

A Guide to Health and Safety in the Hong Kong Exhibition and Convention Industry



HKECIA

香港展覽會議業協會
Hong Kong Exhibition & Convention
Industry Association



1st Edition July 2010

Acknowledgement

This Guide could not have been published without the assistance and input of the Labour Department of the Hong Kong Special Administrative Region. The HKECIA Exhibition Operations Sub - Committee is thanked for their work on this Guide.

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1. Application

- 1.1 This publication (Safety Guide) recommends safety and health practices for industry stakeholders to ensure the safety and health of all employees at work in the exhibition and convention industry.
- 1.2 It is important to note that compliance with this Safety Guide does not itself confer immunity from legal obligations in Hong Kong. Venue Operators, Event Organisers, Exhibitors, Contractors, Workers and Employees should also observe and comply with statutory provisions of safety legislation and relevant in-house safety rules of individual organization so as to discharge their legal duties and in-house obligations in respect of work activities in a scheduled exhibition.
- 1.3 Advice and guidelines stipulated in this Safety Guide are by no means exhaustive. The users of this Safety Guide should critically examine its applicability and suitability, taking into account the actual workplace conditions and its specific work processes.

2. Definition

“ Venue Operator ”

An exhibition and event venue operator or a licensor who is the exclusive management company for an exhibition and event venue and leases an exhibition area to an organization for a scheduled exhibition. The Hong Kong Convention and Exhibition Centre (Management) Ltd., the AsiaWord-Expo Management Limited and the Hongkong International Trade & Exhibition Centre are such Venue Operators.

“ Event Organiser ”

An organization or a licensee who enters into a contract with a Venue Operator to use and occupy an exhibition area for a scheduled exhibition and employs exhibition staff and engages a Contractor to conduct a scheduled exhibition.

“Exhibitor ”

An organization or a licensee who enters into a contract with an Event Organiser to use and occupy an exhibition area within a scheduled exhibition.

“ Contractor ”

A person or company who is engaged by an Event Organiser or an Exhibitor to erect and dismantle Stands during the move-in and move-out period of a scheduled exhibition.

“ Scheduled Exhibition ”

An exhibition function, which includes all work activities related to move-in process, demonstration/show time and move-out process.

“ Safety Management System ”

A safety and health management system within the meaning of the Factories and Industrial Undertakings (Safety Management) Regulation, Cap 59.

“ Stand ”

Any structure, platform, shell-scheme, booth, kiosk, display, space or other installation intended for exhibition purposes.

“ Form ”

Approved Forms No. 1-7 of the Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations, Cap 59 or Form 5 of the Construction Sites (Safety) Regulations, Cap 59.

“ Operator Certificate ”

A valid certificate to operate a forklift truck within the meaning of the Factories and Industrial Undertakings (Loadshifting Machinery) Regulation, Cap 59 or a valid certificate to operate an elevated working platform issued by a local agent of the appliance.

“ Green Card “

A valid training certificate issued by an approved training operator within the meaning of the Factories and Industrial Undertakings Ordinance, Cap 59.

3. Legal Liability

- 3.1 To ensure the safety and health of all persons in the exhibition and convention industry is the responsibility of all industry stakeholders. All stakeholders are playing different roles. They may be occupiers, employers or employees whose statutory responsibilities are defined by the Occupational Safety and health Ordinance, Cap 509.
- 3.2 Duties of occupiers of premises:
- Occupier of premises means a person who has any degree of control over the premises where a workplace is located,
 - As such a Venue Operator, an Event Organiser or an Exhibitor may be an occupier of an exhibition premises or an exhibition area respectively,
 - Occupier shall ensure that the premises, the means of access to and egress from the premises and any plant or substances kept at the premises are safe and without risk to health.
- 3.3 Duties of employers:
- Provide and maintain safe plant and safe system of work,
 - Ensure safe use, handling, storage and transportation of plant and substances,
 - Provide information, instruction, training and supervision,
 - Provide safe means of access to and egress from the workplace,
 - Provide and maintain a safe workplace and working environment,
 - A Venue Operator, Organiser, Exhibitor or Contractor is an employer to ensure safety and health at work of their employees.

