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Reference (1) in WSD 3318/50 Pt. 10 T/J(1)

19 November 2025

Distribution: To all Licensed Plumbers and Authorized Persons

Dear Sirs,

WSD Circular Letter No. 13/2025

**Self-Certification Scheme for Plumbing Installations
in Modular Integrated Construction (MiC) Units**

To strive for higher efficiency in construction, the Water Supplies Department (WSD) has been continuously reviewing the procedures of different types of applications for water supply (AWS). The Self-Certification Scheme for Plumbing Installations in MiC Units (“the Scheme”) which introduces self-certification by the submitting party for quality production of MiC modules is hereby promulgated.

2. The Scheme streamlines the prevailing procedures for regulatory control of plumbing works constructed by MiC method (*Appendix A*) through permitting plumbing contractors and MiC providers to self-certify the compliance of plumbing works, and also advocates the adoption of stainless steel plumbing materials with reference to the mature development of such usage in Chinese Mainland and the favourable material characteristics of stainless steel in safeguarding drinking water quality. Details of the Scheme are provided in the ensuing paragraphs.

Applicability

3. As an alternative to the prevailing requirements and procedures, the Scheme is applicable to AWS for plumbing installations in MiC units of new building projects complying with all the following conditions:

- (i) MiC factory/provider shall be on list of Building Technology Research Institute's MiC Manufacturer Accreditation Scheme¹ at the time of application;
- (ii) Stainless steel plumbing materials² shall be adopted;
- (iii) Plumbing contractors engaged by the project office/developer shall be registered as Registered Plumbing Contractor (Provisional) (RPC(P))³ and have engaged in the plumbing aspect of at least one MiC project (other than the project applying for the Scheme) or Multi-trade Integrated Mechanical, Electrical & Plumbing (MiMEP) project within five years of application; and
- (iv) Applications shall be submitted by responsible licensed plumbers (RLP) who are Authorized Representatives (AR) appointed by RPC(P) under the Voluntary Scheme in Enhancing Plumbing Works Control⁴.

Workflow

4. The following table summarizes the key procedures of the Scheme and the corresponding workflow for implementation:

	Key procedure	Workflow
i	Project office/developer applies for joining the Scheme	RLP submits "Notification Form for Joining the Self-Certification Scheme for Plumbing Installations in MiC Units" (<i>Appendix B</i>) together with plumbing proposals (Form WWO 542) as per prevailing procedures ⁵ , except that submission of supervision plan, shop drawings, production and inspection schedules for off-site plumbing works in MiC modules are not mandatory in the plumbing proposals.
ii	RLP and MiC factory/provider certifies mock-up of MiC module(s) before mass production	<ul style="list-style-type: none"> • RLP submits Form WWO 46 Parts I & II and Form WWO 1149 (or done earlier along with Form WWO 542) to seek permission for commencement of plumbing works as per prevailing procedures. • RPC(P) inspects and arranges mock-up of selected

¹ Details can be found at: <https://mic.btri.hk/reg.php>.

² For fresh water inside services using (i) stainless steel and/or ductile iron pipes and fittings for upfeed and downfeed; and (ii) stainless steel pipes and fittings for the rest.

³ As specified in Addendum No. 1 to WSD Circular Letter No. 3/2022 – Voluntary Scheme in Enhancing Plumbing Works Control (Stage 2).

⁴ For cases where there is a change of the RLP for the project during the course of construction, the substitute RLP shall be assumed all responsibilities of the former RLP as required under the Scheme. The project office/developer shall timely inform the WA of such change.

⁵ For the avoidance of doubt, the extent of plumbing installations to be covered up at the MiC factory shall be indicated in the plumbing proposal.

