
The Voluntary Water Efficiency Labelling Scheme on Urinal Equipment

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1. Purpose

This document is intended to give a detailed description on the Voluntary Water Efficiency Labelling Scheme (WELS) on Urinal Equipment.

2. Background

2.1. The voluntary WELS is one of the water conservation initiatives that the Government of the Hong Kong Special Administrative Region (HKSAR) has adopted. The WELS would cover common types of plumbing fixtures and water-consuming appliances. Products participating in the WELS will incorporate a water efficiency label that serves to inform consumers the water consumption level and efficiency rating. Consumers could then be able to take these factors into account in making their purchasing decision.

2.2. In overseas countries, the WELS is in different stages of development and implemented in several forms. In some countries, it is a compulsory requirement to provide water efficiency labels for certain kinds of plumbing fixtures and appliances before they can be put on sale in the market. For others, the WELS is implemented on a voluntary basis so as to allow a lead time for the market to transform towards more water efficient products. **The implementation of WELS in Hong Kong currently adopts a mixed¹ approach. The WELS aims to:**

- (a) To provide consumers with information on the levels of water consumption and efficiency ratings of plumbing fixtures and water-consuming appliances;
- (b) To facilitate consumers to select water efficient plumbing fixtures and water-consuming appliances;
- (c) To promote public awareness on water conservation and efficiency issues; and
- (d) To achieve actual water savings.

2.3. The voluntary WELS in Hong Kong is being implemented in phases for

¹ *Mandatory use of some designated water efficient products in new plumbing works and voluntary labelling in the retail market.*

different groups of plumbing fixtures and water-consuming appliances. The first **six** groups of products for implementation of the WELS are showers for bathing, water taps, washing machines, urinal equipment, flow controllers **and water closets**, which had been launched in September 2009, September 2010, March 2011, March 2012, August 2014 **and May 2018** respectively.

3. Scope

- 3.1. The Scheme will apply to the urinal equipment manufacturers, importers, or other related parties participating in the Scheme.
- 3.2. The Scheme registration commenced from **29 March 2012**. The revision of the Scheme is effective from **1 May 2021** and will expire on **30 April 2026** when re-registration **may be necessary subject to the result of the periodic review of the Scheme**.
- 3.3. The Scheme only covers new urinal equipment imported to or manufactured in Hong Kong but does not cover second-hand products, products already in existing use, under trans-shipment or manufactured for export, etc.
- 3.4. The Scheme is operated as a ‘Grading Type’ labelling system. Under this Scheme, participating urinals will be rated to different grades according to their minimum water flush volumes per cycle required to fulfill performance. For urinal flushing valves, the rating is according to their total water flush volumes per cycle provided that they have met the statutory requirements and performance requirements specified in the Scheme.
- 3.5. The provisions of this Scheme shall apply to the urinals with traps and automatic/manual urinal flushing valves. Those urinals with traps coupled with urinal flushing valves to form a combination or urinal suites (urinals with traps equipped with integrated sensing type flushing valves) are also included in this Scheme. However, urinals without integral or external traps, trough urinals, flushing cistern as well as waterless urinals are excluded from this Scheme at this stage.

4. Definitions

Unless otherwise specified, the following definitions shall apply throughout this document:

Department means the Water Supplies Department, the Government of HKSAR.

Director means the Director of the Water Supplies Department, the Government of HKSAR.

Government means the Government of HKSAR.

HKAS means the Hong Kong Accreditation Service.

HOKLAS means Hong Kong Laboratory Accreditation Scheme.

Inspecting Officer means the officer authorized by the Director to carry out the inspection as described in Section 11 of this document.

ISO means the International Organization for Standardization.

Label means the water efficiency label (both full version and simplified version) as described in Section 7 of this document.

Low pressure application Means urinal equipment operating in low water supply pressure on or higher than 0.40 bar but below 1.75 bar.

MRA means a mutual recognition arrangement.

Normal pressure application Means urinal equipment operating in a water supply pressure on or higher than 1.75 bar.

<i>participant</i>	means a manufacturer, an importer or other related party of the urinal equipment registered in the Scheme.
<i>recognized laboratory</i>	means a laboratory which complies with the requirements for testing laboratory as stated in Section 8 and is acceptable to the Department for carrying out tests (including re-tests) and issuing test reports on Urinal Equipment.
<i>Scheme</i>	means the Voluntary Water Efficiency Labelling Scheme on Urinal equipment.
<i>Trough urinals</i>	means the sanitary fitting, comprising a floor channel and a slab or sheet fixed to a wall, for receiving urine and water used for flushing and directing both into a drainage system.
<i>Urinal(s)</i>	Means the sanitary fitting, either wall or floor mounted, used by men for urination. Water is used for flushing.
<i>Urinal equipment</i>	Means urinals, urinal flushing valves either automatically or manually operated, urinals equipped with urinal flushing valve to form a combination or urinal suites.
<i>Urinal flushing valve</i>	Means a device that controls the release of water to flush a urinal either in sensor or manual type.
<i>Urinal suite</i>	Means urinal with trap equipped with an integrated sensing type flushing valve.
<i>Water Authority</i>	means the Water Authority as defined in the Waterworks Ordinance, Chapter 102, Section 2.
<i>Waterless urinals</i>	Means the sanitary fitting, wither wall or floor mounted, used by men for urination and no water is needed for operation.

5. Testing Methodology and Standard

Statutory Requirement

- 5.1. The flushing valve of urinal equipment shall be tested in accordance with the requirements as specified in relevant Waterworks Regulations and comply with the standards specified for the flushing valve by the Water Authority.

Upon the completion and compliance with the test(s), the approval for the urinal flushing valve shall also be obtained from the Water Authority prior to the WELS application.

Scheme Participation Requirement

- 5.2. The testing methodology is described in Annex 1 with reference to testing conditions and requirements specified in the American Standard No. ASME **A112.19.2:2018** – Ceramic Plumbing Fixtures, Appendix D of Australian/New Zealand Standard No. AS/NZS 3982:1996 – Urinals and requirements in relevant Waterworks Regulations or other equivalent international standards approved by the Department.