3.4 Duties of employees:

- Take care for the safety and health of himself and other persons who are at the workplace,
- Co-operate with employer to ensure safety and health requirements are complied with.

3.5 Venue Operators, Event Organisers, Exhibitors, Contractors and employees should make clear their roles and responsibilities for the safety and health of the people in the exhibition and convention industry.

4. Commitment

4.1 A safe and healthy workplace cannot be maintained in its effective and efficient state without a strong commitment and continuous investment from various stakeholders of the exhibition and convention industry. Venue Operators, Event Organisers, Exhibitors, Contractors and employees should maintain a high standard of safety and health within all operations of scheduled exhibitions, with an aim to minimizing physical harm to any persons, reducing any impairment to health, and controlling any property damage to plant and equipment to the minimal level.

4.2 Venue Operators should:

- Operate a Safety and Health Management System to display strong safety and health considerations over all other matters of business,
- Provide resources in implementing the Safety and Health Management System to manage scheduled exhibitions safely,
- Set up in-house safety rules to maintain safe premises for all persons in any scheduled exhibition,
- Provide safety and health advice and assistance to Organisers to enhance safety and health conditions at their exhibitions.
- Regulate and monitor in-house safety rules and the safety practices of this Safety Guide and urge Organisers to issue stop-work orders to rectify any hazardous conditions, as specified in the in-house safety rules and this Safety Guide.

4.3 Event Organisers and Exhibitors should:

- Plan all work activities of a scheduled exhibition with due care to ensure the safety and health of persons participating in a scheduled exhibition,
- Adopt safety measures as recommended in this Safety Guide and its respective in-house safety rules to design and build all Stands,
- Adopt safety measures as recommended in this Safety Guide and its respective in-house safety rules to provide and maintain a safe and healthy environment for their employees and Contractor's workers,
- Engage safety professionals to conduct risk assessments of hazardous trade processes and adopt their recommendations to build and conduct a scheduled exhibition,
- Exercise regulatory control over the use of premises, plant and substances that may impose hazardous conditions on persons engaged in a scheduled exhibition.

4.4 Contractors should:

- Have a safety professional conduct risk assessments for a hazardous work processes,

5. Prohibition

- 5.1 Without prior approval from a Venue Operator, no welding process, paint-spraying process and use of circular saws are allowed in a scheduled exhibition.
- 5.2 No naked flame is allowed within the venue premises.
- 5.3 Smoking is prohibited within the venue premises except at a designated area.
- 5.4 The loading and unloading areas, the material handling areas, and the marshalling areas are designated as hazardous work areas.

The following activities are prohibited:

- Consumption of alcoholic beverages and smoking,
- Speeding or reckless use of vehicles or equipment including forklift trucks,
- Storage of gasoline, kerosene, diesel fuel or other flammable liquids, even temporarily,
- Refueling activity of any kind,
- The presence of workers under 18 years of age during the move-in and move-out period.

6. Time Frame of an Exhibition

- 6.1 A scheduled exhibition consists of 3 work-periods:
- Move-in period in which Stands are erected by workers of Contractors,
 - Open period of an exhibition for visitors,
 - Move-out period in which Stands are dismantled and removed from the venue premises by workers of Contractors.
- 6.2 As far as practicable, a reasonable time frame within a scheduled exhibition should be allocated for the move-in and move-out periods. Too short a work duration for any move-in and move-out processes may impose work stress on workers to finish the task in time. Under acute time constraints, workers may take short cuts, adopt malpractices and dangerous acts.
- 6.3 It is the duty of an Event Organiser to plan and execute a reasonable time frame for a scheduled exhibition, with the cooperation of a Venue Operator in the allocation of an exhibition area. In general, an Event Organiser should provide a reasonable time frame for the move-in and move-out periods to his Contractors. The following Table 1 is one of the proposed time apportions for an exhibition with 50,000m² in which 50% is raw space, but these timings can vary greatly depending on the size and type of exhibition being built/dismantled. Generally speaking, the greater the amount of "special design" or "raw space" stands or pavilions, the more time is required for the building and dismantling processes.