	Key procedure	Workflow
		<p>representable types of MiC module(s) with plumbing installations delivered to Hong Kong upon receipt of Form WWO 46 Part III issued by the Water Authority (WA).</p> <ul style="list-style-type: none"> • RPC(P) submits the MiC Mock-up Certificates signed by the RLP and the MiC Factory/Provider (<i>Appendices C1 and C2 respectively</i>) to the WA before the MiC factory/provider proceeds to mass production of the MiC unit(s). • RLP certifies in the MiC Mock-up Certificate (<i>Appendix C1</i>) that the plumbing installations in the MiC mock-up have been carried out in accordance with the approved plumbing proposals (including VPLDs) and in compliance with the Waterworks Ordinance (WWO)/Waterworks Regulations (WWR) and the WA's requirements. • MiC factory/provider undertakes the consistency of MiC unit production in the MiC Mock-up Certificate (<i>Appendix C2</i>) by confirming the plumbing works inside the MiC units to be manufactured are replicas of the mock-up. • RPC(P) notifies the WA the target date of inspection of the mock-up which shall not be less than 4 working days after the submission of the MiC Mock-up Certificates. • RPC(P) covers up the concealed pipework and proceeds to mass production of the MiC unit(s) after the target date unless the WA requests for conducting on-site inspection.
iii	For monitoring compliance, the WA selects cases on a risk-based approach for site inspection before approving supply of water	<ul style="list-style-type: none"> • RLP arranges the WA's inspection of the MiC mock-up upon the WA's request. • MiC factory/provider proceeds to mass production of the MiC unit(s) if no non-compliance (NC) is observed during the inspection or RLP carries out rectification to NC(s) identified accordingly.

5. Subsequent stages of construction, inspection and commissioning of plumbing systems shall follow the prevailing procedures of AWS for on-site in-situ plumbing works.

Effective Date

6. The above arrangement shall be applicable to AWS with the first submission of Form WWO 542 after the issuance of this Circular Letter.

Enquiry

7. Should you have any enquiry, please contact our Engineer/Technical Support(4) at telephone no. 2829 5657.

List of Appendices

- Appendix A – Streamlined Requirements for Plumbing Works in MiC Projects
- Appendix B – Notification Form for Joining the Scheme
- Appendix C1 – MiC Mock-up Certificate (by RLP)
- Appendix C2 – MiC Mock-up Certificate (by MiC Factory/Provider)

Yours faithfully,

(Original Signed)

(YIP Ka Chun, Gary)
for Water Authority

Encl.
(with Chinese translation)

c.c.

Housing Department (Attn: SM/QM)

Buildings Department

Architectural Services Department

Fire Services Department

The Hong Kong Housing Society

The Hong Kong Institute of Architects

The Hong Kong Institution of Engineers

The Hong Kong Institute of Surveyors

The Chartered Institute of Plumbing and Heating Engineering – Hong Kong Branch

Hong Kong Plumbing and Sanitary Ware Trade Association Ltd.

Hong Kong Licensed Plumbing Professionals Association Ltd.

Hong Kong Water Works Professionals Association Ltd.

The Hong Kong Institution of Plumbing and Drainage Ltd.

Plumbing Technology Student Association

The Association of Registered Fire Service Installation Contractors of Hong Kong Limited

Real Estate Developers Association of Hong Kong

The Hong Kong Construction Association, Ltd.

Hong Kong Registered Contractors Association Company Ltd.

The Hong Kong Federation of Electrical & Mechanical Contractors Ltd.

Contractor's Authorised Signatory Association Ltd.

Registered Minor Works Contractor Signatory Association Ltd.

Hong Kong General Building Contractors Association Ltd.

Hong Kong Institute of Vocational Education

Hong Kong Institute of Construction, Construction Industry Council

Hong Kong Licensed Plumbers Union Limited

Hong Kong Metropolitan University Li Ka Shing School of Professional and Continuing Education

The Association of Electrical and Mechanical Engineering (Hong Kong) Ltd.

Pipeman Engineering (International) Limited

Hong Kong Institute of Water and Sanitation Safety

Hong Kong Plumbing General Union

WSD 3318/15/81

Appendix A - Streamlined Requirements for Plumbing Works in MiC Projects

(Extracted from "Guide to Application of Water Supply")

January 2025 Version

relevant construction site within 6 months after WSD's completion of the early connection works, WSD will consider that the early connection applied by the developer or AP is no longer required and WSD will abandon the connection point to avoid risks of unlawful taking of water through the connection. WSD will notify the developer or AP before taking this action. Extension of the 6 months period may be allowed with sufficient justification from the developer or AP.