Water Flush Volume per Cycle

- 5.3. The minimum water flush volume per cycle and the total water flush volume per cycle shall be determined in accordance with Annex 1. The water efficiencies of the urinal equipment will be rated to different grades according to Section 6.

Other Performance Requirement

- 5.4. The urinal equipment shall also be tested in accordance with Annex 1 for conformity with all the performance requirements as shown in Table 1 and/or Table 2.

Table 1: Performance Requirements for Urinals with Traps

Performance Property	Performance Requirements
Trap seal depth determination	The full trap seal depth shall be at least 51 mm (2.0 inches).—
Surface wash test	The total length of the ink line segments remaining on the flushing surface after each flush cycle shall not exceed 25 mm (1.0 inch) when averaged over three test runs. In addition, no individual segment shall be longer than 13 mm (0.5 inch).—
Dye test	The colour of the test sample shall be lighter than or equal to that of the control sample.

Splash test	The urinals shall not splash water onto the floor.
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Table 2: Performance Requirements for Urinal Flushing Valves

Performance Property	Performance Requirements
Physical endurance and leakage test	There shall be no leakage from 1, 2, 5, 10, 50, 100, 500, 1000, 10000 cycles and then every 10000 up to 200000 cycles for the duration of test.

Quality Requirement

- 5.5. The urinal equipment shall be manufactured under a design (if applicable) and production system operating according to a recognized international quality system (such as ISO 9001 **or equivalent**).

6. Water Efficiency Grading

Classification of Urinal Equipment

- 6.1. For the purpose of water efficiency rating assessment, all urinal equipment to be registered under the Scheme is classified based on the category or categories submitted by the participants in accordance with Table 3. The urinal equipment will be registered and labelled with either one Label for the corresponding category or two Labels, i.e. one Label for **Category 1** and the other Label for **Category 2**.

Table 2: Classification of Urinal equipment

Category	Description
1	Urinal Equipment in normal pressure application
2	Urinal Equipment in low pressure application





Water Efficiency Grading

- 6.2. The water efficiencies of the urinals with traps are rated to different grades according to their minimum water flush volumes per cycle required to fulfill performance while the water efficiencies of the urinal flushing valves are

rated to different grades according to their total water flush volumes per cycle as shown in Table 4. Grade 1 is the most water efficient whereas Grade 4 is the least water efficient.

- 6.3. For a product of combination or a urinal suite, the water efficiency grade of the product will be rated to different grades according to the total water flush volume of the urinal flushing valve per cycle provided that the accompanied urinal shall also fulfil all the performance requirements as specified in Section 5.4 when tested using the total water flush volume per cycle of the urinal flushing valve.

Table 4: Conversion of Water Flush Volume per Cycle to Water Efficiency Grades for Urinal Equipment under Normal or Low Pressure Application

Water flush volume per cycle* : f (litres/cycle)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$f \leq 1.5$	Grade 1	1 water droplet 
$1.5 < f \leq 2.5$	Grade 2	2 water droplets 
$2.5 < f \leq 4.5$	Grade 3	3 water droplets 
$4.5 < f$	Grade 4	4 water droplets 

Note : * water flush volume per cycle means minimum water flush volume per cycle for a urinal with trap or total water flush volume per cycle for a urinal flushing valve, a product of combination or a urinal suite.

- 6.4. If the total water flush volume per cycle of a urinal flushing valve is 1.0 litre or less, it shall be tested together with the recommended urinal to form a combination. The valve and the urinal will be registered as a combination.
- 6.5. A urinal with an external trap shall be tested together and both will be registered as a combination.
- 6.6. In order to sustain the performance requirements, a urinal and a urinal

flushing valve registered under WELS on urinal equipment can be connected to form a combination provided that:

- (a) The water efficiency grading of the urinal and the urinal flushing valve must be the same; and
- (b) The total water flush volume per cycle of the urinal flushing valve should not less than the minimum water flush volume per cycle of the urinal.

6.7. If the urinal equipment is operated with a smart demand operation to achieve additional water saving and have already verified by the testing laboratories or certification bodies as specified in Section 8.1, the merit will be shown on the water efficiency label for public information and description of the merited function will be referred from the registration certificate.

7. Water Efficiency Label

Label Versions and Location

7.1. The Label should be self-adhesive or pre-printed onto the packing. There are two versions of the Label – full and simplified versions. It is a compulsory requirement for the participant to affix/print the full version Label to his/her registered urinal equipment or its packing at a prominent location. The participant should also ensure that the registered urinal equipment shall be displayed for sale with the full version Label(s) **in order to enhance the awareness of water efficient plumbing fixtures being installed. The simplified version Label is designed to facilitate the participant to affix it to the urinal equipment in case the full version Label is too large to do so. However, the affixation of the simplified version Label to the urinal equipment is optional.**

Colour Scheme and Dimensions

7.2. The Label should be printed on white-coloured self-adhesive sheet material (for self-adhesive type) in accordance with the figures, dimensions, **Pantone Colour Codes, font sizes and styles** as shown in Annex 2. **It should be printed in English and Chinese. Soft copies of WELS labels will be transmitted by the WSD to successful applicants for WELS soon after the approval of the respective application.**

Paper Quality

- 7.3. The paper used for the Label should be durable and possess good wear and tear characteristics. It should stick tightly on the urinal equipment or its packing.

Information on the Label

- 7.4. The information that appears on the Label shall accord with the Label format as indicated in Annex 2 and shall tally with the information listed on the registration certificate issued by the Department.

