

Safety Training Course of Construction Workers of Specified Trade Demolition Worker (Building) (AS3)

Key Points Review

Version: 2023-07

All Rights Reserved



1. Introduction - Causes of Accidents

1.1 Collapse of Structure

The building structure is overloaded during demolition process, incorrect sequence for demolition, inadequate/ unstable support or insufficient protection to workers or the public during demolition process



Source: <https://pmnewsnigeria.com/2017/08/29/another-3-storey-building-collapses-lagos/>

1.2 Falls of persons

Improper working place, resulting in slipping and falling.



Source: <https://www.labour.gov.hk/tc/public/pdf/os/D/CaseBook.pdf>

1. Introduction - Causes of Accidents

1.3 Fall of Objects

Improper placement of tool, materials and failure to provide adequate safety measures to prevent fall of objects



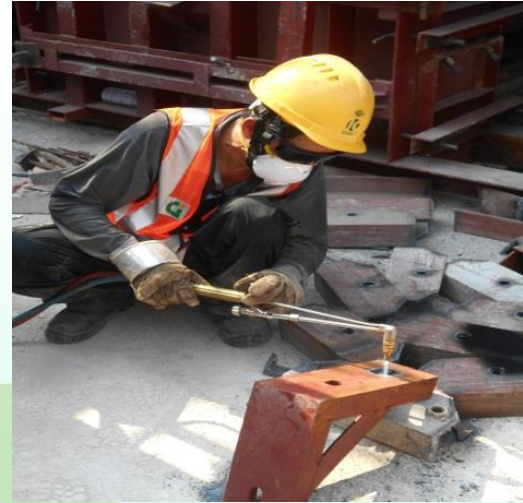
1. Introduction - Causes of Accidents

1.4 Collapse of Equipment

Caused by inappropriate operation, inadequate trained operator or unsafe working environment

1.5 Gas Explosion

Caused by improper placement or operation to gas cylinders or conducting hot work in an enclosed environment with explosive gas



Source:

<https://www.housingauthority.gov.hk/mini-site/site-safety/tc/promoting-best-practices/paradigms-of-best-site-practice/safe-use-plant/index.html#>



Source: Guidebook for Understanding of Asbestos Containing Materials

1. Introduction - Causes of Accidents

1.6 Pneumoconiosis

Inhalation of harmful dust (e.g., silica and asbestos dust) during demolition work



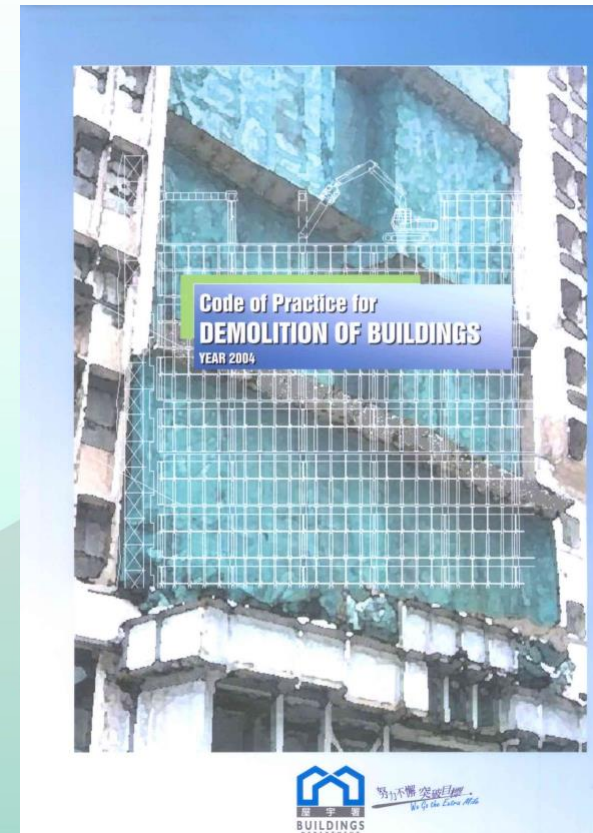
Source: Guidebook for
Understanding of Asbestos Containing
Materials

2. Structural Study before demolition work

Prior to carrying out any building demolition, detailed building evaluation by means of surveys and appropriate assessments shall be required:

2.1 Studied building structure details

Special safety measures shall be arranged for any special design in structure (e.g., support for safety of falsework). For general structure, check if the load capacity is sufficient to withstand the extra load during demolition work



Source:
https://www.bd.gov.hk/doc/tc/resources/codes-and-references/code-and-design-manuals/Demolition_c2004.pdf

