機電工程署 Electrical and Mechanical Services Department

ISSUE 31
DECEMBER 2020

GAS SAFETY Bulletin

Message from the Editor

Hello, everyone! This issue of Gas Safety Bulletin features points to note for choosing the right portable cassette cooker and using it properly, requirements for annual inspection of LPG vehicle maintenance workshops with approved notifiable gas installations, points to note for carrying out works on gas pipes, regulation of the use of LPG as refrigerants, conveyance of LPG cylinders on gas vehicles, and safety design of LPG road tankers. Readers can also find relevant legal knowledge about gas safety, as well as gas-related incident and prosecution statistics by type in January to June 2020 for reference.

Choose the Right Portable Cassette Cooker and Use it Safely

As winter approaches, we start to have hot pot, which may involve the use of portable cassette cookers. When purchasing and using portable cassette cookers, we must learn about information on gas safety and relevant statutory requirements.

According to the Gas Safety Ordinance, from 1 January 2003, all models of domestic gas appliances, including portable cassette cookers, to be manufactured in Hong Kong, imported, sold or supplied for use in Hong Kong shall have the written approval of the Gas Authority (i.e. the Director of Electrical and Mechanical Services). Approved portable cassette cookers shall bear a GU mark for identification. For safety's sake, members of the public and restaurants should only purchase portable cassette cookers with the GU mark.

When using portable cassette cookers and LPG cylinders, pay attention to the following:

- ✓ Read the user manual provided by the manufacturer and follow the safety instructions therein before using the gas appliance and cylinder.
- ✓ Use the gas appliance and cylinder in a well-ventilated area away from flammable materials.
- ✓ Ensure that the coupling recess of the cylinder is facing upwards when installing a disposable LPG cylinder.
- ✓ Stay away from ignition source or naked flame when installing or removing a cylinder.

- ✗ Do not use two portable cassette cookers placed next to each other.
- ✗ Do not use cooking utensil that is too large so as not to cover the LPG cylinder box of the cooker or cause overheating of cylinder.
- ✗ Do not use non-genuine accessories.

Safe Use of Disposable LPG Cylinders (Including Cartridges)

All disposable LPG cylinders, including cartridges, for use in Hong Kong shall be type approved by the Gas Authority. Approved LPG cylinders shall bear a label on which is printed the words "Approved by EMSD" for identification.

已獲機電工程署批准
Approved by EMSD

For the list of approved LPG cylinders, please refer to the following EMSD website:
https://www.emsd.gov.hk/filemanager/en/content_261/LPG_Cartridge_Approved_List.pdf

Strictly follow the safety instructions printed on the LPG cylinder label and in the user manual of the gas appliance when using disposable LPG cylinders. No LPG cylinders shall be stored in the one place (including any part of any premises) where the aggregated nominal water capacity of the cylinders (including used cylinders) is more than 130 litres (approximately 50 kg), unless approval from the Gas Authority is obtained.

Enjoy hot pot meals safely. Please only use portable cassette cookers with a GU mark and approved LPG cylinders.

Promotional leaflets in different languages are available for members of the public and foreign domestic helpers to learn about relevant gas safety information.

https://www.emsd.gov.hk/filemanager/en/content_284/gas_gen_hot.pdf (Chinese and English)

https://www.emsd.gov.hk/filemanager/en/content_284/gas_gen_hot_Indonesian.pdf (Bahasa Indonesia)

https://www.emsd.gov.hk/filemanager/en/content_284/gas_gen_hot_Thai.pdf (Thai)

《氣體快訊》的中英文版本可於以下網頁瀏覽：
The English and Chinese versions of the Gas Safety Bulletin may be viewed on the following website:
https://www.emsd.gov.hk/en/gas_safety/information_for_the_gas_trade/index.html

EMSD

Requirements for Annual Inspection of

LPG Vehicle Maintenance Workshops

with Approved Notifiable Gas Installations

Types of Identification Signage for LPG Vehicle Fuel System Maintenance Workshops

To make it easier for LPG vehicle owners, drivers, members of the public and trade practitioners to identify LPG vehicle fuel system maintenance workshops, the EMSD has issued red or blue identification signage to qualified workshops (commonly known as red or blue signage workshops in the trade). The blue signage workshops are not allowed to store an aggregated nominal water capacity of more than 130 litres of LPG (i.e. in general, only one LPG fuel tank is allowed to be stored), whereas the amount the red ones are allowed to store should not exceed the limit as approved by the EMSD.

