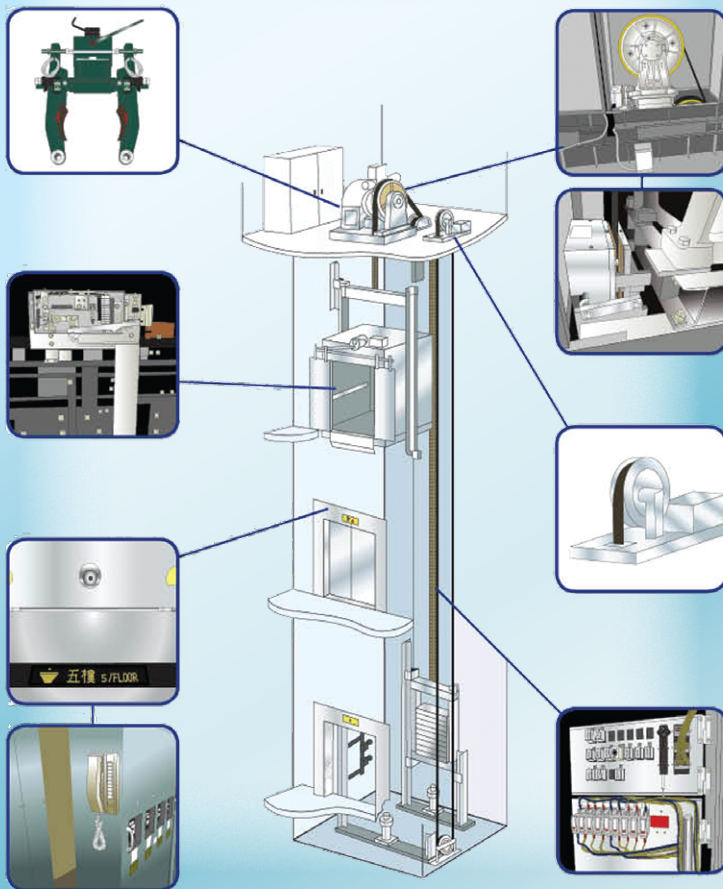
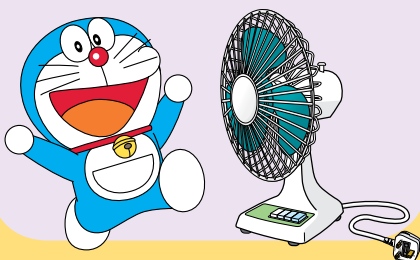


Modernising Old Lifts

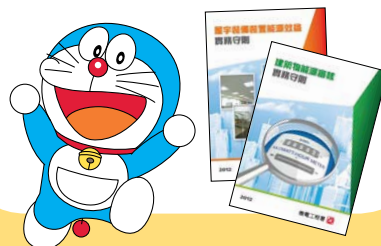


Safe Use of Kiddie Rides

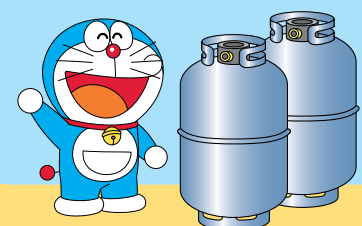
Safe Use of Electric Fans



Codes of Practice for Energy Efficiency of Building Services Installation and Building Energy Audit

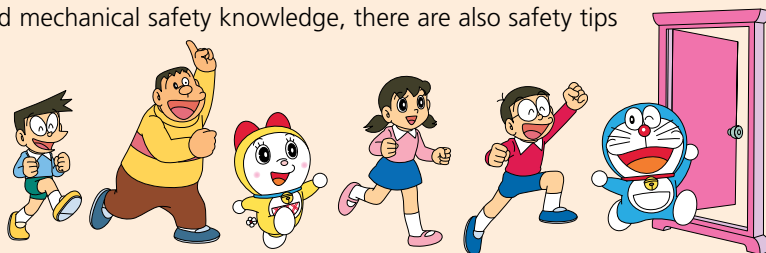


LPG Supply to
Commercial Kitchens and
Food Preparation
Establishments



Editor's Notes

This is the 17th issue of the E&M Safety Newsletter. We would like to express our heartfelt thanks for your continuous support. This issue covers a variety of topics, including the modernisation of existing lifts, the promulgation of the Code of Practice for Energy Efficiency of Building Services Installation and the Code of Practice for Building Energy Audit. To refresh your electrical and mechanical safety knowledge, there are also safety tips on the use of kiddie rides, ways of ensuring the safe use of household electrical appliances like electric fans, and the requirements for gas installations. As summer vacation is approaching, we wish you a joyous holiday.