(From WSD Circular Letter No. 5/2018)

3.12. Plumbing Proposal for Projects Adopting Modular Integrated Construction (MiC)¹¹ Method

The requirements stipulated in paragraphs 3.12, 4.1.3, 4.2A, 4.3.2A and 4.3.3A are only applicable to MiC projects with plumbing installations to be constructed off-site in a MiC factory. For MiC projects in which all plumbing installations are constructed in-situ at the building site in Hong Kong, the procedures and requirements for applications for water supply will be the same as normal new building projects.

For MiC projects with plumbing installations to be constructed off-site in a MiC factory, the Applicant for water supply shall provide the following additional information in the plumbing proposal.

- i. **A section shall be included in the plumbing proposal to be submitted with Form WWO 542 clearly specifying the part of the plumbing installations (plumbing works) to be constructed off-site in a MiC factory.** The extent of the plumbing installations to be constructed in the MiC factory should also be clearly indicated in the Vertical Plumbing Line Diagram, and other documents of the plumbing proposal as appropriate.
- ii. **A supervision plan of the construction of the plumbing installations at the MiC factory shall be submitted before the commencement of the works for agreement by the Water Authority (WA).** The supervision plan shall specify the name, the qualification proof, the supervision frequency and the supervision period of the supervision personnel to ensure that there will be adequate supervision for

¹¹ Modular Integrated Construction (MiC) refers to a construction whereby free-standing integrated modules (completed with finishes, fixtures and fittings) are manufactured in a MiC factory and then transported to site for installation for the new building.

optional

the plumbing works in the MiC factory. It shall also contain the name, the address, the responsible contact person and the contact means of the MiC factory. The details of the supervision plan shall be determined based on the extent and complexity of the plumbing works. In general, the responsible Licensed Plumber (LP) who submit the Form WWO 46 for the plumbing works to be constructed in the MiC factory shall visit the MiC factory at least once a week to oversee and inspect the plumbing works, and continuous supervision of the plumbing works in the MiC factory shall be provided by a Registered Plumbing Worker (RPW)¹².

(From WSD Circular Letter No. 2/2019)

3.13. Electronic Submission for Applications for Water Supplies in New Village Type Houses using Pre-approved Standard Plumbing Design Drawings

3.13.1. Pre-approved Standard Plumbing Design Drawings (“Standard Plumbing Designs”)

Some LP associations/institutions have developed a number of commonly used plumbing designs for village type houses including standard VPLD and standard meter box arrangements, and have obtained pre-approval from the WA confirming the compliance of these plumbing designs with statutory and WA requirements. A list of the standard plumbing designs for village type houses is given in **Appendix 29** and drawings of the standard designs could be found at the official websites of relevant LP associations/institutions as given in **Appendix 30**.

(From WSD Circular Letter No. 4/2021)

3.13.2. Electronic Submission

Applicants and LPs who adopt standard plumbing designs as their plumbing proposal may submit AWS by emails using the “**Plumbing Proposal Form for e-submission**” given in **Appendix 31** in lieu of submission by post or in person. Submissions of AWS for village type houses by emails is only allowed for plumbing proposals using

¹² As defined in Part 1 of the Schedule of the Waterworks Ordinance.

To facilitate preparation of the submissions, WSD has provided a function in its webpage¹⁹ for the applicants to search and select the pipes and fittings with valid GA and directly convert to the required format for Form WWO 1149. The prepared Form WWO 1149 can be downloaded for printing and signing and subsequent submission to the WA.

If pipes and fittings with low metal leaching rate²⁰ other than those under Voluntary General Acceptance Star (“GA*”) Scheme are adopted in the plumbing works, the responsible LP is required to provide such details as well as the test report(s)/certificate(s) showing their compliance in the submission of Form WWO 1149 to the WA.