Gross Area	% of Raw Space	Move-in Period	Move-out Period
50,000 m ²	50%	48 hours	12 hours

Table 1- proposed move-in and move-out time frame of an exhibition with 50,000 m² in which 50% is raw space.

- 6.4 Under no circumstances should the dismantling of Stands be carried out at the end of an open period in which exhibitors and visitors are still present in the exhibition halls.

7. Support Services

- 7.1 Although it is a prime duty and responsibility of a Contractor to provide and maintain a safe plant and a safe system of work for his workers during the move-in and move-out periods, a quadripartite cooperation between a Venue Operator, Event Organiser, Exhibitor and Contractor is an effective mechanism to enhance the safety and health standard of the exhibition and convention industry.
- 7.2 A Venue Operator may provide safety and health advice and offer temporary rental services of safe plant and equipment whenever available to an Event Organiser, an Exhibitor or a Contractor in case of need to speed up a job process in a safe manner.
- 7.3 Examples of safety and health advice are:
- Risk assessment of a specific trade process,
 - Method statement of a specific trade process,
 - Proper use of personal protective equipment.
- 7.4 Examples of temporary rental service are:
- Ladders,
 - Metal scaffolds,
 - Elevated working platforms,
 - Safety harnesses and independent lifelines.
- 7.5 The arrangement of the support services should be made known to the Event Organiser and the Exhibitors before signing a lease for a scheduled exhibition. Notice of such an arrangement should also be displayed for the attention of Contractors.
- 7.6 The Event Organiser, the Exhibitor and Contractor should accept the liability of using such services during the rental period.

8. Health and Safety Guidelines

8.1 Fire Prevention

8.1.1 The stand building and dismantling periods may involve hundreds of workers and fire could be a disaster when the risk is not manageable. The followings fire preventive measures should be observed:

- Avoid electric socket overloading,
- Proper treatment of cigarette butts and other ignition sources,
- No naked flame inside exhibition and convention venue,
- Keep fire exits clearly marked, free from obstruction and fire doors closed at all times,
- Keep all fire fighting equipment easily accessible,
- Inflammable substances exceeding the legally exempted amount are prohibited in exhibition venue,
- Preparation of a detailed fire emergency evacuation plan so that the workers can be evacuated safely,
- Under the Smoking (Public Health) Ordinance, Cap. 371, smoking is prohibited inside the exhibition venue.

8.2 Working at Height

8.2.1 In an exhibition, some stands may exceed 4 metres or more. The erection and dismantling of Stands involve working at height, which is one of the main causes of serious accidents in the exhibition industry. The following are principles that a Contractor has to consider when they undertake working at height:

- It is often much safer to work from a suitable working platform than from a ladder,
- As a good practice, priority should always be given to a working platform when choosing means of access/support for working at height,
- When a ladder is chosen as the access/support equipment for working at height for practical reasons, the height of access should be limited to less than 2 metres,
- Suitable working platforms should be provided for working at height exceeding 2 metres,
- Under special situations where provision of a working platform is not practicable, a risk assessment should be conducted to justify the alternative choice and to identify the necessary precautionary measures,
- In all circumstances, suitable steps must be taken to ensure that adequate protection measures are in place before allowing workers to work at height.

8.3 Ladders

8.3.1 Ladders are extensively deployed in the erection and dismantling of Stands. When ladders are used, the following control measures require attention:

- Select suitable type of ladder for the work,
- Use only ladders of sound construction and proper maintenance,
- Install ladder locks for A-ladders,
- Always maintain 3 points of contact when climbing ladder,
- Properly place ladder base on even and solid ground,
- If required, post a person underneath to secure ladder and provide necessary assistance,
- Use ladder for light work of short duration. Do not overload ladder,
- Do not work off the top three rungs,
- Do not work on the rung which presents a falling distance of 2 metres or more,

- Do not take dangerous action on ladder, such as straddling across, ladder walking, or over-reaching from it,
- Do not rest ladder on uneven surfaces, loose material, incline or gradient,
- Do not place ladder on boxes, unsecured objects, booths or elevated working platforms,
- Avoid positioning ladder in any area susceptible to surrounding work activity,
- Provide adequate information, instruction, training and supervision for users.