Safe Use of Kiddie Rides

Apart from large-scale amusement rides such as Ferris wheels and roller coasters, EMSD is also responsible for regulating the safety of kiddie rides. Since most of the kiddie rides do not require operation by staff attendants, their safe use depends on the self-discipline of users. Parents and children should refer to the following illustrations for the matters that require attention when using kiddie rides.

Before getting on the kiddie ride, read and follow the safety instructions. Pay attention to the seating capacity and weight limit. Do not overload the ride.



Neither the rider(s) nor the person(s) around should rock the ride to avoid bodily injury or damage to the machine parts.



Sit on the designated seat when riding on the kiddie ride. Do not reach out of the ride to avoid falling off and getting hurt.



When the ride is in motion, stay out of the fenced area or the area as specified on the warning sign to avoid bodily injury from collision.





Lifts are an important vertical mode of transport which we use every day in Hong Kong, a city with a high density of tall buildings. Heavy use means that wear and tear of lift parts is inevitable. With a view to enhancing the technical integrity and safety of old lifts, EMSD has published a promotion booklet “Guidelines for Modernising Existing Lifts” last year to provide responsible persons of lifts with enhancement and modernisation solutions for making their lifts safer, more effective, reliable and comfortable.

The following four solutions (as presented in Figures 1 to 4), meriting priority consideration, are the most effective and efficient ways to enhance the safety, reliability and comfort of old lifts. The remaining three solutions (as presented in Figures 5 to 7) will be introduced to readers later.

1. Install a Double Brake System

Old lifts are mostly fitted with only one brake and so a breakdown of the brake system may lead to a failure of the lift car's braking function. A double brake system can enhance safety as it has all the main brake parts in two sets, so that in the event that one set of parts fails, the other set will ensure the safe operation of the lift.

A modern double brake system has two independent braking devices, each of which is electrically monitored.

2. Install an Unintended Car Movement Protection Device

Installation of an unintended car movement protection device is a new requirement. Unintended movement of the lift car while the doors are open and passengers are entering or exiting the lift car could result in injuries. This device is equipped with a self-monitoring system which can protect the lift car from any unintended movement, thus enhancing passenger safety. Rope gripper is a commonly used device.

3. Install an Ascending Car Overspeed Protection Device

Installing an ascending car overspeed protection device can protect an ascending car from overspeeding in the event of a system failure. The protection device automatically detects

and stops any overspeed movement of the ascending lift car, reducing the risk of the ascending lift car from accidentally hitting the top of the lift well, and thus protecting passengers from injuries.

4. Install a Car Door Mechanical Lock and Door Safety Edge

Installing car door mechanical locks in old lift doors has the benefit of preventing passengers inside the lift car from



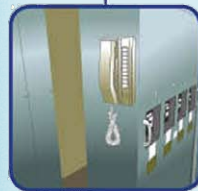
1. Install a double brake system



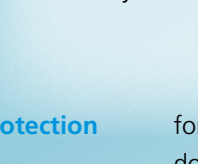
4. Install an advanced car door mechanical lock and door safety edge