Requirements for Red Signage Workshops under the Law

A red signage workshop is a workshop which is equipped with approved notifiable gas installations and is allowed to store an aggregated nominal water capacity of more than 130 litres of LPG (i.e. in general, more than one LPG fuel tank is allowed to be stored). It is therefore necessary to obtain approval from the Gas Authority prior to the construction and use of a red signage workshop. According to regulation 6C of the Gas Safety (Gas Supply) Regulations (Cap. 51B), owners of red signage workshops are required to engage competent persons to carry out annual inspection of their LPG storage installations and necessary rectification as recommended in the inspection report. In addition, a copy of this report should be submitted to the Gas Authority by post, fax or e-mail within four weeks upon completion of the inspection. Failure to do so may render the owners liable to prosecution.

For a full list of the items covered in the annual inspection of a red signage workshop, you can download the form of the "Report on Annual Inspection of LPG Vehicle Maintenance Workshops with Approved Notifiable Gas Installations" from the following website or by scanning the QR code below:

https://www.emsd.gov.hk/filemanager/tc/content_394/Form_109B.pdf

Points to Note for

Carrying out Works on Gas Pipes

Found in homes, housing estates and restaurants, gas installations of various types, including gas appliances for cooking and gas pipes on external walls of buildings, are common in our daily life. During major maintenance projects for housing estates or renovation works for homes/restaurants, installation, maintenance or replacement of gas pipes may be involved. We wish to share with you important points to note for carrying out works on gas pipes, so as to prevent gas incidents due to relevant works and ensure the gas safety of workers and the public.

Gas Installation Works

Gas installation works include the fabrication, connection, disconnection, testing, commissioning, decommissioning, maintenance or replacement of gas fittings. Gas fitting means a gas pipe, gas meter, gas appliance, gas valve or pressure-regulator which is supplied gas through a service pipe, and includes a service riser. All gas installation works must be carried out by registered gas contractors (RGCs) or registered gas installers (RGIs) of the appropriate class employed by RGCs to ensure compliance with the Gas Safety Ordinance. Do not carry out installation and replacement works on gas pipes / gas fittings by yourself or employ unregistered contractors and workers for that purpose for the sake of convenience and cost-saving.

Requirements on the Materials for Gas Pipes and Gas Fittings

When carrying out works on gas pipes, relevant RGCs or RGIs shall pay attention to the relevant statutory requirements. In accordance with section 17 of the Gas Safety (Gas Supply) Regulations and section 4(1) of the Gas Safety (Installation and Use) Regulations, gas pipes and gas fittings shall be constructed of sound materials. The size and strength of the gas pipes shall be able to safely convey the type of gas therein at the operating pressure of such gas. All parts of gas fittings shall be of good construction and adequate strength and size to secure safety.

Disconnection of Gas Pipes and Gas Fittings

If the works on gas pipes involve disconnection of gas fittings, the person who disconnects the gas fittings shall, in accordance with section 5 of the Gas Safety (Installation and Use) Regulations, seal off each outlet of each gas pipe to which it was connected so that each such outlet is gastight. If the consumer no longer uses gas and requires removal of gas meter, the relevant RGC should inform the registered gas supply company and arrange removal of gas meter. Please note that the accompanying installation pipes and gas meter control valves shall be sealed with pipe plugs or pipe caps when carrying out removal of gas meter. Live gas pipes in premises in which a gas meter was installed shall be marked clearly to the effect that such pipe contains gas. Upon completion of disconnection of gas fittings, the responsible person should inspect whether individual gas isolation valve is connected upstream of the pipes. When necessary, turn off the valve properly to ensure that there would be no live gas pipes in premises that would not use gas in a long time.