8.4 Metal Scaffold Platforms

8.4.1 A working platform is inherently much safer than ladder for working at height, and its use will eliminate most of the factors which cause falls from ladders. Nowadays, a proprietary mobile scaffold system is commonly used in the exhibition industry. In order to ensure the safe use of metal scaffolding, the safety requirements stipulated in the Code of Practice for Metal Scaffolding Safety published by the Labour Department should be observed, which include:

- The height to the least base dimension ratio should not exceed 3.5:1 (indoors) and 3 :1 (outdoors), respectively,
- Outriggers should be installed and used,
- Erection should be carried out by trained workmen under the supervision of a competent person,
- Bi-weekly inspection should be conducted by a competent person who issues a Form 5 to certify its safety,
- Internal ladder should be fitted and used,
- Castors should be fitted with a positive wheel and swivel lock,
- Guard-rails, mid-rails and toe-boards should be installed on the working platform,

- Workers are prohibited to remain on the scaffold when it is being repositioned to another work location.
- 8.4.2 Suitable and sufficient anchorage and suitable fixings should be provided to for every scaffolder involved in the dismantling work at height. They should wear safety belt and attach to it to the anchorage. Scaffold itself should not be used for anchorage purpose.

8.5 Power-operated Elevated Working Platforms

8.5.1 A power-operated elevated working platform is flexible and versatile equipment for working at height and often considered a safer alternative to a ladder. Practical guidance on how power-operated elevating work platforms can be used safely and properly are provided in Guidance Notes on Safe Use of Power-operated Elevating Work Platforms published by the Labour Department. The following are some basic safety requirements for using this appliance:

- The appliance should be load-tested by a Registered Professional Engineer before use and after substantial repairs. A Form 4 may be used to certify the result,
- The appliance should be regularly examined by a Registered Professional Engineer every 12 months. A Form 5 of the Factories and Industrial Undertaking (Lifting Appliances and Lifting Gear) Regulations, Cap 59 may be used to certify the safe working condition,
- The appliance should be regularly inspected by a competent person every 7 days with the result recorded in a Form 1,
- Only trained workmen with valid operator certificates are allowed to work on and operate the appliance,
- Trained workmen should wear full body harnesses when on the working platforms. The lanyards should be anchored to suitable anchors provided inside the platform.

8.6 Electrical

8.6.1 Electrical appliances are widely used in installation/dismantling works in exhibition areas. Contact with live electrical components can cause serious or fatal injuries. To prevent such accidents, due attention should be paid to safety in using electricity.

The followings are some basic safety measures in use of electricity:

- Check electrical appliances before use. Repair or replace damaged/faulty parts immediately,
- If portable electrical appliances are not double-insulated, they should be earthed. Plugs and sockets complying with safety standards should be used in conjunction with residual current device (RCD) for earth leakage protection,
- If the protective device of electrical equipment (such as fuse or circuit breaker) has operated and interrupted the electric current, the cause of the fault should be identified and rectified before putting it back into service,
- All sockets and plugs should be of proper construction and electrical wire connections should be adequately protected,
- Avoid overloading electric sockets,
- All electrical work should be carried out by Registered Electrical Workers.
- Any electrical cables or wires on the venue floor must be covered using a metal ramp or rubber matting.

8.7 Fork-lift Truck Operation

8.7.1 In exhibition contracting services, fork-lift trucks are widely used for lifting, transporting and handling of materials and equipment. The following are safety measures for the use of a fork-lift:

- The fork-lift truck operator should possess a valid certificate as required by the Factories and Industrial Undertakings (Loadshifting Machinery) Regulation, Cap 59,

- Rear mirror should be in place,
- When seat belt is provided in the fork-lift, fasten the seatbelt,
- Both visual and audio warning signals should be in place,
- Regular maintenance and examination of the fork-lift trucks shall be carried out by competent person,
- Do not obstruct the view of operator.

