is accredited by the Hong Kong Accreditation Service (HKAS) for carrying out the tests stipulated in the WELS on Water Taps under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or a scheme with which HKAS has concluded a mutual recognition agreement; and the results are issued in a test report or certificate bearing the accreditation mark.
- 7.3 (a) Self-declaration by the manufacturer or importer that the operations of their in-house laboratory followed principally the requirements of ISO/IEC 17025; **and**
- (b) The manufacturer or importer currently operates according to a recognized international quality system (such as ISO 9001); **and**
- (c) The manufacturer or importer's in-house laboratory has been successful in carrying out tests on water consumption appliances and where these tests have been evaluated and certified by internationally recognised third party certification organisations.
- 7.4 A laboratory which achieves HOKLAS accreditation (or is accredited by a scheme with which HKAS has signed a mutual recognition agreement) for laboratory testing of water consuming appliances other than the tests stipulated in the WELS on Water Taps, and the laboratory can demonstrate their capability of carrying out tests on water taps in accordance with the required technical standards.

8 Scheme Participation Process

8.1 Invitation

All manufacturers and importers involved in the business of water taps will be welcome and encouraged to participate in the scheme. For known manufacturers

and importers, invitation letters will be issued to them. However, any manufacturers and importers may submit their applications for registration no matter whether they are invited or not.

8.2 Application Process

Applicant can submit formal application by means of an application letter through mail, facsimile or electronic mail. In order to ensure effective implementation of the scheme, the applicant must be committed to fully comply with the duties, responsibilities and obligations set out in this scheme. A proforma letter of application detailing the aforesaid duties, responsibilities and obligations and the information required for submission with the application will be attached to the scheme document for applicant's use. To facilitate the application process, the application form would be made available at WSD's website for downloading.

8.3 Acceptance or Rejection of Application

On receipt of the application, WSD will verify whether the water tap under application meets the performance requirements based on the submitted data. If Grading Type WELS is adopted, WSD will rate the grade of the water tap according to the flow rate test result. If Recognition Type WELS is adopted, WSD will verify whether the water tap meets the water efficiency requirements.

If the application is accepted, the participant will be notified of the result in writing within **17 working days** (*same as for WELS for Showers for Bathing*) upon receipt of all necessary information requested. The participant will then be allowed to affix the water efficiency label onto the 'registered' water tap. Both the manufacturer and importer of the registered water tap should ensure that the water efficiency label is correctly printed and affixed/printed on the water tap or its packing of in accordance with the requirements specified in the scheme. Similar to the WELS on Showers for Bathing, a simplified version label design will be provided to facilitate the participant to affix it to the water tap in case the full version label is too large to do so. However, the affixation of the simplified version label to the water tap is optional.

If the application is rejected, the notification letter will also be given within **17 working days** (*same as for WELS for Showers for Bathing*) upon receipt of all necessary information requested.

9 Compliance Monitoring and Inspection

9.1 Inspection Approach

To uphold the credibility of the scheme and to maintain continuous confidence of the consumers, compliance check on water efficiency labels on those water taps participating in the scheme will be required. Also, to avoid the unsatisfactory situation that non-participating parties taking advantage of the scheme by using unauthorized labels, suitable form of inspection will be carried out on water taps which have not been registered under the scheme. The inspection may be conducted under the mode of random sampling.

Moreover, registered water taps shall also be randomly selected for testing by an accredited laboratory appointed by WSD to ensure the technical and performance data submitted by the participants under the scheme requirements as mentioned in Clause 4.2 are correct.

9.2 Remedial Actions

Participants will be requested to take immediate remedial action and report the action taken if non-compliance is found on their water taps.

If a registered water tap carrying water efficiency label is found not complying with the standard as mentioned in Clause 4.2, the participant will be requested to repeat the tests at his own costs by an agreed testing laboratory.

If non-compliance is confirmed and no remedial action is taken by the applicant, WSD may order it be de-registered from the scheme. Failure to remove the WELS label from the de-registered water tap after WSD has withheld its authorization for using such label may contravene the relevant Ordinances.

9.3 Inspection Officers

Inspecting officers would be authorized to carry out compliance monitoring and inspection. The officers will carry proper identification cards that will be produced on request during their inspection operations. However, the officers will not inform the participants in advance of their intended inspection operation. It is the participants' duty to allow the inspecting officers to gain access to their premises to carry out inspection. Inspections will normally be carried out at the retail outlets and showrooms. Where necessary, inspection will also be done at warehouses.

10 Legal Provisions

- 10.1 This is a voluntary scheme. However, a participant who abuses the scheme by giving false information on a label may contravene provisions of the **Trade Description Ordinance**.
- 10.2 No one could take advantage of the scheme by using the label on his water tap without authorization of WSD as that may constitute an infringement of copyright under the **Copyright Ordinance**.
- 10.3 Department of Justice was consulted on the above legal provisions during the development of the WELS on Showers for Bathing and the application of the above Ordinances was found appropriate.