▲ **Photo1: Marking of a live gas pipe in a unit in which the town gas supply has been disconnected**

Marking of Gas Pipes

Marking of gas pipes allows consumers and persons who carry out renovation works to recognise the gas pipes and indicates that the gas pipes are live. Upon completion of works on gas pipes, the relevant persons should mark clearly locations of the live gas pipes, so as to prevent them from being mistaken as abandoned pipes or other pipes and damaged as a result. Section 21 of the Gas Safety (Installation and Use) Regulations also stipulates that a person installing in any premises, elsewhere than in any domestic premises, a part of an installation pipe which is accessible to inspection shall permanently mark such part, in the English and Chinese languages, in such a manner that it is readily recognisable as part of a gas pipe.

Testing of Gas Pipes and Reinstatement of Supply of Gas

Upon completion of gas installation works (including installation or replacement works on service pipes and installation pipes), procedures such as testing, gastightness test and purging shall be carried out so as to comply with the requirements of the Gas Safety Ordinance. Where work is being carried out in relation to an installation pipe and gas is being supplied to the pipe, the person carrying out such work shall carry out purging throughout every installation pipe through which gas can then flow, so as to remove safely all air and other gases. Upon completion of gas fitting works which might affect the gastightness of the gas supply system, one shall immediately test such system for gastightness at least as far as the nearest gas valves upstream and downstream in such system. Upon completion of works, the responsible person should contact the registered gas supply company for inspection of the gas supply system to ensure that the works did not affect the operation and safety of the system before resumption of gas supply.

For enquiries, please contact the EMSD or the registered gas supply company.

▲ **Photo 2: Marking of a live gas pipe with town gas supply**

Regulation of the use of LPG as Refrigerants

Based on their composition, most refrigerants are regulated by the Dangerous Goods Ordinance. Since the composition of some flammable refrigerants falls under the definition of LPG under the Gas Safety Ordinance, the importation, manufacture, storage, transport, supply and use of these refrigerants shall be in compliance with the Gas Safety Ordinance.

According to the Gas Safety Ordinance, LPG means any gas which is a mixture of—

(a) hydrocarbons primarily consisting of butanes, butylenes, propane or propylene; or
(b) all or any of the hydrocarbons referred to in paragraph (a).

When choosing chiller plants and their refrigerants, we should ensure that their design, manufacture and installation meet the relevant standards and statutory requirements. For existing chiller plants, we should adopt the prescribed refrigerants according to the manuals provided by manufacturers instead of switching to flammable refrigerants.

Conveyance of LPG Cylinders on Gas Vehicles

Liquefied petroleum gas (LPG) is highly flammable. To safeguard public safety, the EMSD has strict control over the conveyance of LPG cylinders. Vehicles are required to undergo examination and obtain a gas vehicle permit issued by the EMSD before they are allowed to transport LPG cylinders for registered gas supply companies or gas distributors. In addition to processing applications for gas vehicle permits, the EMSD also conducts inspections from time to time to combat contravention of such requirements. Conveyance of other types of dangerous goods or LPG cylinders of other brands by cylinder wagons are the two most common types among the recent cases of contravention.

Regulation 41 of the Gas Safety (Gas Supply) Regulations (Cap. 51B) stipulates that no person shall place or carry on a gas vehicle any explosive substance or article capable of causing a fire or explosion, including matches and cigarette lighters. No other dangerous goods, such as kerosene, shall be placed or carried on a cylinder wagon while it is carrying LPG cylinders, even if the cylinder wagon is also licensed for conveyance of other relevant dangerous goods. Any person who contravenes the requirements commits an offence and is liable on conviction to a fine of $5,000.

Regulation 12 of the Gas Safety (Registration of Gas Supply Companies) Regulations (Cap. 51E) also stipulates that a gas distributor may only transport the branded LPG cylinders of a registered gas supply company for which he is a gas distributor. Any gas distributor who, without reasonable excuse, contravenes this requirement commits an offence and is liable on conviction to a fine of $10,000 and, in the case of a continuing offence, to a daily penalty of $1,000.