8. Testing Laboratories and Certification Bodies

- 8.1. The testing specified in Sections 5.3 & 5.4 is to be carried out either by an independent testing laboratory or **by the manufacturers or the importers or other related parties themselves at their own testing laboratories**. The Department will accept the results and certificates issued by the testing laboratories, which fulfill one of the following criteria as specified in Sections 8.2, 8.3 or 8.4.
- 8.2. The **testing** laboratory is accredited by the Hong Kong Accreditation Service (HKAS) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or **a testing laboratory accredited by the mutual recognition arrangement partners for HKAS*** for carrying out the tests stipulated in Sections 5.3 & 5.4 of this document; and the **test** results are issued in **an endorsed** test report or certificate bearing the accreditation **mark as having the same technical validity as certificates endorsed by HOKLAS**.
- 8.3. An in-house laboratory fulfilling the criteria listed below:
- (a) Self-declaration by the manufacturer, importer or other related parties

* HKAS has concluded mutual recognition arrangements with overseas accreditation bodies for testing laboratory accreditation. The list of mutual recognition arrangement partners may change from time to time and the up-to-date list is available from the HKAS website of http://www.itc.gov.hk/en/quality/hkas/doc/common/mramla/MRA_HOKLAS_en_ch.pdf. Partners of these arrangements recognise the accreditations granted by one another as equivalent. An up-to-date APLAC MRA list is available from http://www.aplac.org/aplac_mra.html. An up-to-date ILAC MRA is available from https://ilac.org/signatory_print.php

that the operations of their in-house laboratory follow the requirements of ISO/IEC 17025; **and**

- (b) The manufacturer, **importer or other related parties** is currently operating according to a recognized international quality system (such as ISO 9001); **and**
- (c) The manufacturer's or importer's or related parties' in-house laboratory has been successful in carrying out tests on urinal equipment and where tests have been evaluated and certified by internationally recognized third party certification organisations.

- 8.4. A laboratory **that** achieves HOKLAS accreditation (or is accredited by a scheme with which HKAS has concluded a mutual recognition agreement) for laboratory testing of plumbing fixtures and water-consuming appliances other than the tests stipulated in the Scheme, and the laboratory can demonstrate **its** capability of carrying out tests on urinal equipment in accordance with Annex 1.

9. Application for Registration

Application Procedures

- 9.1 All manufacturers, importers and other related parties in the urinal equipment business are **welcome** and encouraged to participate in the Scheme. For some known manufacturers and importers, invitation letters will be issued to them. However, any manufacturers, importers and other related parties in the urinal equipment business may submit applications for registration no matter whether they are invited or not.
- 9.2 The application for WELS registration **shall** be submitted by means of an application letter **together with "Performa Letter of Application" in Annex 3 by hand**, through post, facsimile or electronic mail to the Water Supplies Department:

Address: 47/F, Immigration Tower
7 Gloucester Road, Wanchai, Hong Kong

Fax number: 2824 0578

Email: wsdinfo@wsd.gov.hk

A proforma letter of application is attached in Annex 3. In order to ensure effective implementation of the Scheme, the participant must be committed to full compliance with the obligations set out in the Scheme. The proforma letter of application in Annex 3 details the obligations. The proforma application letter is also available at the Water Supplies Department's website (https://www.wsd.gov.hk/filemanager/en/share/wels/proforma_letter_of_application_urinal.pdf) for downloading. The application submission can be made in either English or Chinese.

Information/Documents/Materials to be Submitted for Application

9.3 The information/material to be submitted with the application are listed as follows **and also listed in Annex 4:**

- (a) Information of the company, i.e. name, address, telephone number, fax number, e-mail address, website address, contact person, and sale distribution network (names and addresses of the distributor(s)), etc.;
- (b) Information of the urinal equipment being applied for registration in the Scheme, i.e. brand name, model no. and/or name, urinal equipment category (or categories), catalogue (if available), **country/region of origin** and three photos clearly showing the front, side and bottom views of the urinal equipment;
- (c) **Parties which will be responsible for making and affixing the water efficiency label (Label);**
- (d) Proposed commencement date to affix the Label to urinal equipment (Year ____, Month ____);
- (e) Documentary proof of the approval for the urinal equipment issued by the Water Authority;
- (f) Documentary proof that the design (if any) and production system for the urinal equipment is operating according to a recognized international quality system[†] (such as ISO 9001). The submission of product drawings extracted from the product manual or design manual, and international quality system certificate on the manufacturer can be considered as documentary proof of recognition of the quality system. Failure to the renewal of the recognized international quality system may render the model registration null and void;
- (g) Detailed test report in accordance with the reporting requirements

[†] *The details of a recognised international quality system may change from time to time and the up-to-date list is available from HKAS website at https://www.itc.gov.hk/en/quality/psib/standards_res.html*

specified in Annex 1. The test report shall be issued by a recognized laboratory complying with the requirements in Section 8. The required information requested in Sections A5 and A6.2 for urinals and Section B5 for urinal flushing valves of Annex 1 and Section C3 for merited function (if any) of the scheme document have to be provided in a single section of the test report;

- (h) Documentary proof that the testing laboratory appointed by the participant has satisfied the requirement of Section 8.2, 8.3 or 8.4. The submission of certificate of accreditation, self-declaration statement that the operation of the testing laboratory meets the requirements of ISO/IEC 17025 can be considered as documentary proof.
- (i) For the case of urinal equipment of same design but with the variation in colour and finishing, the applicant should consult with the testing laboratory and confirm in writing that such variation will not affect the water flush volume performance and other performance requirements stipulated in Section 5.3 to Section 5.5; and
- (j) A reference sample for each urinal equipment successfully registered under the Scheme upon the request of the Department.

- 9.4 Company's chop should be stamped on the Proforma Letter of Application and all the documents front cover provided by hand, or through post, facsimile or electronic mail to the Water Supplier Department. All photocopy test reports submitted to the Department shall be certified as true copy issued by the testing laboratory appointed by the participant. Upon the request of the Department, the participant is required to provide the original copy of the test reports

Acceptance/Rejection of Application

- 9.5 On receipt of the application, the Department will verify whether the urinal equipment meets the requirements based on the submitted information and will rate the urinal equipment with a water efficiency grade according to the urinal equipment's water flush volume per cycle and performance test results.
- 9.6 If the application is accepted, the participant will be notified of the result within 17 working days upon the receipt of all necessary information requested. A registration certificate listing the information to be displayed on the Label will be issued to the participant by the Department. Soft copies of WELS labels will be transmitted by the WSD to successful applicants for

WELS soon after the approval of the respective application. The participant will then be allowed to affix the Label to the ‘registered’ urinal equipment or print the Label onto its packing. The participant should ensure that the Label is correctly printed and affixed to the urinal equipment or its packing in accordance with Section 7.