4.1.2. Not Used

4.1.3. Submission of Additional Information for Projects Adopting MiC Method

If any part of the plumbing installations constructed by MiC method will be covered up in the MiC factory, such that the plumbing installations will not be exposable for inspection and non-destructive tests at the building site upon delivery of the MiC modules to the building site in Hong Kong, the following additional details shall be submitted to the WA **for information** before the commencement of plumbing works in the MiC factory:

- optional iii. **Shop drawings** showing details of the plumbing installations in the MiC modules that will be covered up in the MiC factory.
- optional iv. **Production schedule** of the MiC modules in particular the production schedule of the plumbing works in the MiC modules and the corresponding inspection schedule for the plumbing works to be covered up in the MiC modules at the MiC factory ~~for the WA to arrange for interim inspection of the plumbing installations by his Inspection Agent before the concealed parts are covered up in the MiC factory.~~

(From WSD Circular Letter No. 2/2019)

¹⁹ <http://ga.wsd.gov.hk/en>

²⁰ Low metal leaching rate metallic plumbing products shall possess supporting document/test report to prove compliance with an Australian/New Zealand Standard AS/NZS 4020. For details please refer to https://www.wsd.gov.hk/filemanager/common/licensed_plumbers/ga_star_scheme_e.pdf

4.2.4. Collection and Installation of Security Seals

When collecting water meters, for installation in new plumbing installations LPs will be required to collect security seal at the Regional Stores for each water meter of size 40mm or above as shown in the Collection Note.

Upon installation of security seals, LPs should take record photos of each seal installed and submit them together with the Meter Installation Table (**Appendix 35**) to WSD indicating the serial number of the seal installed for each meter for checking.

(From WSD Circular Letter No. 9/2019)

4.2A. Supervision of Plumbing Works in Projects Adopting MiC Method

The responsible LP shall ensure that adequate supervision is provided for the plumbing works in the MiC factory **in accordance with the supervision plan** ~~agreed by the WSD mentioned in paragraph 3.12 above.~~ Proper supervision records shall be kept including the date and time of inspection **and supervision of the plumbing works conducted by LP and RPW.** ~~The supervision records shall be submitted to the WA for inspection when required and the WA will assign agent to carry out audit checks of the supervision records at the MiC factory if considered necessary.~~ A sample supervision record is at **Appendix 26** for reference. **The responsible LP will be required to declare that plumbing works carried out in the MiC factory have been supervised according to the supervision plan.**

(From WSD Circular Letter No. 2/2019)

4.3. Inspections

4.3.1. Submission of Part IV of Form WWO46 Requesting for Inspection of Works

Water supply will only be effected after the inside service / fire service has been checked in order and the necessary commissioning requirements such as satisfactory water sampling test results are fulfilled. After completion of plumbing works, the licensed plumber concerned is required to report completion to the Water Authority

treated. This confirmation should be submitted to the WA together with the Form WWO 46 Part IV for final inspection.

4.3.1.3. Submissions of Test Records of Lead Checks for Soldering Materials in Pipe-fitting with Integral Solder Ring

Following the lead check carried out in accordance with Section. 4.1.4, the LP is required to obtain relevant test records from plumbing contractor where necessary and submit the test records of lead checks for each batch of pipe-fittings with integral soldering materials (including such pipe-fittings used in prefabrication works) to Water Authority together with Form WWO 46 Part IV.

(From WSD Circular Letter No. 4/2020)

4.3.2. Interim Inspections

The responsible LP shall report completion of underground/concealed plumbing works by Form WWO 46 Part IV for inspection by the WA before the works are covered up. WA will inform the LP about the arrangement of interim inspection to be carried out.

During interim inspections, the WA will use checklists to record findings. The LP or his authorised representative attending the inspection shall sign the checklist and he may make a copy of the checklist for retention if he so wishes.

During an interim inspection of plumbing works of any new building project, the WA may, apart from inspecting the part of the plumbing works reported as completed, also inspect other parts of the plumbing works not reported as completed but found on site, for the purpose of early detection of defects. Defects found in other parts of the plumbing works not reported as completed are not subject to the Penalty and Demerit Point System (PDPS) (Section 4.3.5 refers).