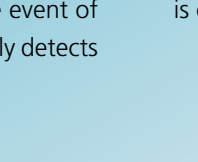
5. Add an intercom and CCTV system



6. Install an obstruction switch to protect the suspension ropes

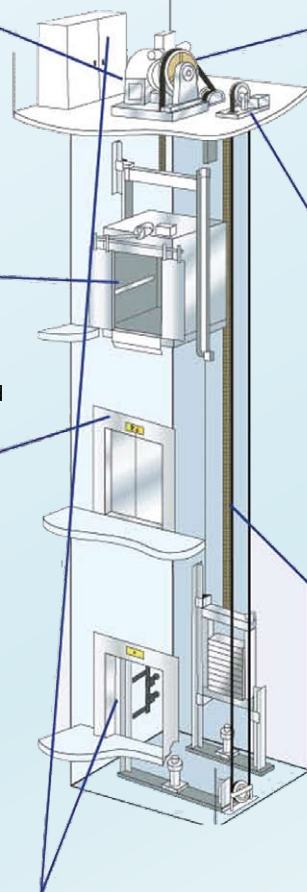


3. Install an ascending car overspeed protection device



2. Install an unintended car movement protection device on the brake system

2. Install an unintended car movement protection device on the brake system



7. Add automatic rescue devices



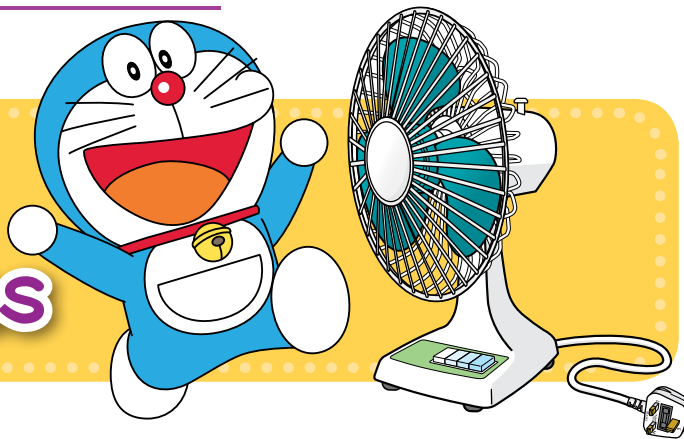
3. Install an ascending car overspeed protection device



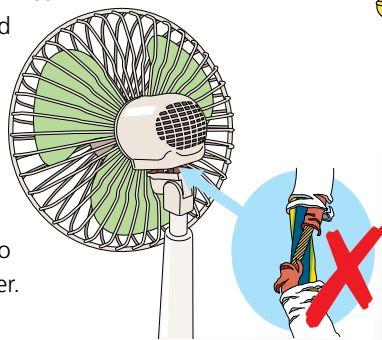
6. Install an obstruction switch to protect the suspension ropes

forcibly opening the lift doors, which can be dangerous. A door safety edge can automatically initiate the re-opening of the door should a passenger be struck by the door as it is closing.

Safe Use of Electric Fans



- ⚠ The electric fan should be placed on a hard and stable surface with minimum tripping hazard.
- ⚠ Allow sufficient space around the electric fan for heat dissipation and free movement, so as to avoid danger caused by nearby objects getting caught in the fan blades.
- ⚠ Do not put or use the electric fan in a place where it can easily be splashed by water, such as near the window or in the bathroom, to avoid the danger of electric shock.
- ⚠ Check if the flexible power cord which moves with the electric fan has been worn out by prolonged use. A damaged cord may cause danger of short-circuiting or exposure of live wire cores.
- ⚠ Do not let children put their fingers or other objects into the fan guard to avoid danger.
- ⚠ Do not use the electric fan if its casing is broken.
- ⚠ If abnormalities, such as strange noises and smells, or tripping for unknown reason, are detected, stop using the electric fan and arrange for checking and repair by a qualified technician.
- ⚠ Switch off and unplug the electric fan before leaving home or if it will not be in use for a long period.
- ⚠ Clean the electric fan regularly according to the user manual.
- ⚠ Unplug the electric fan before cleaning and prevent water from getting inside the fan.



CPD Scheme for REWs Kick-started

To upgrade the standard of Registered Electrical Workers (REWs), the Continuing Professional Development (CPD) Scheme for REWs is included as a requirement for renewal of registration starting 1 January 2012. According to the CPD Scheme, all REWs are required to have completed two modules of training, including Module 1: Legislative and Safety Requirements and Module 2: Technical Knowledge, before submitting their renewal application. REWs can fulfil this requirement by participating in seminars organised by EMSD or other recognised organisations of the electrical trade. REWs may also receive training at the EMSD Customer Services Office during office hours.

For details of the CPD Scheme, please visit the EMSD website at www.emsd.gov.hk

→ Protecting Public Safety → Electricity → CPD Scheme for REW

For enquiries on the above, please contact EMSD at 1823 or email to eld@emsd.gov.hk

Power Suspension Arrangement for 5-yearly Inspections of Electrical Installations in Buildings

In engaging registered electrical contractors to carry out the 5-yearly inspection for the main switchboard of a building, building owners, incorporated owners or property management companies should require the contractors to apply for temporary disconnection of electricity supply with the power company before carrying out the inspection. This is to ensure the safety of the electrical workers concerned and avoid disruption of power supply to the building in case of an electrical accident. In submitting the WR2 certificate of the main switchboard for endorsement on or after 1 December 2011, the power company's record for power suspension (e.g., relevant letters or receipts issued by the power company) should also be submitted.