Did You Know? Safety Design of LPG Road Tankers

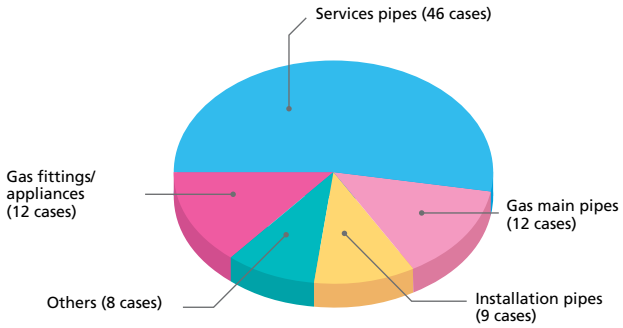
LPG road tankers (commonly known as road tankers) are motor vehicles used for the conveyance of LPG in bulk on roads. Such vehicles shall comply with the design requirements set out in the Gas Safety (Gas Supply) Regulations (Cap. 51B) and may not run on roads unless they have been issued with a valid permit by the Gas Authority. To ensure safe conveyance of LPG, LPG road tankers in Hong Kong are required to be designed with the following safety features:

- The design of LPG vessel shall comply with international standards, with a design pressure three times of the operating pressure. The vessel shall also be provided with a minimum of 1 mm additional wall thickness for corrosion allowance;
- A fire proof coating shall be applied to the surface of the vessel. The coating should be able to afford fire protection to the vessel when subject to a jet fire for 30 minutes or a pool fire for 100 minutes;
- Fire resisting shields shall be provided to screen the vessel from the cab, fuel tank, engine and engine exhaust system of the tanker;
- Safety relief valves shall be provided to automatically release the gas from the vessel in case of excessive pressure;
- The vessel shall be provided with an earth continuity wire to dissipate any electrostatic potential which may develop between the tanker, piping, static tank and the ground during loading and unloading operations; and
- The electrical installations on road tankers shall comply with the fire and explosion protection requirements specified in international standards.

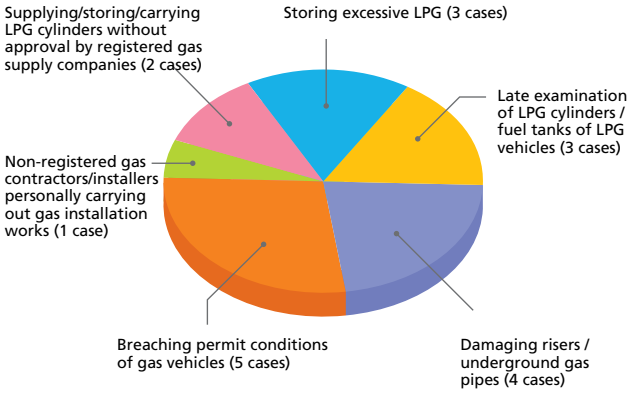
For more information on the design of LPG road tankers, please refer to Module 3 (Handling and Transport of LPG in Bulk by Road) of the Code of Practice for Hong Kong LPG Industry published by the Gas Standards Office. This code of practice can be downloaded free of charge from the EMSD website (https://www.emsd.gov.hk/filemanager/en/content_286/module_3_issue_1_e.pdf).

Gas-related Incident and Prosecution Statistics by Type

Gas-related Incidents by Type in 2020 (January to June)



Prosecutions by Type for Gas-related Cases in 2020 (January to June)



Gas Authority EMSD
3 Kai Shing Street, Kowloon, Hong Kong
Tel. : 1823 (Hotline)
Website : http://www.emsd.gov.hk
Fax. : 2576 5945
E-mail : gasso@emsd.gov.hk

打開手機掃一掃
註冊氣體技工即知道

家用氣體爐具

安心啲 安全啲
認住 GU 標誌

每18個月檢查一次

使用方法:

1. 下載「E&M Connect」應用程式
2. 選擇「掃證快」
3. 閱讀注意事項後請選擇同意後繼續
4. 掃瞄證件或輸入註冊號碼
5. 註冊氣體裝置技工資料隨即顯示

立即下載 E&M Connect

Google Play | App Store

如有查詢
請電郵至gasso@emsd.gov.hk

機電工程署