9.7 If the application is rejected, a notification letter with reason(s) of rejection will also be given to the participant within 17 working days upon receipt of all necessary information requested.

9.8 To ensure a more efficient processing of applications of products for registration under WELS, the deadline for submitting all necessary supporting information will be set at six months from the date of receipt of the application. Upon receipt of application, the Department will vet and, if found necessary, require the applicant to submit outstanding information. For any application that could not be completed in five months due to incomplete information, the Department will issue a final reminder requesting the submission of outstanding application/clarification within one month from the date of such reminder. The application concerned will be rejected automatically without further notification if the required information/clarification is still outstanding after the deadline specified in the reminder.

9.9 The flow chart for registration is shown in Annex 5.

Participant’s Obligations

9.10 The participant is obliged to:

- (a) submit application, for registration by means of an application letter together with the “Proforma Letter of Application”, the information/material required in Section 9.3 and the test results which follow the format set out in Sections I, II and III of Annex 1;
- (b) at his/her own costs, produce the Label(s) and affix/print the Label(s) either to the urinal equipment or its packing at a prominent location in accordance with Section 7;
- (c) ensure that the registered urinal equipment shall be displayed for sale with the full version Label;
- (d) fully inform other related parties (such as sales agents, retailers, etc.) in

the participant's sale distribution network once the urinal equipment is registered under this Scheme and notify them that the Department may request to enter their premises to carry out the **compliance monitoring and inspections** in Section 11;

- (e) allow **annual/ad-hoc inspection/re-inspection** to be conducted by Inspecting Officers authorized by the Director on the registered urinal equipment at his/her premises **such as the warehouse and/or its retailing spots**;
- (f) allow the **tested water flush volumes** and performance data of the registered urinal equipment to be uploaded to the Department's website for public information;
- (g) conduct re-test(s) at his/her own costs at a recognized laboratory if non-compliance is found on the registered urinal equipment. The result of re-test(s) shall reach the Department within the time specified by the Department;
- (h) **submit a reference sample of each urinal equipment successfully registered under the Scheme upon the request of the Department**;
- (i) **provide additional supporting information/material upon request of the Department within the time prescribed. Failure to comply may render rejection of the Application for Registration (see Section 9)**;
- (j) notify the Department by means of a notification letter (in either English or Chinese and the company's chop should be stamped on **the Proforma Letter of Application and all submitted documents front covers**) through post, facsimile or electronic mail of any changes of the company information (e.g. company name). The notification should be made not less than 14 working days before the change. Failure to comply may render the model registration null and void. Changes of urinal equipment information (e.g. brand name, model no.) will be considered as major changes that require new applications for registration in the Scheme;
- (k) remove within three months all Labels from the urinal equipment and its packing if it has been de-registered; **and**
- (l) **return the corresponding registration certificate to the Department within one month upon receipt of the notification letter of de-registration.**

9.11 The details of urinal equipment registered under this Scheme will be kept in a register maintained by the Department. The registration records will be

regularly uploaded to the Department's website for public information.

Termination

9.12 Under circumstances of poor performance such as:

- (a) the participant failing to fulfil the obligations set out in the Scheme; or
- (b) the urinal equipment failing to perform in accordance with rated water efficiency grade and/or the performance requirements of the Scheme and the participant not being able to rectify the non-compliance within the time frame specified by the Department; or
- (c) where the Director is of the opinion that registration of urinal equipment is contrary to the public interest,

the Department may de-register urinal equipment from the Scheme with immediate effect by giving the participant notice in writing. Once the urinal equipment is de-registered, it is not allowed to affix Label(s) to it. The participant shall remove all Labels from the de-registered urinal equipment and its packing within three months from the notice.

9.13 Participant who decides to discontinue participating in the Scheme or to withdraw any registered urinal equipment from the Scheme shall give at least three months' advance notice to the Department.,, in writing with the reason(s) for de-registration.

9.14 The participant shall return the registration certificate to the Department within one month after de-registration under the Scheme.

Arrangement and Procedures upon expiry of the General Acceptance (GA) Approval

9.15 The flushing valve of the urinal equipment, if applicable, shall be tested in accordance with the relevant requirements as specified in the Waterworks Regulations (Caps. 102A) and comply with the standards specified for the flushing valve by the Water Authority. The WELS registration record will expire on the expiry date of the General Acceptance (GA) of the flushing valve for urinal equipment.

9.16 The detailed arrangement and procedures for handling WELS registered urinal flushing valve upon expiry of its GA is described as below:

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- (a) The WELS registration record will expire instantly on the expiry date of the GA of flushing valve for urinal equipment;
 - (b) The WELS on urinal equipment register on the Water Supplies Department's website (<https://www.wsd.gov.hk/en/plumbing-engineering/water-efficiency-labelling-scheme/wels-on-urinal-equipment/register-urinal-equipment-/index.html>) will be updated accordingly;
 - (c) A notification letter will be given to the participant upon the expiry of the WELS registration;
 - (d) Participant who decides to discontinue participating in the Scheme should inform the Department with written notice and return the corresponding registration certificate to the Department within one month upon receipt of the notification letter;
 - (e) Once the WELS registration record of a urinal equipment is expired, it is not allowed to affix a Label to it;
 - (f) The participant shall remove all Labels from the urinal equipment expired under WELS registration as well as its packing within three months from the notice;
 - (g) Participant who decides to continue registering a urinal equipment with a flushing valve (of expired GA) with the Scheme shall submit a notification letter through post, facsimile or electronic mail within one month of the date of the corresponding letter of the renewed GA of the flushing valve. The notification letter shall include its WELS registration number, manufacturer, brand and model number, together with the documentary proof the renewed GA issued by the Water Authority with the new validity period. If the application is accepted, the participant will be notified of the result within 17 working days upon the receipt of all necessary information requested.

