



水務署

Water Supplies Department

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Reference

(10) in WSD 3318/50 Pt.6

26 May 2017

Distribution: To all Licensed Plumbers and Authorised Persons

Dear Sirs,

### **WSD Circular Letter No. 5/2017 Online Re-plumbing Works**

Aging plumbing works require refurbishment and replacement. The most favourable method for carrying out these re-plumbing works is to install a new plumbing installation in the vicinity of the existing plumbing installation before the existing plumbing installation is dismantled. Due to limited space for accommodating the new plumbing installation in some cases, the re-plumbing works are carried out along the existing alignment by directly replacing the existing plumbing installation with the new plumbing installation (i.e. online re-plumbing method).

The Water Supplies Department (“WSD”) has reviewed the existing workflow of the online re-plumbing works and formulated enhanced workflow containing measures in regard to the material control and supervision of works under online re-plumbing works. The WSD has consulted the Technical Committee on Plumbing on implementation of these measures. This Circular Letter promulgates the enhanced workflow which will apply to online re-plumbing works in occupied buildings with tenders invited (if applicable), or Form WWO 542 submitted, on or after 30 June 2017 (whichever is earlier). In this connection, the applicants shall indicate in their plumbing proposal the use of online replumbing method and shall provide documentation proof of tenders invited, if applicable, when they submit

Form WWO 542 for the works.

At the same time, for re-plumbing works being carried out before the implementation of the enhanced workflow, the Water Authority (“WA”) will continue to initiate random inspection to the sites of these re-plumbing works with particular focus on buildings with residential units to ensure lead-free solders are being used. On the other hand, the licensed plumber undertaking the online re-plumbing works (“**responsible LP**”) before the implementation of the enhanced workflow shall notify the residents not to use tap water directly for drinking and cooking purposes during the construction period of the online re-plumbing works.

## **Enhanced Workflow for Online Re-plumbing Works**

### *(1) Control on jointing methods and fittings*

According to the Handbook on Plumbing Installation for Buildings, the applicants shall specify the details of jointing method(s) when they submit their applications for water supply via Form WWO 542. Due to the nature of online re-plumbing works, the applicants are encouraged to follow the recommendation of the Good Practice Guide on Plumbing Works<sup>1</sup> to adopt jointing methods free from the risk of misuse of leaded solder joints, e.g. use of mechanical joints or brazing for jointing copper pipes or the use of fittings with integral solder ring for this type of re-plumbing works. If soldering is to be adopted, the applicants shall follow the additional requirement provided in item (4) below.

To effectively reduce the leaching of heavy metals into water when water is in contact with newly installed fittings, the building contractors/LPs shall carry out pretreatment of fittings before installation using the pretreatment protocol as set out in **Appendix I** or shall adopt fittings with low initial leaching rate<sup>2</sup>. In

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<sup>1</sup> The Good Practice Guide on Plumbing Works could be accessed through :

[http://www.wsd.gov.hk/filemanager/en/content\\_1349/Good\\_Practice\\_Guide\\_on\\_Plumbing\\_Works-e.pdf](http://www.wsd.gov.hk/filemanager/en/content_1349/Good_Practice_Guide_on_Plumbing_Works-e.pdf)

<sup>2</sup> Low initial leaching rate fittings are fittings tested by “Extraction of Metal” tests stipulated in AS/NZS 4020:2005. The maximum allowable concentrations of the metals (Lead, Nickel, Chromium and Cadmium) shall not exceed the limits

this connection, if fittings with low initial leaching rate are adopted in the re-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 Annex to Form WWO46 to the WA. If pretreatment of fittings is adopted, the responsible LP is required to submit an confirmation to the WA using the form in **Appendix II** that the new fittings, where applicable, have been pre-treated. This confirmation should be submitted to the WA together with the Form WWO 46 Part IV.

