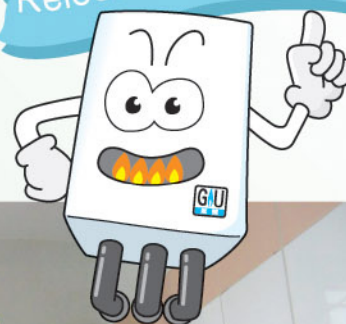


GAS SAFETY Bulletin



In this issue of the Gas Safety Bulletin, readers will find details of the application procedures for the modification of gas water heater aperture / flue opening installation location, and the use of polyethylene pipes for the underground town gas supply system. We also take this opportunity to explain the use of torches fuelled from disposable LPG cylinders, and report on the Symposium on Electrical and Mechanical Safety & Energy Efficiency organised by the Electrical and Mechanical Services Department (EMSD), for the reference of trade members. Besides, this issue features legal knowledge on gas safety, brief messages and some interesting gas statistics for readers' information.

Relocation · Removal



Modification of the Gas Water Heater Installation Location

According to regulation 27(2) of the Gas Safety (Installation and Use) Regulations, where suitable provision has been made for the installation of a room-sealed gas water heater to serve a bathroom in any premises, irrespective of whether such provision is made in the bathroom or in any other part of the premises, no person shall install a room-sealed gas water heater in the premises to serve that bathroom except by using that suitable provision.

Therefore, to comply with the Gas Safety Ordinance and the Buildings Ordinance, whenever an aperture / flue opening is provided in any premises for the installation of a room-sealed gas water heater to serve a bathroom, the aperture / flue opening must be used for the installation of a room-sealed gas water heater unless exemption has been given by the EMSD.

Improving Public Services

In recent years, there has been an increase in the applications for exemption from regulation 27(2) of the Gas Safety (Installation and Use) Regulations. To better serve the public, the approval of applications for modification of the gas water heater aperture/flue opening installation location has become a regular work item of the EMSD. Procedures have been streamlined and standardized to expedite the process, which helps to enhance the professional standards of trade members and enables effective centralized regulation by the EMSD.

Application for Exemption

Any person who wishes to change the installation location and the exhaust outlet of a gas water heater should engage a gas contractor to carry out the modification works.

A gas contractor may install room-sealed gas water heaters



according to the actual environment. Pursuant to the Gas Safety Ordinance and the Code of Practice GU03 - Installation Requirements for Domestic Gas Water Heaters, a gas contractor may choose and design an appropriate provision (i.e. aperture/flue opening) for the installation of a room-sealed gas water heater.

Before the commencement of any modification works, the gas contractor should fill in an application form for exemption from regulation 27(2) of the Gas Safety (Installation and Use) Regulations and submit it with all supporting documents to the Gas Authority. The EMSD will issue an exemption notice if the application complies with the statutory and safety requirements. The gas contractor should not commence the relevant works before the exemption notice is received. The gas contractor should send a Certificate of Completion to the Gas Authority after the modification work is completed. The EMSD will conduct quality assurance inspection in respect of individual applications.

Detailed Information

Please visit the EMSD website (<http://www.emsd.gov.hk>) for relevant details, the application form and the Certificate of Completion form. We would be glad to receive suggestions from trade members on the above items. Let us join hands to enhance gas safety in Hong Kong.

The Use of Polyethylene Pipes


in the town gas supply system

The Hong Kong and China Gas Company Limited has been using polyethylene pipes for supplying gas underground since 1987. The polyethylene pipes in the territory have now extended to over 1,100 kilometres, approximately 40% of the total length of the local gas supply network. In the long run, the use of polyethylene pipes will continue to increase and polyethylene will become the major piping material for the gas supply network.

The advantages of using polyethylene pipes are as follows:

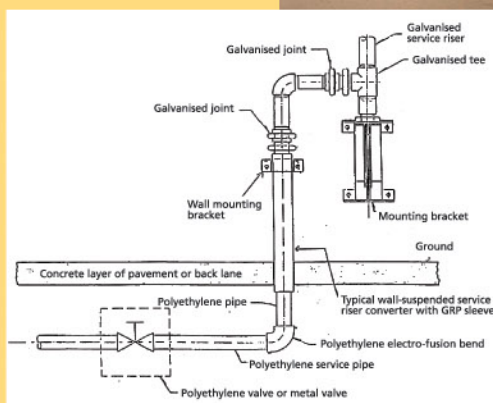
- (1) They are made of plastic and are resistant to rust and corrosion.
- (2) They are heat fused with good connectivity, minimizing gas leakage in pipe joints.
- (3) They are more elastic and stronger in resisting land subsidence. Therefore, they help to alleviate problems caused by underground soil erosion and land subsidence.