10. Legal Provisions

- 10.1 Without prejudice to any remedy a purchaser may have against the party under the **Laws** of Hong Kong, a culpable party may be subject to the following sanctions.
- 10.2 This Scheme is a voluntary scheme. However, a participant who abuses the Scheme by giving false information on the Label may constitute an offence under the Trade Descriptions Ordinance, Cap 362.

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- 10.3 Unauthorized use of the Label(s) may constitute an offence under the Copyright Ordinance, Cap. 528.

11. Compliance Monitoring and Inspection

Purpose

- 11.1 To uphold credibility of the Scheme and to maintain continuous confidence of the consumers, compliance check on the Labels on those urinal equipment registered in the Scheme is necessary. In addition, to avoid the unsatisfactory situation that unauthorized Labels are used on non-registered urinal equipment, the Department may also carry out suitable form of inspection on those urinal equipment which have not been registered under the Scheme.

Scope

- 11.2 The scope of inspection includes, but not limited to, sample checking and testing for the following items:
- (a) whether the Label(s) is/are affixed to registered urinal equipment as required in Section 7;
 - (b) whether the Label(s) being displayed is/are of correct format in accordance with Section 7;
 - (c) whether the water efficiency grade rated by the Department based on the data submitted by the participant is in line with the grade rated from the results of testing conducted by the Department **in compliance monitoring and inspection**;
 - (d) whether the data shown on the Label(s) tally with the information listed on the registration certificate; and
 - (e) whether unregistered urinal equipment display unauthorized Labels.
- 11.3 The participants will be requested to take immediate remedial action and report the follow-up action taken if non-compliance is found on their registered urinal equipment such as incorrect information shown on the Label(s).
- 11.4 The Department will periodically appoint a recognized laboratory to conduct **annual** testing on the registered urinal equipment in accordance with the

requirements specified in Sections I, II and III of Annex 1. For a registered urinal equipment which is found to fall within either one of the following cases, the Department may request the participant to conduct separate test at his/her own cost on the registered urinal equipment, in accordance with the testing methodology as stated in Annex 1 in a recognized laboratory agreed by the Department.

- (a) The urinal equipment is found not meeting the performance requirements specified in Sections 5.4; or
- (b) The urinal equipment is found not meeting the water efficiency grade rated based on the data of the urinal equipment samples previously submitted by the participant in the application.

The test should be carried out on at least three further samples of the urinal equipment provided by the WELS registrant. The WELS registrant shall submit the reference samples for testing within one month upon the request of the Department.

For case 11.4(a) above, the performance test results of the three urinal equipment samples should meet the requirements specified in Section 5.4. If the test results fail to meet such requirements, the Department may either require the participant to withdraw his/her registration or de-register the urinal equipment rated from the Scheme. For case 11.4(b) above, the water efficiency grading rated from the average water flush volume per cycle of the three urinal equipment samples should be the same as the grading on the Label(s). Otherwise, the Department will require the participant to take appropriate remedial action including re-registering in the Scheme by replacing a Label(s) with correct grading and water flush volume per cycle for the registered urinal equipment at his/her own cost.

- 11.5 If no remedial action against the non-compliance is taken by the participant within the time prescribed by the Department, the Department may notify the participant of the de-registration of the concerned urinal equipment from the Scheme. Once a urinal equipment is de-registered, it is not allowed to affix or print a Label to it. The participant shall remove all Labels from the de-registered urinal equipment and its packing within three months from the Department's notice. Failure to remove the Labels from the de-registered urinal equipment may contravene the relevant ordinances as mentioned in

Section 10 above. At the same time, the participant shall return the corresponding certificate to the Department within one month after de-registration under the Scheme.

Inspecting Officers

11.6 The Director will authorize Inspecting Officers to carry out urinal equipment compliance monitoring and inspection. The officers will carry proper identification cards which will be produced during their inspection. However, the officers will not inform the participants in advance of their inspection.

11.7 It is the participants' obligation to allow the Inspecting Officers to gain access to their premises to carry out the inspection. **Failure to comply may render the model registration null and void.**

Mode of Inspection

11.8 Inspections will be carried out on registered urinal equipment under the Scheme on **an annual** basis. Based on the record of the registration, **annual** inspection programmes will be developed. Inspection will also be conducted on the non-registered urinal equipment with unauthorized Labels.

11.9 In addition to the **annual** inspections, the Inspecting Officers will carry out ad-hoc inspections in response to complaints. The items to be inspected in such a case will depend upon the nature of complaint and may include the items as stated in Section 11.2.

11.10 **When necessary, re-inspection of non-compliance identified in urinal equipment in the annual/ad-hoc inspection will be carried out.**

11.11 Inspections will normally be carried out at the retail outlets and urinal equipment showrooms. Where necessary, inspection will also be done at warehouses.

11.12 The inspection results will be properly recorded for future analysis as well as on evaluation of the effectiveness of the Scheme **to provide information on the levels of water consumption and efficiency ratings, to facilitate consumers to select water efficient plumbing fixtures and water consuming appliances and to provide confidence on the registered products under the Scheme.**

12. Complaints and Appeals

- 12.1 The Department will be responsible for dealing with complaints from participants and other parties against matters related to the Scheme.

Complaints Handling Procedure

- 12.2 The Department shall ensure that complaints are properly recorded and handled without undue delay.
- 12.3 The Department shall carry out investigation on complaints and reply to them within a reasonable time. For complaints that require site inspection and laboratory test, the complainant shall be notified through an interim reply.
- 12.4 The Department shall inform the complainant of the result or decision made on the complaint.

Appeal Procedure

- 12.5 A participant may appeal against the decision or action taken by the Department in writing to the Director stating the reason for the appeal.
- 12.6 The Director may decide to suspend the decision or action taken by the Department from the day on which the appeal is made until such appeal is disposed of, withdrawn or abandoned unless such suspension would, in the opinion of the Director, be contrary to public interest.
- 12.7 The Director may, by notice to the appellant, require the appellant to attend meeting(s) with him or his representatives and provide documents and give evidence relevant to the appeal.
- 12.8 The Director shall notify the appellant of his decision and reasons for it. The decision will be final.