8.7.2 To effectively reduce the risks of fork-lift accidents in exhibition venues, a safe system of work comprising risk assessment, planning, workplace control, fork-lift selection, training of personnel, implementation, reviewing and auditing should be established and maintained. The Venue Operator and the Event Organiser should define the route for fork-lift trucks in order to achieve the division of vehicles and workers in the venue. Reference should be made to the Guidance Notes for Safe Use of Fork-lift Trucks published by the Labour Department for details.

8.8 Air Receiver

8.8.1 Air receiver is a kind of equipment commonly used for installation/dismantling work in exhibition venues. The safe operation of air receiver depends on a thorough understanding of the equipment, regular inspections and periodic maintenance and, above all, the safety consciousness of all parties concerned. The Labour Department has published "A Guide to the Construction, Installation, Operation and Maintenance of Air Receivers" to provide effective guidelines for the safety in use of this equipment. The following are some key points of air receiver safety:

- Air receiver should be properly designed, constructed and maintained,
- Air receiver should be examined by an appointed examiner in accordance with the requirements laid down in the Boilers and Pressure Vessels Ordinance, Cap. 56,
- A certificate of fitness in respect of an air receiver shall be obtained from an appointed examiner before putting the air receiver into use,

- The safety valve of an air receiver should be properly set by an appointed examiner to prevent excessive pressure build-up,
- Every air receiver should be registered with the Boiler and Pressure Vessel Division of the Labour Department before it is put into use. The registration number should be engraved in a conspicuous position on the air receiver,
- The dangerous parts of an air receiver, such as discontinuous rotating part of flywheel or in-running nips of belt and pulley, should be effectively guarded.

8.9 Lifting Operation

8.9.1 For exhibitions involving large display items, lifting operations are involved. To ensure that the lifting operation is conducted under safe conditions, the following safety measures have to be observed:

- Prior to lifting operation, assess the weight and type of load to be lifted, such as size, lifting points, centre of gravity, etc,
- A signaler for lifting operation shall be employed, where necessary,
- All lifting appliances and gears shall have valid examination certificates,
- Periodic examination, repair and maintenance of lifting appliances and gears shall be carried out by competent persons,
- The requirements of the F&IU (Lifting Appliances and Lifting Gear) Regulations, Cap. 59, shall be followed,
- Operators shall hold valid certificates for the kind of lifting appliances to be operated.

8.10 Rigging Operation

8.10.1 In exhibitions, the overhead space may be used to hang extraordinary articles such as banner or structures. To hang such articles involves rigging operations. The following safety measures have to be observed:

- All lifting appliances and gears shall have valid examination certificates,
- All aluminium trusses should comply with the British Standard Code of Practice for the Structural Use of Aluminium – BS 8118 or other equivalent standard. Any steel components or trusses should comply with BS 449 the Structural Use of Steel or other equivalent standard. There is a British Standard (BS 7906 – 1 and 2) which covers the design and use of trusses respectively. Other equivalent standard which covers the design and use of trusses should also be accepted.
- The weight of the truss and rigging articles should not exceed the load capacity of the suspension point,
- Securely fix the rigging articles on the truss,
- All riggers and crew shall be trained on the safe working procedures and be familiar with the use of rigging equipment,
- No person shall be allowed to stay under the area where rigging is in progress,
- If power-operated elevated working platform is used, ensure there is effective communication between spotters and the operator.

8.11 Manual Handling

8.11.1 A large-scale exhibition may involve thousands of Stands. Stand materials, furniture, etc require manual transportation from loading point to the specific display area, and vice-versa. The following manual handling safety should be observed:

- Conduct risk assessment of manual handling in accordance with the Occupational Safety and Health Regulation, Cap 509,
- Use mechanical tools or trolleys for transport operations whenever possible,
- Adopt safe handling procedure and correct posture,
- Observe the following manual handling steps,

- Estimate the weight and stand close to the object(s) with feet spread apart for balance before lifting
- Keep back straight
- Use palms and fingers to hold the object(s) tightly
- Hold the object(s) close to the body

8.12 Housekeeping

8.12.1 Keeping the workplace clean and tidy is a fundamental step for improving safety and health in the workplace. Good housekeeping can also help reduce slips and trips which are a major cause of injuries in the exhibition industry. The following are some good housekeeping practices:

- Provide and maintain adequate lighting and ventilation,
- Keep all passageways tidy to avoid tripping hazards,
- Install electric wiring properly and do not leave loose or unprotected cables across passageways,
- Stack articles properly to ensure their stability,
- Keep exits unlocked, clearly marked and escape routes unobstructed.