Galvanised metal pipes are used above ground since polyethylene pipes are not suitable for above ground use. Due to the difference of the two materials, an installation called "glass-fibre reinforced polyethylene riser" is used to connect the underground polyethylene pipe with the above ground galvanised metal pipe. The installation consists of two parts: the inner tube is a polyethylene pipe for supplying gas and the outer tube is a glass-fibre reinforced protection sleeve that blocks sunlight and protects the pipe from impact. As the installation possesses the advantages of anti-corrosion and elasticity, it can further reduce corrosion-caused gas leak incidents and problems caused by land subsidence around buildings, when compared to using installation of metal pipes.

Given the many benefits of polyethylene pipes, they will continue to be widely used in underground gas supply networks to further enhance the safety and reliability of gas supply. 



The laying of polyethylene gas pipes



The installation of glass-fibre reinforced polyethylene risers



Use of LPG torches fuelled with disposable

LPG Cylinders

Many LPG torches fuelled with disposable LPG cylinders, produced by different manufacturers in different designs, are available for commercial and industrial use. Users must undergo training and possess appropriate operation techniques to ensure the safe use of these LPG torches.

- ◆ LPG torches are mainly used for cutting, drying, cooking and welding.
- ◆ To prevent accidents, LPG torch users should follow the instructions shown on the torch and LPG cylinder.
- ◆ Only use LPG torches that comply with specified standards, such as those with vaporizers.

Proper ways to use LPG torches and points to note:

- In general, LPG torches are fuelled with disposable LPG cylinders. Only use LPG cylinders approved by the EMSD. Read the precautions and follow the instructions shown on the disposable LPG cylinder and torch before use.
- Before using the LPG torch, read and follow the manufacturers' instructions.
- The connection of the LPG cylinder must fit perfectly with the LPG torch.
- All disposable LPG cylinders must have self-sealing valves and LPG torches must be used in a well-ventilated location away from

inflammable materials.

- Do not shake the LPG torch during use to avoid unstable combustion.
- Avoid touching the hotter parts of the appliance during and after the use of LPG torch.
- After using the LPG torch, make sure that the gas control valve is turned off and remove the torch from the cylinder.
- LPG torches and LPG cylinders must be kept out of reach of children.

Precautions on Replacement of Disposable LPG Cylinders

- Replace the disposable LPG cylinder in accordance with the instructions of the LPG torch manufacturer.
- Extinguish all nearby flames. Do not smoke and ensure adequate ventilation.
- Check and ensure the gas control valve of the LPG torch is turned off.
- Make sure the LPG torch is fitted with an appropriate sealing ring before fitting the LPG cylinder onto the torch. Do not use the torch and return it to the dealer (supplier) for repair or replacement if the ring is missing or damaged.
- Check whether there is any smell / sound of gas leak from the LPG cylinder connection. ⚠

In the "Case Sharing" column of Gas Safety Bulletin issue 4, we reported on the violation of the Gas Safety Ordinance by a LPG cylinder wagon. The wagon breached regulation 35 of the Gas Safety (Gas Supply) Regulations by blocking the ventilation openings of the compartment. As there have been similar violations recently, we would like to draw your attention to the following cases to remind all LPG cylinder wagon owners and drivers to comply with the gas safety requirements.

During an inspection in a Cheung Sha Wan car park in May 2007, five LPG cylinder wagons were found to have allegedly breached the relevant requirements. The details are as follows: (1) In a district with designated parking area provided, the wagons were parked in a non-designated parking location while not in operation; (2) some wagons were laden with LPG cylinders as well as kerosene; (3) three of the wagons had the ventilation openings of the compartments blocked. The concerned LPG wagon owners / drivers were prosecuted, convicted and fined more than \$10,000 in total.