13. Maintenance of Scheme

13.1 To ensure that the Scheme can continue to operate effectively and efficiently, the Scheme will be maintained as follows:

- (a) Continuous updating of the lists of urinal equipment registered in the Scheme as follows:
 - (i) registered urinal equipment with details such as registration numbers in the Scheme, dates of registration, water flush volume per cycle data, performance data, makes, models and other related information; and
 - (ii) manufacturers, importers or other related parties of the registered urinal equipment with details such as addresses, telephone numbers, e-mail addresses, etc.
- (b) Periodic review of the **Scheme Document, including** testing methodologies, procedures for registration application and compliance monitoring etc.
- (c) Continuous evaluation of the effectiveness of the Scheme and assessment of what changes are necessary.

Testing Guidelines for Urinal Equipment

Condensed Testing Requirements with reference to the ASME A112.19.2:2018 Standard, Appendix D of AS/NZS 3982:1996 Standard and Requirements in relevant Waterworks Regulations

- Note -

This Annex is a guideline to facilitate the participant to grasp the context of water efficiency testing requirements. It makes reference to the some of the chapters of the captioned standard and focuses on the dye test for measurement of minimum water flush volume per cycle of urinal fixture and measurement of total water flush volume per cycle and physical endurance and leakage test for urinal flushing valves. The participant should be able to obtain from the text a good appreciation of the testing requirements. On the other hand, the captioned standard is much more comprehensive and detailed and contains exact definitions. Due to condensed size, this Annex cannot replace the captioned standard nor is there any intention to do so. In case of doubt, the captioned standard should always be consulted.

Section I of this Annex describes the methodology for performance requirement of urinals. The tests for urinal flushing valves are elaborated in Section II.

The Department would like to acknowledge the assistance of the SAI Global Limited, Australia for granting permission to reprint the content of the above-mentioned Appendix under Licence 1108-c064:JH:SS.

Section I - Methodology for Performance Requirement for Urinals

A1. Scope

This section sets out the method for performing dye test and determination of minimum water flush volume per cycle for urinals.

A2. Principle

The tests are to determine the performance requirements for urinals with respect to rim wash, waste removal, and minimum water flush volume per cycle respectively. The minimum water flush volume per cycle is the minimum volume of water per cycle required for fulfilling the performance requirements of dye test as specified in Section 5.4. The water efficiencies of the urinals in normal pressure application (Category 1) will be rated to different grades according to the minimum water flush volume per cycle under a test pressure of 1.75 bar. On the other hand, the water efficiencies of the urinals in low pressure application (Category 2) will be rated to different grades according to the minimum water flush volume per cycle under a test pressure of 0.40 bar.

A3 Testing Apparatus

Please refer to Figure 12 in ASME A112.19.2:2018.

A4 General Instructions

The procedure for standardizing the water supply system for testing flushometer valve urinals shall refer to *Section 8.2.1 in ASME A112.19.2:2018.*

A5 Full Test Report

A full test report for urinals shall combine the test reports as specified in Section I below (i.e. dye test). The following shall also be reported and attached:

- (a) Manufacturer, country of origin, brand name, model name, model number and type (if these are applicable) of urinals.
- (b) Three photos clearly showing the front, side and bottom views of urinal.
- (c) The minimum water flush volume per cycle under a test pressure of 1.75 bar for normal pressure application or the minimum water flush volume per cycle under a test pressure of 0.40 bar for low pressure application.

A6 Dye Test

Please refer to Section 8.5.1 in ASME A112.19.2:2018.

A6.1 Procedure for Dye Test

- (a) *Please refer to Section 8.5.2 in ASME A112.19.2:2018.*

- (b) The test shall be conducted under a test pressure of 1.75 bar for normal pressure application or under a test pressure of 0.40 bar for low pressure application.

A6.2 Test Report

The following shall be reported:

- (a) *Please refer to Section 8.5.3 in ASME A112.19.2:2018.*
- (b) The minimum volume of water per cycle necessary for fulfilling the performance requirement of dye test as specified in Section 5.4. The measuring apparatus shall be calibrated by volume in increments not exceeding 0.1L.

Section II Methodology for Performance Requirement for Urinal Flushing Valves

B1 Scope

This section sets out the method for performing physical endurance and leakage test and total water flush volume per cycle for urinal flushing valves.

B2 Principle

The tests are to determine the performance requirements for urinal flushing valves with respect to physical endurance and leakage as well as total water flush volume per cycle respectively. The total water flush volume per cycle of urinal flushing valves is determined by the total water given out in one complete operation cycle provided that they fulfill all the performance requirements as specified in Section 5.4. The water efficiencies of the urinal flushing valves in normal pressure application will be rated to different grades according to the total water flush volume per cycle under a test pressure of 1.75 bar. The water efficiencies of the urinal flushing valves in low pressure application will be rated to different grades according to the total water flush volume per cycle under a test pressure of 0.40 bar.

B3 Procedure for physical endurance and leakage test

Please refer to the test requirements for urinal flushing valves in conformity with the Waterworks Ordinance and Regulations.

B4 Procedure for total water flush volume per cycle

- (a) *Please refer to the test requirements for urinal flushing valves in conformity with the Waterworks Ordinance and Regulations.*
- (b) Measure the total flush volume per cycle under a test pressure of 0.40 bar for low pressure application.

B5 Full Test Report

The following shall be reported and formed part of the test report.

- (a) Manufacturer, country of origin, brand name, model name, model number and size (if these are applicable) of the urinal flushing valves.
- (b) Three photos clearly showing the front, side and bottom view of urinal flushing valve.
- (c) The total flush volume per cycle under a test pressure of 1.75 bar for normal pressure application or under a test pressure of 0.40 bar for low pressure application.
- (d) A complete test report in conformity with the Waterworks Ordinance and Regulations.