Since the temporary disconnection of electricity supply may cause inconvenience to tenants, building owners, incorporated owners or property management companies should work closely with the contractor when arranging the 5-yearly inspection to come up with a power suspension arrangement and provisional measures that suit the operational needs of the building, so as to minimise the impact of inspection and testing on building users.

Moreover, building owners, incorporated owners or property management companies may contact the power company to find out whether it is possible to carry out the 5-yearly inspection concurrently with the power company's equipment maintenance work, so as to avoid repeated power suspensions and hence minimise the inconvenience caused to building users.

For enquiries please contact EMSD at 1823.



Codes of Practice for Energy Efficiency of Building Services Installation and Building Energy Audit Gazetted

The Electrical and Mechanical Services Department (EMSD) gazetted the Code of Practice for Energy Efficiency of Building Services Installation (the "Building Energy Code" or "BEC") 2012 Edition and the Code of Practice for Building Energy Audit (the "Energy Audit Code" or "EAC") 2012 Edition on 10 February this year to tie in with the upcoming full implementation of the Buildings Energy Efficiency Ordinance (Cap. 610) (the Ordinance) on 21 September 2012. As the department responsible for enforcing the Ordinance, EMSD has released the Building Energy Code and the Energy Audit Code to provide technical details and guidance for the trade to comply with the Ordinance.

The Building Energy Code (BEC)

The Building Energy Code applies to newly constructed commercial buildings, common areas in newly constructed residential buildings, common areas in newly constructed industrial buildings, and major retrofitting works in completed buildings of the above categories etc. (Note: BEC is not applicable to residential and industrial units). BEC sets out the basic energy efficiency standards and requirements for the four types of major building services installations (viz. air-conditioning, electrical, lighting and lift and escalator installations) specified in the Ordinance, including the power of installable lamps in an illuminated space, the allowable efficiency of air-conditioning chillers, the allowable efficiency of electric motors, and the allowable electric power of lifts etc.

The Energy Audit Code (EAC)

The Energy Audit Code sets out the technical guidelines and details in respect of the energy audit requirements governing the central building services installation under the Ordinance, with the inclusion of proposed energy saving measures and compilation of Energy Audit Report. The energy audit sets an energy utilisation index (EUI) (i.e. the energy consumption/m²) for every building. According to the Ordinance, the EUI should be displayed on a specified form to be posted in a conspicuous position at the main entrance of the building. Although owners are not mandatorily obliged under the Ordinance to implement the energy saving measures proposed in the Energy Audit Report, they can implement these measures in accordance with their own resource allocation arrangements and timetables, with the ultimate goal of reducing the energy consumption of their buildings.