4.3.2A. Interim Inspection of Plumbing Works in Projects Adopting MiC Method

~~For plumbing installations to be covered up in the MiC factory, the WA will arrange an Inspection Agent to carry out interim inspection in the MiC factory before the concealed parts of the plumbing installation are covered up to ensure that they comply in all~~

~~respects with the provisions of the Waterworks Ordinance (WWO) / Waterworks Regulations (WWR) and all prevailing requirements of the WA²⁵. The Inspection Agent will conduct inspections and carry out non-destructive tests for the plumbing installations. The responsible LP or his/her representative shall be present in all interim inspections such that any noncompliance identified during the inspections could be immediately communicated to the LP or his/her representative for rectification. If the plumbing installations to be covered up are in order, the Inspection Agent will also advise the LP or his/her representative on the spot.~~

~~The responsible LP shall coordinate and liaise with the Inspection Agent of the WA regarding the exact inspection dates of the plumbing installations to be covered up at the MiC factory. The responsible LP is not required to submit Form WWO 46 Part IV to WA for arranging interim inspection. If the inspection frequency so warrants, the responsible LP may be required to arrange a working place in the MiC factory for the Inspection Agent to field its resident staff for conducting interim inspection.~~

(From WSD Circular Letter No. 2/2019)

4.3.3. Final Inspections

Given that WSD's final inspections shall include but not limited to carrying out spot-check of the pipes and fittings at the premises and taking water samples at random locations of the Approved Plumbing Works, attention of the licensed plumber is drawn to the licensed plumber's duty to construct of the Approved Plumbing Works covered by the submitted Form WWO 46 in compliance with the approved plumbing proposals and the Waterworks Ordinance and Regulations.

Furthermore, neither the approval of the plumbing proposals nor the granting of the connection to the main and the installation of the part of the fire service or inside service on land held by the Government shall be construed as a ratification of any contravention of any of the provisions of the Waterworks Ordinance or the Waterworks Regulations.

To facilitate WA's inspection of an inside service or a fire service, the LP shall provide a sample board on site for new building projects where at least one building has more than 3 storeys. The sample board shall display samples of taps, shower mixers, valves,

²⁵ Inspection will cover including but not limited to the aspects of material and size of pipes and fittings as well as their jointing method.

and pipes listed in the Form WWO 1149 as well as solder materials if used. Relevant certificates/testing reports/catalogues as appropriate are also required to be provided together with the sample board. The LP shall upon request provide for the WA's inspection relevant supporting documents for the pipes and fittings as listed in the Form WWO 1149 (such as delivery notes, purchase order, product certificate or confirmation from relevant suppliers/distributors stating the place of origin of the pipes, fittings and solder materials).

During final inspection, the WA will use checklists to record findings. The LP or his authorised representative attending the inspection shall sign the checklist and he may make a copy of the checklist for retention if he so wishes.

For the final inspection of plumbing works of all new building projects except those relatively simple ones involving just one detached village type house, the LP being the person responsible for the completed plumbing works shall attend the final inspection such that defects found by the WA can be brought to the immediate attention of the LP. After the identified defects have been rectified, the LP should report to WA in writing the completion of rectification. WA will arrange further inspection.

4.3.3A. Final Inspection and Commissioning Requirements of Plumbing Works in Projects Adopting MiC Method

Applicant for water supply of a MiC project shall, as for all other plumbing projects, be required to submit Form WWO 46 Part IV upon completion of the plumbing works at the building site in Hong Kong. Upon receipt of Form WWO 46 Part IV, the WA will conduct final inspection of the completed plumbing installations at the building site. Approval of plumbing works of the MiC project will be granted by the WA subject to:

retain

- i. satisfactory results of the final inspection stated in Section 4.3.3. above by the WA at the building site;
- ii. ~~satisfactory results of the interim inspections carried out by the Inspection Agent of the WA on the concealed parts of the plumbing works before they are covered up in the MiC factory as stated in Part C above (in which case no opening up of concealed plumbing works for inspection will be required at the building site); and~~
- iii. the commissioning requirements specified in Section 4.4 being complied with.

retain

(From WSD Circular Letter No. 2/2019)

Appendix B – Notification Form for Joining the Scheme



The Water Authority
43/F Immigration Tower, 7 Gloucester Road, Hong Kong.
Tel : 2824 5000 Fax : 2802 7333 email : wsdinfo@wsd.gov.hk

NOTIFICATION FORM FOR JOINING THE SELF-CERTIFICATION SCHEME FOR PLUMBING INSTALLATIONS IN MODULAR INTEGRATED CONSTRUCTION UNITS

(To be submitted together with Form WWO 542)

Part A (To be completed by the applicant for new water supply)

To the Water Authority,

I hereby notify that I will join the Self-Certification Scheme for Plumbing Installations in Modular Integrated
Construction Units for plumbing works for the premises at

_____.

Details of the plumbing works are as follows:-

Submitted drawing no(s).: _____



The Water Authority
43/F Immigration Tower, 7 Gloucester Road, Hong Kong.
Tel : 2824 5000 Fax : 2802 7333 email : wsdinfo@wsd.gov.hk

I shall appoint _____ (*name of the Registered Plumbing Contractor (Provisional)*) to undertake the above plumbing works.