Section III Verification of Smart Demand Operation for Urinal Equipment

C1 Scope

This section sets out the procedure for verifying urinal equipment with smart demand operation.

C2 Principle

If the participants claim that their urinal equipment is operated with a smart demand operation to achieve additional water saving, they are welcomed and encouraged to apply for the merited function of urinal equipment.

C3 Apparatus

- (a) All the smart demand operation of the urinal equipment shall be verified by a testing laboratory or certification body as specified in Section 8.1.
- (b) Test report shall be attached as per information to be submitted in application as specified in Section 9.

C4 Assessment

- (a) On receipt of the application, the Department will verify whether test result of the smart demand operation is valid and can actually achieve additional water saving.
- (b) If the application is accepted, the merit will be shown on the water efficiency label for public information and description of the merited function will be specified in the registration certificate.
- (c) If the application is rejected, a notification letter with reason(s) of rejection will also be given to the participant accordingly.

Water Efficiency Label



Full Version Grade 1 WELS Label



Simplified Version Grade 1 WELS Label



Full Version Grade 2 WELS Label



Simplified Version Grade 2 WELS Label



Full Version Grade 3 WELS Label



Simplified Version Grade 3 WELS Label



Full Version Grade 4 WELS Label



Simplified Version Grade 4 WELS Label

Notes:

1. Dimensions of the full and simplified versions of the water efficiency label are 100mm x 50mm and 40mm x 20mm respectively.
2. Pantone Color: Green (Grade 1): 390C; Brown (Grade 2): 471C; Purple (Grade 3): 2583C; Red (Grade 4): 214C; WSD logo: 293C
3. The water consumption figure shown in the water efficiency label is the water flush volume of the Urinal Equipment as determined in accordance with the Scheme.

Proforma Letter of Application

Our ref.

Tel.

Fax.

Date

Water Supplies Department
47/F, Immigration Tower
7 Gloucester Road, Wanchai
Hong Kong

Dear Sir/Madam,

Application for Registration in the Voluntary Water Efficiency Labelling Scheme on Urinal Equipment

Our company is the (manufacturer / importer / other related parties (please specify)*) of _____ (brand name, model number and/or name of urinal equipment) in Hong Kong. We would like to apply for registration of the urinal equipment in the above Scheme.

We understand fully our obligations as stated in the scheme document of “**Voluntary Water Efficiency Labelling Scheme on Urinal Equipment**” (Scheme Document) and will comply with all relevant requirements, in particular those specified below:

- (a) submit application **for registration by means of an application letter together with “Proforma Letter of Application”**, the information/material required in Section 9.3 of the Scheme document and the test report in accordance with the reporting requirements specified in Annex 1;
- (b) at his/her own costs, produce the **water efficiency label and affix/print the full version water efficiency label** either to the urinal equipment or its packing at a prominent location in accordance with Section 7 **of the Scheme Document**;
- (c) ensure that the registered urinal equipment shall be displayed for sale with the Label(s);
- (d) fully inform other related parties (such as sales agents, retailers, etc.) in the participant’s sale distribution network once the urinal equipment is registered

- under this Scheme and notify them that the Water Supplies Department (Department) may request to enter their premises to carry out the random/ad-hoc inspections as stated in Section 11 of the Scheme document;
- (e) allow random/ad-hoc inspection/**re-inspection** to be conducted by Inspecting Officers authorized by the Director of Water Supplies on the registered urinal equipment at his/her premises **such as the warehouse and/or its retailing spots;**
 - (f) allow the tested and performance data of the registered urinal equipment to be uploaded to the Department's website for public information;
 - (g) **submit a reference sample of the registered urinal equipment for testing at his/her own cost upon the request of the Department;**
 - (h) conduct re-test(s) at his/her own costs at a recognized laboratory **complying with the requirements in Section 8 of the scheme document** if non-compliance is found on the registered urinal equipment. The result of re-test(s) shall reach the Department within the time specified by the Department;
 - (i) **provide additional supporting information/ material upon request of the Department within the time prescribed. Failure to comply may render rejection of the application;**
 - (j) inform the Department of any change in accordance with Section 9.10 (j) of the Scheme Document; and
 - (k) remove within three months all Labels from the urinal equipment, its packing if it has been de-registered; **and**
 - (l) **return the corresponding registration certificate to the Department within one month after de-registration under the Scheme.**

The detailed information of the urinal equipment which we apply for registration is shown in the attached documents (see Annex 4 for the list of information to be submitted) for your processing.

Yours faithfully,

(Manufacturer/Importer/Agent's Name and Company Chop)