*(2) Temporary water supply arrangement*

Under the enhanced workflow, temporary water supply arrangement for drinking and cooking purposes shall be put in place during construction stage of these online re-plumbing works until approval of the whole re-plumbing works by the WA. A publicly accessible clean water source shall be provided. It can be in the form of metered standpipe, provision of water filters or distribution of bottled water, etc. The applicants are required to submit a proposal on temporary water supply arrangement for drinking and cooking purposes when they submit their Form WWO 542. Apart from detailing the arrangement on supplying water for drinking and cooking purposes during the construction stage, the proposal shall also explain the arrangement on notifying/alerting the affected consumers not to use tap water for drinking and cooking purposes until subsequent notification of the approval of the whole re-plumbing works by the WA.

*(3) Submission to WA for temporary resumption of water supply for purposes other than drinking and cooking*

Water supply will be temporarily suspended during these online re-plumbing works and temporarily resumed after completion of the section of works for purposes other than drinking and cooking. Under the enhanced workflow, for any application for the water supply to be temporarily resumed after completion of the section of works, the responsible LP or his representative is required to submit the form in **Appendix III** together with relevant site photos including specific photos showing the relevant pipes or fittings concerned in the completed section of works

(“**Submission**”) to the WA via email/WhatsApp message to the responsible Regional office of WSD before 11:30am (for section of works completed in the morning session) or 4:30pm (for section of works completed in the afternoon session). Details of the email addresses/WhatsApp Nos. of our Regional offices are set out below:

<b>Regional Office</b>	<b>Email Address/WhatsApp Nos.</b>
Hong Kong & Island Region (except Lantau)	wsd_hk_cs@wsd.gov.hk/5200 0819
Hong Kong & Island Region (Lantau)	wsd_lantau_cs@wsd.gov.hk/5200 0820
Kowloon Region	wsd_k_cs@wsd.gov.hk/5200 0821
New Territories East Region	wsd_nte_cs@wsd.gov.hk/5200 0822
New Territories West Region	wsd_ntw_cs@wsd.gov.hk/5200 0823

Unless the responsible LP or his representative receives a notification from the WA not to resume water supply via email/WhatsApp message before 12:30pm (for section of works completed in the morning session) or 5:30pm (for section of works completed in the afternoon session), water supply can be temporarily resumed on the same day after sending the Submission for the completed section of works to the WA. Despite the temporary resumption of water supply for the completed section of works, the responsible LP will still be responsible for the satisfactory completion of the whole re-plumbing works and shall apply for inspection and approval of the whole re-plumbing works upon its full completion.

*(4) Additional submissions for use of soldering*

For each section of completed works, the responsible LP or his representative shall conduct non-destructive test of lead content at one newly completed solder joint and include the photo record(s) of such test(s) in the submission to WA for temporary resumption of water supply for the concerned completed section of works using the form in **Appendix III**. The responsible LP shall also keep record of the result of the non-destructive test conducted for inspection by the WA upon request until issuance of WWO 46 Part V for the works.

This requirement does not apply to the use of fittings with integral solder ring in these online re-plumbing works.

### **Control Measures taken by the WA on Re-plumbing works**

For online re-plumbing works required to follow the enhanced workflow, the WA will initiate random inspection of these online re-plumbing works during their construction. The responsible LP shall obtain necessary consent for entry to the site before commencement of the re-plumbing works to facilitate the WA to carry out such random inspection. During the random inspection, if the WA finds that the applicants fail to implement the temporary water supply arrangement and/or the responsible LPs fail to conduct the necessary non-destructive test for use of soldering, the applicants would have in fact failed to comply with the approval conditions for the Approved Plumbing Works and the WA will consider to withdraw the permission for proceeding with the Approved Plumbing Works given under WWO 46 Part III until necessary rectification works have been carried out.

The responsible LPs shall also take sufficient relevant site photos (showing the records of pre-treatment of fittings, temporary water supply arrangement and non-destructive test conducted for completed solder joints, if applicable) which shall be submitted to the WA together with Form WWO 46 Part IV as supporting documents when the responsible LPs apply for WA's inspection and approval of the whole completed re-plumbing works. If the relevant supporting documents cannot be produced, the relevant parties shall take appropriate remedial actions as required by the WA for obtaining approval of the completed re-plumbing works. For example, if record of non-destructive test conducted for completed solder joints cannot be produced, additional completed solder joints will be selected by the WA for conducting the non-destructive test of lead content during final inspection.

