

GAS SAFETY Bulletin



Message from the Editor

Greetings to all. This issue of the Gas Safety Bulletin features the duties of owners of LPG storage installations and the fire services facilities at LPG filling stations, plus legal tips on gas safety, as well as regulations requiring the attention of registered gas contractors and registered gas installers. Readers will also find in this issue gas incident and prosecution statistics by type from January to December 2013 for reference.

Gas Safety Briefing 2014




A gas safety briefing was organised for the trade on 17 February this year at the lecture hall of the Hong Kong Science Museum in Tsim Sha Tsui. Topics of the briefing included LPG installations for catering purposes in commercial buildings, matters to note for gas installers and gas contractors, hybrid flame ionisation detection for high-power frying stoves, matters to note in installation of outdoor LPG heater lamps and an introduction to Continuing Professional Development courses.

The briefing was well attended with enthusiastic response from participants. EMSD colleagues, representatives from the Hong Kong and China Gas Company Limited and the Chief Instructor of the Vocational Training Council were on hand to provide detailed presentations on gas safety matters. Issues raised by the floor were discussed in a lively and positive Q&A session at the end. To find out more about the briefing, please click http://www.emsd.gov.hk/emsd/eng/pps/gas_igt.shtml

During the briefing, registered gas installers were reminded that letters were sent via recorded delivery mail to all of them on 9 July 2012 and 14 June 2013, and to all registered gas contractors on 14 June 2013. The letters aim to draw their

attention to the requirement under Regulation 11 of the Gas Safety (Registration of Gas Installers and Gas Contractors) Regulations that any registered gas installer who changes his name or address for service by post specified in his application under Regulation 5 after registration as a gas installer must notify the Gas Authority in writing of such change not later than 21 days after such change takes place. Any registered gas installer who, without reasonable excuse, contravenes Regulation 11 commits an offence and is liable on conviction to a fine of \$1,000.

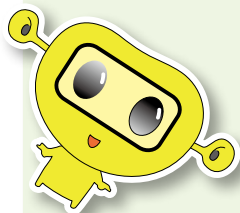
As some of the mails were returned undelivered, we had reason to believe that some registered gas installers could have already contravened the above legal requirement. To deal with this situation, we shall consider taking disciplinary action, including temporary suspension of registration, against the registered gas installers in question in accordance with the Regulations. To avoid contravening Regulation 11 and being subject to our disciplinary action, the parties concerned should contact us in writing and update their postal addresses as soon as possible. 



Fire Services Facilities at LPG Filling Stations

LPG is a flammable gas which will accumulate on the ground in the event of leakage. When the LPG concentration reaches the flammable limit, there is a risk of fire and explosion if a source of ignition is present.

To ensure safety, a water spray system, a gas detection system and a remote emergency shut-down system are installed at each LPG filling station to prevent occurrence of fire and explosion.

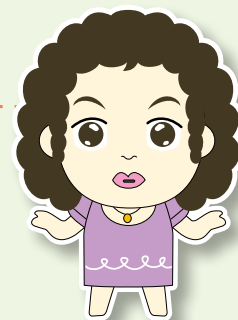


Gas detectors (see photos) are provided at different locations in an LPG filling station. In the event of LPG leakage, the system will activate an audio alarm when LPG concentration reaches 20% of the Lower Flammable Limit. When LPG concentration reaches 40% of the Lower Flammable Limit, the system will automatically give a signal to the Fire Services Communication Centre for attendance by firemen.



A water spray system (see photos) is also installed at the station. When LPG concentration reaches 40% of the Lower Flammable Limit, the system will be activated to prevent fire occurrence.

Normally, there are operatives working at the dispensing area and a supervisor present in the sale office of the filling station. In the event of LPG leakage which has activated the alarm, the staff can immediately press a remote emergency button (see photo) to shut down the whole LPG supply system.



In addition to these major fire services facilities, portable dry powder fire extinguishers are provided in the filling station. Warning signs of "LPG Filling Station", "No Smoking", "No Naked Lights", etc are posted conspicuously to raise the alert of staff and customers.

Duties of Owners of LPG Storage Installations

Regulation 6B of the Gas Safety (Gas Supply) Regulations stipulates that the owner of a notifiable gas installation (e.g. an LPG storage installation) should maintain and operate the installation in a safe condition to prevent fire, explosion or other danger arising from the installation.