2. Structural Study before demolition work

2.2 Alternation of Building Structure

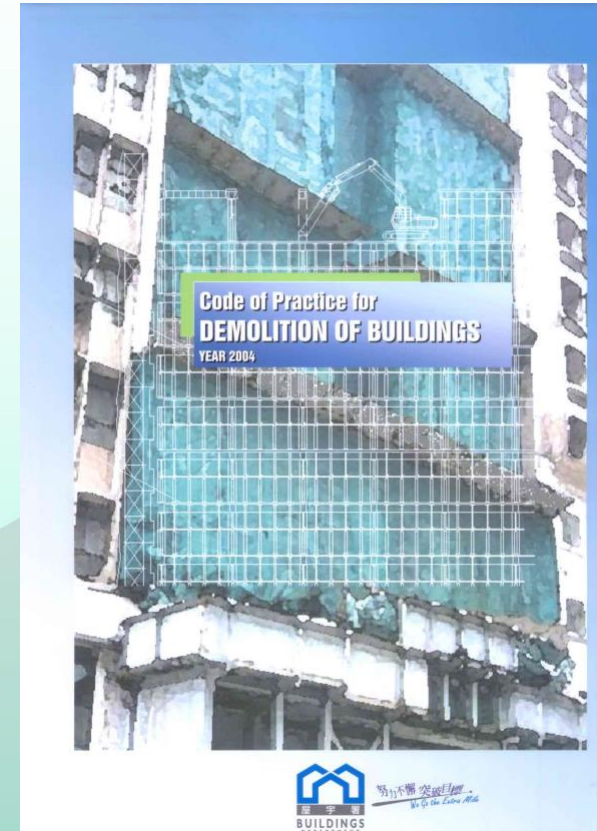
If alterations or additions work (A&A works) was carried out before, special care should be taken during demolition

2.3 Condition of Building Structure

The structural safety is no longer what it used to be after many years use. Observation, judgement and handling are needed on the existing condition.

2.4 Structures near Building

Evaluation process must include the influence on adjacent structures. Bracings/ support should be considered to ensure the safety and stability of building in surroundings.



Source:

https://www.bd.gov.hk/doc/tc/resources/codes-and-references/code-and-design-manuals/Demolition_c2004.pdf

2. Structural Study before demolition work

2.5 Original Use of Building

Original use of building can be hazardous to workmen. For instance, flammable or radioactive substance can be stored in hospital or industrial building or material of asbestos existed in the building.

3. Arrangement for Demolition of Utilities

Utilities (e.g., water, electricity, fuel, telephone, antenna and sewage pipes etc.) are hazardous to workers. Those facilities shall be fully isolated and certified by relevant authorities before commencement of demolition work.



4. Handling of Dangerous Substances (Asbestos)

4.1 Understanding Asbestos

It was not well known the hazards associated with asbestos (e.g., asbestos dust could lead to lung cancer) in the past, but asbestos products was suspended to use when its hazard was learned.

光學顯微鏡下放大一百倍的石棉纖維



Source:

https://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/environmentinhk/air/guide_ref/files/Asbestos_Control_Leaflet_Chi.pdf

4. Handling of Dangerous Substances (Asbestos)

4.1 Understanding Asbestos

Asbestos is made of fibers of stone surface. With its heat-resistant function, it is suitable for product of heat-resistant (such as roof insulation bricks, corrugated plates, chimney, grilles, garbage chute, elevator brakes and fuse for electric products etc.) and widely used.

光學顯微鏡下放大一百倍的石棉纖維



Source:

https://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/environmentinhk/air/guide_ref/files/Asbestos_Control_Leaflet_Chi.pdf

4. Handling of Dangerous Substances (Asbestos)

4.2 Safety Preventive Measures to Asbestos

- Consult or employ a registered asbestos consultant for assessment, and asbestos removal work shall be carried out by registered asbestos contractor
- Prevent the exposure of any workman to asbestos
- Workman shall suspend work and report to the management in case asbestos is found during demolition;
- Reduce the exposure of any workman to asbestos to the lowest level reasonably practicable;
- Provide every workman who is or liable to be exposed to asbestos with approved respiratory protective equipment;
- Ensure the full and proper use by each workman of the respiratory protective equipment °

4. Handling of Dangerous Substances (Asbestos)



4. Prevention of Falling Objects

3. Installation of catch-fan with appropriate apertures and thickness to prevent falls of objects and cause personal and property damage.
4. All persons must wear safety helmets in approved standard to prevent serious injuries caused by falling objects.



5. Hoardings and Covered Pedestrian Walkways

1. The primary purpose of hoardings and covered walkways is to separate the demolition site from the public and prevent unauthorized entry to construction site;
2. Pedestrian walkway with covered protection further protects pedestrians from falling objects (e.g., mud)





CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

會



生命第一
LIFE FIRST



對危險說 **不**

SAY **NO** TO DANGER

Copyright and Republication

All contents and information, including but not limited to graphical design, are proprietary to The Hong Kong Institute of Construction and are subjected to copyright protection. Republication, redistribution or unauthorized use of any content or information contained in this document is expressly prohibited without the prior written consent of The Hong Kong Institute of Construction.

Disclaimer

The author and publisher has made every effort to provide complete and accurate information in this document. Any person using this document must rely on his/ her own skills and judgement. The author or the publisher assumes no liability or responsibility for any error in the information contained and will not be liable for any loss or damage arising from any omissions in this document (whether in negligence or otherwise).