Four types of major building services installations



Lighting installations



Air-conditioning installations



Electrical installations

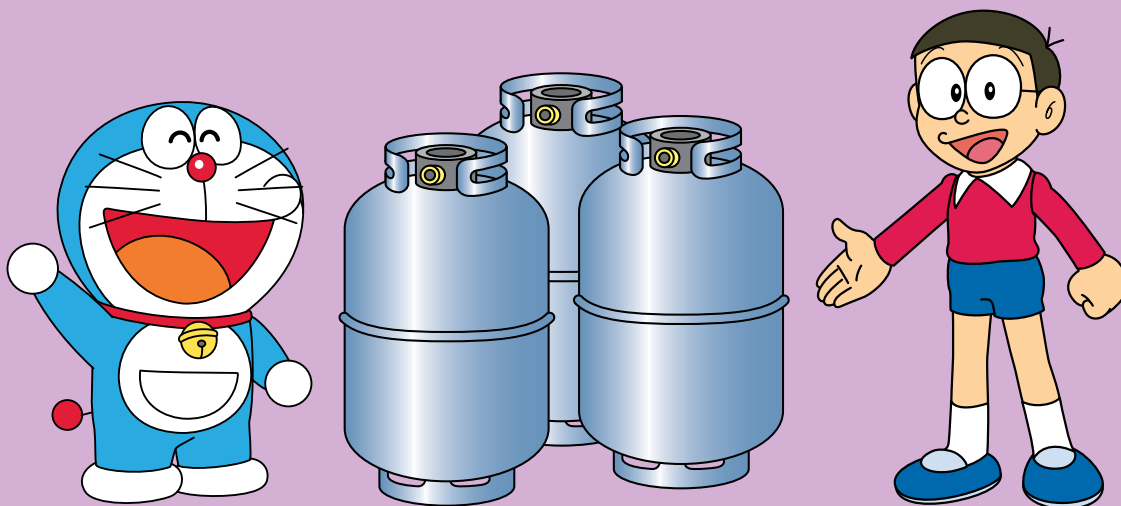


Lift installations

By regulating the energy consumption of building services installations through the Ordinance and the Building Energy Code, it is expected that an energy saving of 2.8 billion kWh will be achieved in the first 10 years for newly constructed buildings. This is approximately equivalent to the electricity consumption of 610,000 families in one year. Not only will buildings become more energy-efficient by that time, the environmental protection industry (including building services installation suppliers and the electrical, mechanical and energy management sectors) will also be presented with more green business opportunities, while the public can enjoy a reduction of electricity tariffs through energy saving. This is a win-win situation for all.

The requirements stipulated in the newly promulgated BEC are more stringent than the existing standards which have been implemented on a voluntary basis since 2007. When formulating the standards, EMSD has made reference to the latest development of the relevant technology and practices in other regions. Most of the requirements in the new standards are comparable to those adopted by some countries in the region and in Europe and the US, while some requirements (e.g. the allowable electrical power of lifts) are not yet stipulated in other regions.





LPG Supply to Commercial Kitchens and Food Preparation Establishments

LPG Supply to Catering Establishments

Any person interested in operating a catering establishment, including a restaurant, a bakery, a factory canteen, a food factory, a fresh provision shop, a frozen confection factory, a milk factory, a Siu Mei and Lo Mei shop, etc., in Hong Kong must apply for a licence from the Food and Environmental Hygiene Department (FEHD) before commencement of business. If gas is used as a fuel for food preparation in the premises, an applicant is required to submit a "Certificate of Compliance" and a "Work Completion Certificate" to FEHD. These certificates must be issued by a registered gas contractor who employs gas installers of the appropriate classes. These requirements aim to confirm that the gas installation work has been completed and that the gas installations are ready for operation under the Gas Safety Ordinance and the Code of Practice GUO6: LPG Installations for Catering Purposes in Commercial Premises.

Requirements for Gas Installations

To ensure gas safety, the following requirements on LPG supply to general commercial kitchens and food preparation establishments must be followed:-

You Should:-

- 🔒 LPG cylinders should only be installed to supply LPG to fixed gas appliances where a piped gas supply is not available within the premises;
- 🔒 LPG cylinders must be placed in a purpose-designed



chamber;

- 🔒 A notice indicating the location of the emergency control valve or the fire safety valve must be displayed prominently at the entrance of the kitchen;
- 🔒 An on/off sign must be provided on the emergency control valve or the fire safety valve;
- 🔒 Gas pipework must bear identification labels, be adequately supported and protected by painting or by being enclosed in a sleeve (if such pipework is to pass through a wall). A minimum separation distance of 25 mm from the electric conduit must be kept;
- 🔒 Gas supply and internal installation pipework must be of steel construction and comply with specified international standards. Such pipework must be installed in a safe, reliable and workmanlike manner; and
- 🔒 Gas pipework must be protected against corrosion and mechanical damage, and ventilation provided for the service ducts.

You Should Not:-





- ❌ Supply LPG to basement kitchens or seating areas below ground level;
- ❌ Store LPG/LPG cylinders with a total nominal water capacity of over 130 litres;
- ❌ Install gas meters at the only means of escape from the premises;





-  Install gas pipework in confined spaces; and
-  Install gas pipework in rooms accommodating air conditioning or ventilation equipment for the premises.