According to Regulation 6C of the Gas Safety (Gas Supply) Regulations, the owner should ensure that the LPG storage installation is inspected by a competent person at least once every year to ascertain that the installation is maintained and operated in accordance with Regulation 6B. After each inspection, an inspection report (Form 109) should be compiled and the owner should submit a copy of this report to the Gas Authority within four weeks after the inspection. Failure to inspect the LPG storage installation before the due date and/or failure to submit a copy of the inspection report in a timely manner is an offence **and the owner may be prosecuted.**

In order to fulfill these duties, the owner is required to:

- Arrange for a competent person to conduct statutory inspections of the installation at least once every year. Before the statutory inspections, the owner should rectify all irregularities found during routine inspections and make improvements. Failure to do so may be regarded as a contravention of Regulation 6B;
- Rectify as soon as possible any irregularities found in the installation and its surroundings or any defects that may cause danger;
- Keep record of all construction and use approvals granted by the Gas Authority for the LPG storage installation;

- Keep record of all inspection, maintenance and alteration works carried out on the installation;
- Put all LPG cylinders (if any) in a proper place;
- Ensure that all works on the installation are carried out by workers with suitable training and competence;
- Remove any weeds and debris found inside the installation or in its surroundings, and maintain a good standard of management and cleanliness;
- Ensure the security of the installation, and that the entrance gates are securely locked;
- Ensure that a safe distance is maintained between the installation and parked vehicles, except for road tankers or cylinder wagons during gas delivery;
- Ensure that all operators are familiar with the operation procedures and emergency response measures for the LPG storage installation;
- Conduct routine inspections of the LPG storage installation.



Legal Knowledge

Regulations on Dangerous Gas Installation Notice Record

According to Regulation 32(1)(b)(ii) of the Gas Safety (Installation and Use) Regulations, if a gas supply company or a registered gas installer knows or has reason to suspect that a certain gas appliance or gas fitting is unsafe, the company or the gas installer should forthwith take all steps to carry out repair work. If the defect cannot be rectified, the company or the gas installer should:

- (a) cause the supply of gas to the gas fitting concerned to be shut off;
- (b) attach to such fitting, or to the gas valve which gas supply has been shut off, a notice prepared and issued by the Gas Authority for the purpose of this subparagraph (i.e. the upper part of the DGI Notice); and
- (c) as soon as practicable, submit to his employer or, if he is self-employed, should retain for not less than two years, a notice prepared and issued by the Gas Authority for the purpose of this subparagraph (i.e. the lower part of the DGI Notice).

According to Regulation 33(3) of the Gas Safety (Installation and Use) Regulations, if the defect is rectified, the company or the gas installer should:

- (a) immediately remove the notice referred to in Regulation 32(1)(b)(ii) (i.e. the upper part of the DGI Notice) which relates to such fitting after the gas supply has been reinstated; and
- (b) as soon as practicable, submit to his employer or, if he is self-employed, should retain for not less than two years after the notice was removed.

Therefore, when shutting off gas supply, make sure you attach a Dangerous Gas Installation Notice. After the gas supply has been reinstated, immediately remove the notice. Please note that the notice form should be completed in accordance with the directions given therein. Employers or self-employed persons should retain the notice for not less than two years for record. Any person who contravenes Regulation 32 or 33 commits an offence and is liable on conviction to a maximum fine of \$5,000.





Breaching of Specified Conditions in the Gas Vehicle Permit

A recent case involved an owner of a gas vehicle (cylinder wagon) who failed to comply with the additional conditions in the gas vehicle permit. The gas vehicle owner has been convicted and fined by the court.

What happened was that an operator of a cylinder wagon was loading and unloading LPG cylinders with the wagon parked at a location on the street which was less than 15 metres away from the nearby domestic premises. This was spotted by an enforcement officer who suspected the operator to be in contravention of the specified conditions of the permit issued to the wagon by the Gas Authority, as the wagon had been parked at the said location with loading and unloading activity going on for longer than one hour within a four-hour period.