November 2009

Overseas WELS Development on Water Taps

Country / Region	Voluntary Scheme	Mandatory Scheme	Label Type	Efficiency Rating for Water taps	Test Standard for Water taps
Australia	-	Under implementation	Grading type with “ ” star	<p style="text-align: center;"><u>Zero Star</u> flow rate > 16 l/min or failing the performance requirements</p> <p style="text-align: center;"><u>One Star</u> 12 < flow rate ≤ 16 l/min</p> <p style="text-align: center;"><u>Two Stars</u> 9 < flow rate ≤ 12 l/min</p> <p style="text-align: center;"><u>Three Stars</u> 7.5 < flow rate ≤ 9 l/min</p> <p style="text-align: center;"><u>Four Stars</u> 6 < flow rate ≤ 7.5 l/min</p> <p style="text-align: center;"><u>Five Stars</u> 4.5 < flow rate ≤ 6 l/min</p> <p style="text-align: center;"><u>Six Stars</u> flow rate ≤ 4.5 l/min</p> <p>The rating is increased by one star if the tap has a qualifying automatic shut-off device.</p>	<ul style="list-style-type: none"> ● Nominal flow rate ● Hydraulic strength test ● Water tightness ● Torque of head to body ● Endurance test ● Plastic materials used for plastic-bodied taps under AS/NZ 3718:2005
New Zealand	-	To be implemented by	Grading type with	<p style="text-align: center;"><u>Zero Star</u> flow rate > 16 l/min or failing the performance</p>	<ul style="list-style-type: none"> ● Nominal flow rate ● Hydraulic strength test

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Country / Region	Voluntary Scheme	Mandatory Scheme	Label Type	Efficiency Rating for Water taps	Test Standard for Water taps
		2010	“ ” star	<p style="text-align: center;">requirements</p> <p style="text-align: center;"><u>One Star</u></p> <p style="text-align: center;">$12 < \text{flow rate} \leq 16 \text{ l/min}$</p> <p style="text-align: center;"><u>Two Stars</u></p> <p style="text-align: center;">$9 < \text{flow rate} \leq 12 \text{ l/min}$</p> <p style="text-align: center;"><u>Three Stars</u></p> <p style="text-align: center;">$7.5 < \text{flow rate} \leq 9 \text{ l/min}$</p> <p style="text-align: center;"><u>Four Stars</u></p> <p style="text-align: center;">$6 < \text{flow rate} \leq 7.5 \text{ l/min}$</p> <p style="text-align: center;"><u>Five Stars</u></p> <p style="text-align: center;">$4.5 < \text{flow rate} \leq 6 \text{ l/min}$</p> <p style="text-align: center;"><u>Six Stars</u></p> <p style="text-align: center;">$\text{flow rate} \leq 4.5 \text{ l/min}$</p> <p>The rating is increased by one star if the tap has a qualifying automatic shut-off device.</p>	<ul style="list-style-type: none"> ● Water tightness ● Endurance test <p>under AS/NZ 3718:2005</p>

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Country / Region	Voluntary Scheme	Mandatory Scheme	Label Type	Efficiency Rating for Water taps	Test Standard for Water taps
Singapore		Under implementation	Grading type with “✓” tick	Shower taps and mixers (except concealed bath/shower taps and mixers) : <u>Zero Tick</u> flow rate > 9 l/min <u>Good (1 Tick)</u> 7 < flow rate ≤ 9 l/min <u>Very Good (2 Ticks)</u> 5 < flow rate ≤ 7 l/min <u>Excellent (3 Ticks)</u> flow rate ≤ 5 l/min	Flow rate under their specified testing methods
				Basin taps and mixers : <u>Zero Tick</u> flow rate > 6 l/min <u>Good (1 Tick)</u> 4 < flow rate ≤ 6 l/min <u>Very Good (2 Ticks)</u> 2 < flow rate ≤ 4 l/min <u>Excellent (3 Ticks)</u> flow rate ≤ 2 l/min	

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Country / Region	Voluntary Scheme	Mandatory Scheme	Label Type	Efficiency Rating for Water taps	Test Standard for Water taps
				Sink/bib taps and mixers : <u>Zero Tick</u> flow rate > 8 l/min <u>Good (1 Tick)</u> 6 < flow rate ≤ 8 l/min <u>Very Good (2 Ticks)</u> 4 < flow rate ≤ 6 l/min <u>Excellent (3 Ticks)</u> flow rate ≤ 4 l/min	
Taiwan	Under implementation	-	Recognition type	1 < flow rate ≤ 9 l/min	<ul style="list-style-type: none"> ● Flow rate under JIS B2061 ● Leakage test and operational test under CNS 8085-CNS 8088 or JIS B2061 ● Endurance test under JIS B2061 ● Electroplating thickness test under CNS 4157
UK	Under implementation	-	Recognition type	flow rate < 6 l/min	Flow rate under their specified testing methods

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Country / Region	Voluntary Scheme	Mandatory Scheme	Label Type	Efficiency Rating for Water taps	Test Standard for Water taps
	by the Bathroom Manufacturers Association				
US	Under implementation with WaterSense Partnership programme by US EPA	-	Recognition type	flow rate \leq 1.5 gpm (5.7 l/min)	Flow rate under ASME A112.18.1/CSAB125.1