LPG Cylinder Storage Chambers

For gas safety, LPG cylinders must be stored in a purpose-designed chamber. The construction and use of an LPG cylinder storage chamber should comply with the following requirements:

-  It should be located in a well-ventilated area and not impede the means of escape from the premises;
It should be constructed of concrete or a material with a minimum of 2-hour fire resistance;
-  Its door should preferably be made of metal. The warning notices "LPG Cylinder Storage Chamber" and "No Smoking" should be displayed on the outside of the chamber door, and adequate ventilation openings provided both in the upper and lower parts of the door. A gas isolation valve should be installed outside the chamber;
-  Where a manifold is connected to two or more LPG cylinders at a pressure exceeding low pressure, non-return valves should be fitted to each LPG cylinder outlet connection and the flexible tubing should not exceed 1 m in length;
-  The gas supply system in the chamber should be fitted with a pressure gauge indicating the gas supply pressure. Gas

pipework should be corrosion-resistant, suitably protected, clearly identified and be securely fixed to walls;

-  An on/off sign should be affixed to the valve; and
-  "Instructions for the Safe Exchange of LPG Cylinders" and "Safe Use of LPG" notices should be displayed prominently inside the chamber.

Points to Note after Completion of LPG Works

After completion of works, a registered gas contractor is required to give the Work Completion Certificate, gas installation manual and user guide to the restaurant operator or his/her representative, and keep the records of works for two years for inspection. Restaurant operators should arrange for a registered gas contractor to carry out safety checks on the gas supply system at least once every 12 months, and keep the safety check records to safeguard their own interests.

For the requirements on gas installations in commercial kitchens and food preparation establishments, please refer to the Code of Practice GU06: LPG Installations for Catering Purposes in Commercial Premises prepared by the Gas Standards Office of the Electrical and Mechanical Services Department (EMSD). The code of practice is available on EMSD website at http://www.emsd.gov.hk/emsd/e_download/pps/gas/gu06e.pdf.

E & M Safety Quiz

Please fill in the reply slip below with **the most appropriate answers** and send it by post or by fax to the Editor, E & M Safety Newsletter (contact information is shown at the bottom of this page). The first 500 of the quiz participants^[1] answering all questions correctly will receive a souvenir.

- What should we pay attention to with regard to safety while using kiddie rides?**
 - Stay out of the fenced area while the ride is in motion
 - Sit on the designated seat of the ride
 - Do not overload the ride
 - All of the above
- When considering modernising an old lift, which one of the following is not an enhancement solution recommended by EMSD?**
 - Install a double brake system
 - Install an unintended car movement protection device for the brake system
 - Beautify the lift car interior with decorations
 - Install an ascending car overspeed protection device
- Since when was the CPD Scheme for REWs included as a requirement for renewal of registration?**
 - 1 January 2011
 - 1 January 2012
 - 31 December 2011
 - 1 January 2010
- The Code of Practice for Energy Efficiency of Building Services Installation sets out the design**

standards and technical guidance in respect of the energy efficiency of 4 types of major building services installations. Which one of the following installations is not covered by the Code?

- Lighting installations
 - Air-conditioning installations
 - Fire service installations
 - Electrical installations
- Which of the following is the correct way to ensure gas safety with regard to LPG supply to general commercial kitchens and food preparation establishments?**
 - LPG cylinders must be placed in a purpose-designed chamber
 - Supply LPG to basement kitchens or seating areas below ground level
 - Install gas meters at the only means of escape from the premises
 - Install gas pipework in confined spaces
 - To ensure safety, how often should safety checks be performed on gas installations and cooking appliances in general commercial kitchens and food preparation establishments?**
 - Every 6 months
 - Every year
 - Every 18 months
 - Every two years

REPLY SLIP ^[2]					
Name:			Tel.:		
Hong Kong Address:					
Answers:					
Q1	Q2	Q3	Q4	Q5	Q6
Where did you get this E&M Safety Newsletter?					
Residential estate	School	District Office	New immigrant centre		
Others (please specify):					

[1] Only the first 500 of the quiz participants sending in the Reply Slip with all answers correct will be notified.

[2] The personal data provided in the Reply Slip will only be used for the E & M Safety Quiz purpose. It will be kept confidential and will not be disclosed to any third party. You have the right to request in writing to check whether EMSD is keeping your personal data, to access or correct it, and to enquire about our policy and procedures in the use of such data as well as the types of personal data we are keeping. The above terms do not affect your rights as set out in the Personal Data (Privacy) Ordinance.

Answers to last issue's quiz: 1.A 2.A 3.C 4.C 5.B 6.B

Feedback

Your comments and suggestions, whether on editorial style or contents, are most welcome. Tell us how we can improve and make the E & M Safety Newsletter a truly informative and interesting publication for you. Both the English and Chinese versions of the E&M Safety Newsletter are available on our website at <http://www.emsd.gov.hk>. Please contact us should you need a printed copy.

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