A flowchart showing the enhanced workflow is at **Appendix IV**.

## Enquiry

Should you have any enquiry, please contact our Engineer/Technical Support(4) at telephone no. 3428 5814.

Yours faithfully,

( Original signed )

( CHAN Chung Kun )  
for Water Authority

(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 Council  
Hong Kong Plumbing and Sanitary Ware Trade Association Ltd  
Hong Kong Licensed Plumbing Professionals Association Ltd  
Hong Kong Plumbing General Union  
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 Ltd  
Real Estate Development Association of Hong Kong  
Hong Kong Institute of Vocational Education  
Construction Industry Council  
Hong Kong Construction Association Ltd  
Registered Minor Works Contractor Signatory Association Ltd  
Hong Kong Registered Contractors Association Company Ltd  
Building Services Operation and Maintenance Executives Society  
The Hong Kong Air Conditioning and Refrigeration Association Ltd  
Hong Kong General Building Contractors Association Ltd  
The Hong Kong Federation of Electrical & Mechanical Contractors Ltd  
Contractor's Authorised Signatory Association Ltd  
Hong Kong Licensed Plumbers Union Limited  
Li Ka Shing Institute of Professional and Continuing Education, The Open University  
of Hong Kong  
The Association of Electrical and Mechanical Engineering (Hong Kong) Ltd

WSD 3318/15/81

**Pretreatment Protocol**

The pretreatment protocol for new fittings before installation is set out below :

- (1) Immerse the fittings<sup>3</sup> in container(s) with water for 5 days.
- (2) The fittings need to be in fully open position to ensure their inner surfaces are completely immersed into water.
- (3) The water needs to be changed once every day with a simple flush of the fittings by water.
- (4) During the immersion of fittings, the container(s) shall be covered with lid(s) to maintain good hygiene.

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<sup>3</sup> The pretreatment is only applicable to fittings (including taps) with copper alloy inner surfaces which will be in contact with potable water. Please be cautioned that immersion of the part of fittings containing iron should be avoided during the pretreatment.

**Appendix II**

(to be attached with Form WWO 46 Part IV)

**Confirmation on the use of pre-treated fittings**

To the Water Authority,

I hereby confirm that the fittings that are applicable for pretreatment and installed for the construction, installation, alteration or removal of the Approved Plumbing Works covered by the WWO 46 Part IV (ASN No. \_\_\_\_\_) in which this undertaking is attached to have been pre-treated using the pretreatment protocol as prescribed in Appendix I of WSD Circular Letter No. 5/2017.

\_\_\_\_\_  
Signature of Licensed Plumber

\_\_\_\_\_  
Name in full

\_\_\_\_\_  
Plumber's Licence No.

Date: \_\_\_\_\_

**Submission for Temporary Resumption of Water Supply  
for Purposes other than Drinking and Cooking for Online Re-plumbing Works**

To the Water Authority,

ASN: \_\_\_\_\_

Address of works: \_\_\_\_\_

I hereby submit to you the following section of works that had been completed:

**(A) Works Completed :-**

Location of works	Description of completed works

**(B) Site photo(s) showing the completed works described in (A) and the relevant pipes and fittings to be attached on separate sheet(s):-**

*(Note: If soldering is adopted for connecting copper pipes, please also attach relevant photo(s) to show a satisfactory result of non-destructive test of lead content for the copper pipe joint.)*

**(C) I undertake and declare that the information given in this submission and photos attached is true, correct and complete.**

\_\_\_\_\_  
Signature of Licensed Plumber/  
Representative of Licensed Plumber

\_\_\_\_\_  
Name in full

\_\_\_\_\_  
Plumber's Licence No.

Date: \_\_\_\_\_

**Enhanced Workflow for Online Re-plumbing Works**