8.13 Personal Protective Equipment (PPE)

8.13.1 PPE should be worn correctly at all times when safety and health risks are present during exhibition move-in/out.

- Wear a safety harness with the lanyard connected to an anchorage point, when using a non-standard working platform,
- Wear a safety harness with the lanyard connected to designated anchorage, when working on power-operated elevated working platform,

- Wear reflective vests whilst working in loading bays, outdoors and during move-in and move-out periods where mobile machinery is in operation,
 - In the case of work that may lead to the possibility of head injuries, the wearing of safety helmets is recommended
 - Suitable footwear to guard against nails, broken glass etc.
- 8.13.2 Ensure personal protective equipment is in good condition for use.

8.14 Green Card Scheme

- 8.14.1 Workers engaged in the erection and dismantling of Stands should possess adequate safety and health knowledge and awareness. With effect from 1 January 2010, HKECIA endorses the requirement for all workers to acquire a valid Green Card before they can be allowed to work in the venues.
- 8.14.2 Workers have to present their valid Green Cards before entering the venue for the erection or dismantling of Stands.
- 8.14.3 Workers who do not have valid Green Cards will be prohibited from the erection or dismantling of Stands in the venues.
- 8.14.4 Exemption will be granted to overseas workers who can show that they have undergone training of an equivalent standard to green card training in Hong Kong.

8.15 Working In Very Hot Weather

- 8.15.1 As far as practicable, an Event Organiser should, under a contract with his Venue Operator, provide air-conditioning and ventilation to workers of a Contractor in the course of move-in and move-out periods in very hot weather conditions. In general, the temperature of an exhibition area should be maintained at a level of not more than 28°C on the condition that the heat gain to inside the venue is negligible. When the heat gain inside the venue is significant and originates from the move-in or move-out activities of the exhibition, Venue Operators, Event Organisers and Contractors should come up with possible solutions or alternatives to prevent or lessen the heat gain inside the venue.

- 8.15.2 Natural and mechanical ventilation should also be provided, especially in those exhibition areas where air-conditioning facilities have not been installed.
- 8.15.3 In very hot weather, workers engaged in the erection and dismantling of Stands in the move-in and move-out periods should pay attention to their health condition. Mineral water is appropriate for replenishment.
- 8.15.4 Whenever abnormal health conditions are identified, stop working, take a rest in a shaded area and seek help.

8.16 Supply of Drinking Water Arrangement

- 8.16.1 According to the Occupational Safety and Health Regulation, Cap 509, it is the responsibility of employers to provide their employees with adequate supplies of drinking water.
- 8.16.2 Venue Operators, Event Organisers, Exhibitors and Contractors should make suitable arrangements to provide drinking water to their employees. The arrangement, such as the location of supply of drinking water, should be clearly made known to their employees.

Appendix

References

- A Guide to Ladder and Elevated Working Platform
- Code of Practice for Metal Scaffolding Safety
- Safe Use of Power-operated Elevating Work Platforms
- Guidance Notes for Safe Use of Fork-lift Trucks
- Basic Electrical Safety Measures in Workplace
- Guidance Notes for the Safe Isolation of Electricity Source at Work
- Guidance Notes on Fire Safety at Workplaces
- Five Steps to Risk Assessment
- Safe System of Work
- A Guide to the Construction, Installation, Operation and Maintenance of Air Receivers
- Handbook on Guarding and Operation of Machinery
- A Guide to Personal Protective Equipment
- Working Safely with Hand Tools