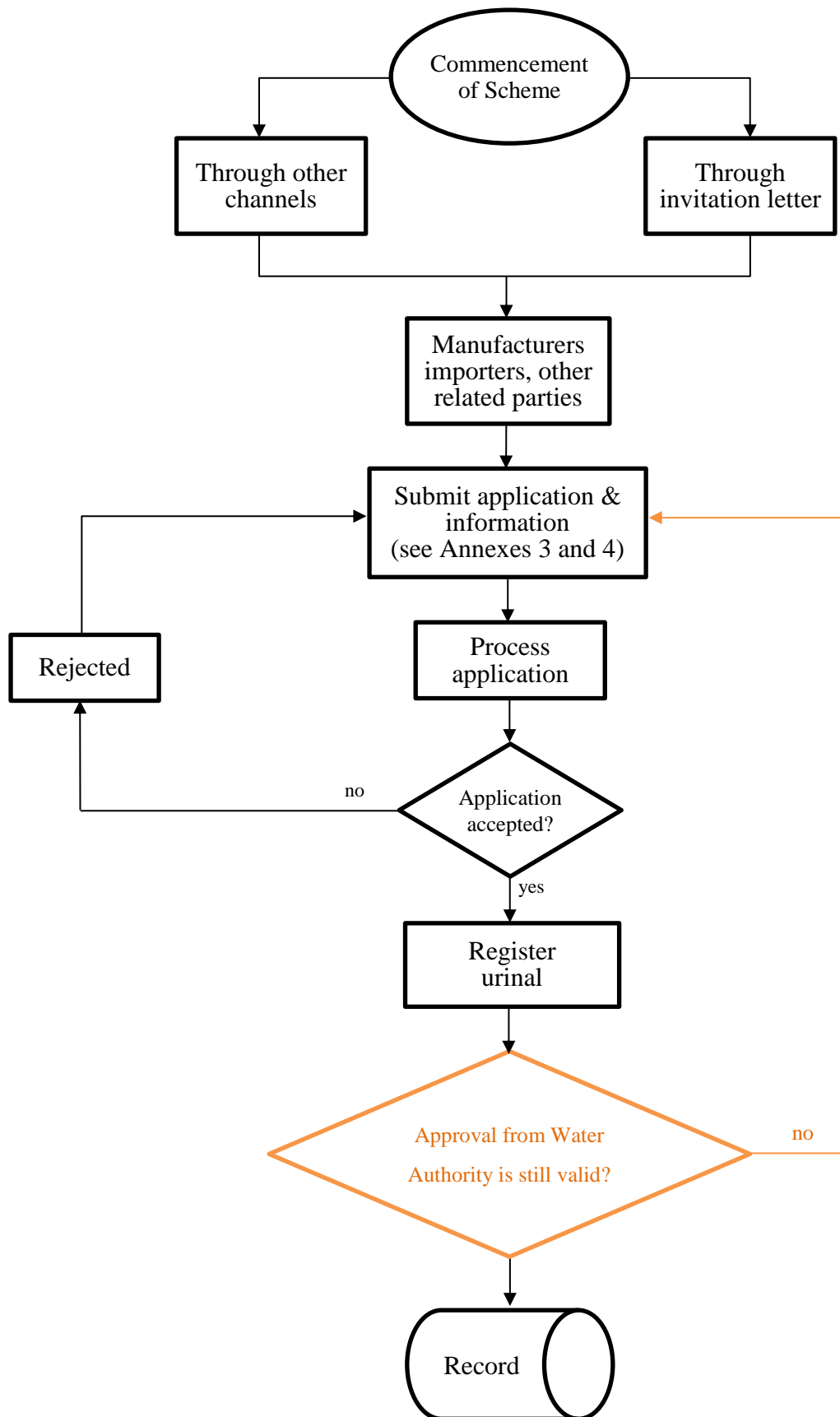
** delete as appropriate*

**Information/Material to be Submitted
to the Water Supplies Department**

1. Information of the company, i.e. name, address, telephone number, fax number, e-mail address, website address, and contact person, and sale distribution network (names and addresses of the distributor(s)), etc.;
2. Information of the urinal equipment being applied for registration in the Scheme, i.e. brand name, model no. and/or name, urinal equipment category (or categories), catalogue (if available), country/region of origin and three photos clearly showing the front, side and bottom views of the urinal equipment.
3. Parties which will be responsible for making and affixing the water efficiency label (Label);
4. Proposed commencement date to affix the Label(s) to urinal equipment (Year _____, Month _____).
5. Documentary proof of the approval for the urinal equipment issued by the Water Authority;
6. Documentary proof that the design (if any) and production system for the urinal equipment is operating according to a recognized international quality system (such as ISO 9001). The submission of product drawings extracted from the product manual or design manual, and international quality system certificate on the manufacturer can be considered as documentary proof of recognition of the quality system. Failure to the renewal of the recognized international quality system may render the model registration null and void;
7. Detailed test report in accordance with the reporting requirements specified in Annex 1. The test report shall be issued by a recognized laboratory complying with the requirements in Section 8. The required information requested in Sections A5 and A6.2 for urinals and Section B5 for urinal flushing valves and Section C3 for merited function (if any) of Annex 1 of the scheme document have to be provided in a single section of the test report;
8. Documentary proof that the testing laboratory appointed by the participant has satisfied the requirement of Section 8.2, 8.3 or 8.4. The submission of certificate of accreditation, self-declaration statement that the operation of the testing laboratory meets the requirements of ISO/IEC 17025 can be considered as documentary proof.
9. For the case of urinal equipment of same design but with the variation in colour and finishing, the applicant should consult with the testing laboratory and confirm in writing that such variation will not affect the water flush volume performance

- and other performance requirements stipulated in Section 5.3 to Section 5.5; and
10. A reference sample for each urinal equipment successfully registered under the Scheme upon the request of the Department.

Note: Company's chop should be stamped on the Proforma Letter of Application and all the document front covers/pages provided by hand, or through post, facsimile or electronic mail to the Water Supplies Department. All photocopy test reports submitted Department shall be certified as true copy issued by the testing laboratory appointed by the participant. Upon the request of the Department, the participant is required to provide the original copy of the test reports.

Flow Chart for Registration

Notes for Installation

1. Installation of water filters before the urinal flushing valves is highly recommended. Without the filters, the flushing valves are liable to leak or flow reduction. The installed filters need frequent inspection and cleaning in order to maintain adequate flushing supply.
2. The gradient of a branch discharge pipe for single urinal is recommended to be at least 1 in 55. All urinal branches should be as short as possible and should not exceed 3 m to minimize the risk of blockage.
3. The common problems in the flushing water supply system are usually water quality, flow reduction and seepage / leakage of water. The main causes of these problems are usually due to corroded / blocked pipes and / or uncleaned storage cisterns, choked pipes and leaking pipe or pipe burst respectively. In this respect, the management office or agent is recommended to :-
 - (a) Thoroughly clean every flush water storage cistern and scrub with a solution of chloride of lime or bleaching powder regularly;
 - (b) Conduct regular checks to the plumbing system to ensure that it conforms to the approval conditions;
 - (c) Rectify any corroded / blocked pipes and irregularities in both supply and discharge of urinals immediately.
4. No system can be guarantee forever but its service life can be greatly improved by proper maintenance and identify initial signs of defects before they have a chance of further propagation.
5. Different categories of urinal equipment should be used in locations matching the stated pressure on the Label to achieve the maximum water saving.