I shall request the RPC (Provisional) to provide a site supervision team and submit the associated site supervision plan before commencement of the proposed plumbing works.

Signature: _____ Name : _____

(applicant for new water supply)

Telephone No. : _____ Fax No. : _____

Correspondence Address : _____

Email Address : _____

_____ Date : _____

Company's chop (if applicable)

* Delete where inappropriate



Part B (To be completed by the registered plumbing contractor (provisional) and the responsible licensed plumber)

To the Water Authority,

We are appointed by the applicant for new water supply (Name) _____
to undertake the plumbing works as described in Part A above.

We will provide the site supervision team to provide continuous supervision for the plumbing works.
The site supervision plan for the plumbing works is attached.

We confirm the responsible licensed plumber signing the Form WWO 46 is our Authorized Representative who leads the site supervision team.

Registered Plumbing Contractor (RPC) (Provisional)

Registration No. : _____
Name of RPC (Provisional) : _____
Name of Authorized Representative : _____
Tel No. : _____ E-mail : _____
Fax No. : _____ Address : _____

Signature of RPC (Provisional) @ : _____
Date : _____
@ to be signed by the Authorized Representative who acts on behalf of RPC (Provisional)

To the Water Authority,

I confirm that I am the Authorized Representative who leads the site supervision team of the above
RPC (Provisional).

Responsible Licensed Plumber who signs the Form WWO46

Plumber's Licence No. : _____
Name : _____
Signature : _____
Date : _____

**Modular Integrated Construction (MiC) Mock-up Certificate
by Responsible Licensed Plumber (RLP)**

Address: _____

To the Water Authority,

I refer to the mock-up of selected representable types of MiC module(s) with plumbing installations arranged by *myself/my representative (*name in full*) _____ for the captioned premise address on (*date(s)*) _____.

I certify that the completed plumbing installations in the MiC module mock-up described above have been carried out in accordance with the approved plumbing proposals (including VPLD), drawings and material schedule (Form WWO 1149) which comply with all respects under the provisions of the Waterworks Ordinance (Cap. 102), the Waterworks Regulations (Cap. 102A), the requirements of the Water Authority and the applicable requirements set out in the Technical Requirements for Plumbing Works in Buildings, the Water Supplies Department Circular Letters to Licensed Plumbers and Authorized Persons and the Guide to Application for Water Supply issued by the Water Authority, *lead-free solders have been used for making all solder joints (if copper pipes are used) / soldering has not been adopted, and that inspection(s) and acceptance test(s) conducted are of satisfactory results.

Signature of RLP

Name in full

Plumber's Licence No.

*Email / Correspondence Address

Date: _____

* Delete where inappropriate

Appendix C2 – MiC Mock-up Certificate (by MiC Factory/Provider)

Page 1 of 1

Modular Integrated Construction (MiC) Mock-up Certificate by MiC Factory/Provider[^]

Address: _____

To the Water Authority,

I refer to the mock-up of selected representable types of MiC module(s) with plumbing installations arranged by *(name of the Registered Plumbing Contractor (Provisional))* _____ for the captioned premise address on *(date(s))* _____.

I undertake the consistency of MiC unit production by confirming the plumbing works inside the MiC unit(s) to be manufactured for the captioned premise address is/are replica(s) of the mock-up described above.

Signature of representative

Company name

Name in full

*Email / Correspondence address

Date: _____

Company's chop (if applicable)

* Delete where inappropriate

[^] For cases where the MiC Factory/Provider is not directly engaged by the project officer/developer for MiC unit production, this certificate may be signed and issued by the Registered Plumbing Contractor (Provisional) who oversees the manufacturing process.