During a follow-up operation in July 2007, three LPG wagons were found parking in the aforementioned non-designated parking area and amongst them were wagons involved in the earlier prosecutions. Therefore, the Magistrate imposed a fine of several thousand dollars.

These cases are useful reminders. We would like to urge all LPG cylinder wagon owners / drivers to pay attention to the operation and parking of their wagons, and not to breach any Regulations. ⚠

Case Sharing



Legal Knowledge

Many of us have heard of the Gas Safety Advisory Committee, but do you know its responsibilities and composition?



The Gas Safety Advisory Committee was established in accordance with regulation 4 of the Gas Safety Ordinance, with these terms of reference:

1. To advise the Gas Authority upon any matters relevant to the importation, manufacture, storage, transport, supply or use of gas as defined under the Gas Safety Ordinance.
2. To represent to the Gas Authority any views pertaining to the interest of the gas industry and those of consumers of fuel gases in general.
3. To advise the Gas Authority on matters relating to the gas safety legislation.

The Gas Safety Advisory Committee consists of the Gas Authority, who shall be the chairman, and 6 to 10 other persons, who are non-official officers appointed by the Chief Executive. Representing the public and the gas industry, the Committee has held more than 20 meetings, discussing gas safety matters that concern the two parties. For the Committee's list of members, terms of reference and minutes of meetings, please visit our website: http://www.emsd.gov.hk/emsd/eng/pps/gas_sab3.shtml ⚠



Symposium on Electrical and Mechanical Safety & Energy Efficiency — A Better Future for All

The EMSD organized an annual Symposium on "Electrical and Mechanical Safety & Energy Efficiency" on 28-29 January 2008. Under this year's theme "A Better Future for All", the symposium covered the current developments and technological advances that will enable a safer, greener and hence better living environment in the future. The Secretary for the Environment, Mr Edward Yau, officiated at the opening ceremony and delivered the opening address for the symposium while the Director of Electrical and Mechanical Services, Mr K.W. Ho, and Deputy Director (Regulatory Services), Mr Stephen H.C. Chan delivered the welcome address and closing remarks respectively.



Director of Electrical and Mechanical Services, Mr. K.W. Ho, delivered the welcome address



Secretary for the Environment, Mr Edward Yau, delivered the opening address


The symposium provided a forum for more than 450 participants from overseas, the Mainland and local professional institutions, consultants, contractors, universities, trade associations, and green organizations to exchange views on various important issues, including gas safety.

In his keynote address titled "Recent Developments and Regulatory Changes in the UK Distribution Network", Mr Richard Haddon, President of the Institution of Gas Engineers & Managers presented the developments and regulatory changes in the British distribution network over the last two decades. He also discussed the roles

of the British gas regulatory system and the Office of Gas and Electricity Markets (Ofgem) in regulating the distribution network, and the safety lessons learnt from major incidents in other industries.

In the session titled "Gas - An Energy Source of Growing Importance", the first presentation discussed the feasibility of liquefaction of coal-bed methane for commercial use. Its aim is to develop coal-bed methane into supplementary energy, hence reducing emissions. Another speaker introduced the characteristics of liquefied natural gas and its supply chain, as well as the construction of the first liquefied natural gas ship in Mainland China. The next speaker highlighted the energy efficiency and safety measures in gas industry, especially the technical precautions for preventing gas explosions and smoke poisoning. Ways to enhance heat and energy efficiency were also discussed.

As the growth of natural gas vehicles (NGVs) has been rapid in Asia, a speaker analysed the reasons for the growth, described the benefits of NGVs (including improvement to air quality and fuel cost savings), and introduced the vehicle's latest technological developments. Another speaker introduced the use of computational fluid dynamics in gas safety analysis. Computational fluid dynamic modelling is the computational tool to analyse gas dispersion, fire and vapour cloud explosion, suitable for the modelling of some hypothetical situations that is too costly or cannot be done in laboratories. The last presentation in the session detailed the technical feasibility study of introducing natural gas/liquefied petroleum gas buses and heavy vehicles in Hong Kong.

The symposium was highly recognized by participants as it fostered the exchange of knowledge and experience, strengthened communication, and provided an opportunity for building up friendships. 



Director of Electrical and Mechanical Services, Mr K.W. Ho (fourth from left), Deputy Director (Regulatory Services), Mr Stephen Chan (first from left) and other speakers

Registered Gas Installers