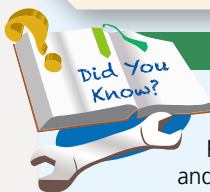
According to Regulation 28(3) of the Gas Safety (Gas Supply) Regulations (Cap. 51B), no person while using a gas vehicle should contravene any condition specified in the permit issued in respect of that gas vehicle. The offender is liable on conviction to a fine of \$5,000.

To ensure gas safety, the Electrical and Mechanical Services Department urges the owners and operators of gas vehicles to comply with the conditions specified in the permit when they use gas vehicles, including:

- ▶ A cylinder wagon should not, while being used to convey LPG, carry goods of any other description at the same time;
- ▶ Not less than two competent persons should be employed on

the cylinder wagon when the wagon is conveying LPG cylinders on a road or when the cylinders are being loaded or unloaded;

- ▶ A cylinder wagon, when carrying LPG cylinders, may be parked outdoors on the roadside for not longer than one hour within a four-hour period, during which time one competent person should be on the wagon. If the wagon is unattended, it should be parked in a location which is not densely populated or congested with traffic, and which is at least 15 metres away from any buildings used for assembly, functioning as institutions or accommodating a large number of residents;
- ▶ In districts where designated parking sites are available, a cylinder wagon carrying LPG cylinders and not engaged in delivery and collection work must be parked in those sites;
- ▶ In districts where designated parking sites are not available and if no such parking sites are designated by the Gas Authority in other districts, a cylinder wagon carrying LPG cylinders and not engaged in delivery and collection work may be parked outdoors and unattended at a location which is not densely populated or congested with traffic, and which is at least 15 metres away from any buildings used for assembly, functioning as institutions or accommodating a large number of residents;
- ▶ A cylinder wagon which has been damaged in a fire or an accident should no longer be used to convey LPG cylinders. The owner of such wagon should report the damage to the Gas Authority in writing within three working days to arrange for a re-examination of the vehicle.



An Overview on the Use of Natural Gas in Hong Kong

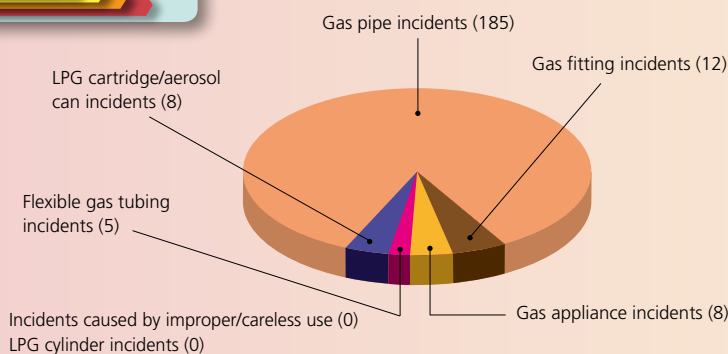
Natural gas is a gaseous fossil fuel consisting primarily of methane. It is mainly found in oil fields and natural gas fields. In Hong Kong, natural gas is used for electricity generation and production of town gas. The two power companies and the town gas company import natural gas from the Mainland via submarine pipelines and directly transport

it to the electricity generation facilities or the town gas production plants. Importation of natural gas to Hong Kong is subject to control by the Gas Safety Ordinance (Cap. 51). The three companies are required to obtain approval from the Gas Authority for their natural gas facilities, while the quality of natural gas must meet the requirements of the Gas Safety Ordinance.

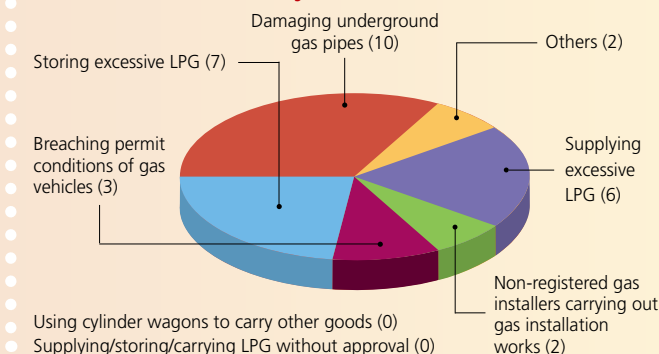


Gas Incident and Prosecution Statistics

Gas Incidents by Type in 2013 (January to December)



Prosecutions by Type for LPG-related Cases in 2013 (January to December)



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