

Next, let's invite the Senior Manager/Safety & Health of the Housing Department Mr. Lau Chee Tim to give us a talk on the issue.

The topic of this session is:

Risk Assessment with Learning from Safety Incidents. Mr. Lau, please

Hello Chairman Wong, all industry players and colleagues,

Today I would like to share

The ideas of risk assessment and our review on several safety incidents, how to conduct risk assessment as well as the importance of risk assessment.

There is a wide range of procedures on construction sites in Hong Kong, which involves vast use of heavy machineries, changing working environment, huge number and high mobility of construction workers.

In fact, hazards exist everywhere on construction sites. Concerning the construction projects of the Housing Department,

we require contractors to implement safety management systems, properly control risks and provide a safe and healthy working environment, in order to prevent workers from being injured on the construction sites.

Risk assessment consists of five steps.

The first step is to identify the hazard, the second step is to predict who will get hurt,

The third step is to find out the possibility of accidents

and the severity of hazards, so as to assess the risk.

To control risks effectively and systematically, we should work from a number of aspects:

Firstly, get rid of risks from the root.

Secondly, resort to less harmful alternatives.

Thirdly, avoid hazards by controlling the construction process.

Then, reduce the exposure to hazards by administrative management.

Finally, the residual risk can be dealt with by putting on personal protective equipment.

The fourth step is to record the assessment outcomes.

Find out the safety measures from the risk assessment outcomes?

The fifth step, when facing a changed environment,

see whether the risk assessment should be reviewed or revised.

After that, through certain

serious accidents occurred on the non-Housing Department construction sites,

let's see the lessons we learnt,

All industry players should play attention to avoid the occurrence of similar tragedies on the construction sites of the Housing Authority.

In the first incident, a bar bender

was working on the scaffold working platform.

During the working period, the worker needed to transfer the materials and tools to another location of the scaffolding.

When transferring materials on the scaffold, the worker lost balance and fell down from the of the gap

of the working platform to the ground.

He died unfortunately.

In this incident, we can reflect ~~rethink~~ if there is any room for improvement.

Did the contractor properly carry out risk assessment, including identifying hazards and finding out the persons being affected during the planning stage?

After analysis and assessment of the risk, in selecting risk handling measures, priority should be placed in adopting suitable construction methods, so as to prevent people from falling down, reduce the risk to the minimum, or use prefabricated element to reduce the chance of working at height.

Secondly, in choosing scaffolding as the working platform, did the planning teams establish safe construction methods under related safety standards for the erection, examination and the use of working platforms ?

Purpose of erecting scaffolding is to provide a stable working platform, which should be provided with appropriate guard-rails and toe-boards.

Thirdly, to ensure the safety of the working platform, did the construction methods require inspection of the working platform by competent person before use?

Fourthly, did the contractor provide suitable training to all supervisors and workers and conduct regular monitoring to ensure the correct implementation of these safe construction methods?

In the second incident, an electrician fell from a ladder.

That worker was responsible for installing electrical conduits on the ceiling.

After reaching the ceiling by using a foldable ladder, the worker fell due to loss of balance.

He sustained serious head injuries and was subsequently dead unfortunately.

In this incident, did contractors properly conduct risk assessment?

When selecting risks control measures,

did they give priority in considering suitable construction methods to minimise the risks of human falling from height?

When the planning team choosing the working equipment, did they consider whether the equipment can reduce the chance of human falling from height, or reduce the severity of being hurt?

Thirdly, if it is impossible to work safely on the ground,

did contractors provide a suitable working platform equipped with guard-rails and toe-boards?

From these pictures, there are electric working platforms and working platforms with guard-rails.

These are good alternatives.

In the third incident, metal frames fell to the ground during lifting.

On the construction site, a worker used a chain sling with safe working load of only 1 tonne to lift metal frames of total 2 tonnes.

Then, the frames were lifted from the ground to the roof.

In the course of lifting, the chain sling broke suddenly and the metal frames fell down, hitting a worker working on the ground.

The chain sling used in the incident had not been tested or checked.

In this incident, did contractors properly conduct risk assessment during the planning stage?

Did they identify hazards of objects falling from height and persons being affected?

Did they formulate risks control measures after assessing the risk?

Did they decide who is responsible to implement the risks control measures?

What are the priorities for these risk control measures?

When all work is done, can the remaining risks be prevented

by using personal protective equipment as a final resort?

Secondly, to prove the safety use of equipment, did the planning team set up any requirement under the construction methods that the chain sling should be examined and inspected regularly by competent persons?

Thirdly, to keep away other workers from the lifting zone, did the construction methods required the lifting routes to avoid passing other working zone?

Fourthly, did the contractor provide suitable training to the supervisors and workers on the safe lifting procedures and rigging method and conduct regular monitoring?

In the fourth incident, an electric arc welding worker died due to electric shock.

On a rainy day, two electric arc welders were assigned to weld metal I-beams outdoor.

One of them died due to an electric shock during welding.

In this incident, did contractors properly conduct risk assessment and identify hazards of electric shock during the planning stage?

Did they consider whether there is unacceptable risk on rainy days?

Indeed on rainy days, it should be better to arrange welding activities in sheltered and indoor areas.

Did the planning team allow sufficient protection, isolation or conductor to prevent workers from electric shock in the construction methods??

Did the construction methods specify the provision of personal protective equipment for preventing direct contact with the components?

such as insulated gloves and mat or 110V hand-held welding machines.

Did the contractor provide suitable training to all supervisors and electric arc welding workers and conduct regular monitoring on the implementation of the safe construction methods?

In the fifth incident, a lift installation worker fell to the lift pit.

Three workers were installing a steel rope-for a lift in a building.

One of them lowered an end of the steel rope from the machine room at the rooftop to the lift pit manually while the other two were

standing on the steel scaffold inside the lift shaft on the 35th floor and the 15th floor respectively leading the steel rope-down.

When the lower end of the rope reached the lift pit,  
the worker on the 15 floor left the scaffold. At that moment,  
the whole rope fell rapidly,  
and the worker on the 35th floor was dragged down from the scaffold by the falling rope.  
That worker fell to the lift pit and died.

Indeed, did the contractor properly assess the risks  
during the construction planning stage?  
including the identification of the falling hazard of the rope.

Did the construction method specify the provision of suitable working platforms inside the lift shaft  
for the workers?

Were there sufficient means of ingress / egress?

Were there enough safety nets to prevent objects from falling down?

Did the planning team specify the need of machinery tools to lift heavy objects when formulating the  
construction methods?

Did the construction method specify the provision of  
suitable full body harness and anchorage to the workers?

Did the contractor provide guidance and conduct regular monitoring on the implementation of the  
safe construction methods?

To conclude, risk assessment is the key to safety,  
which helps us to identify hazards, formulate a comprehensive list of risk factors,  
analyse the causes of risks, impact and the possibilities of occurrences  
manage the risks so as to confirm the priority of risks control,  
By adopting suitable preventive measures, risk can be eliminated or to be reduced to the minimum.  
Accident can be avoided from happening.

We expect and hope industry players can analyse the work flows in detail,  
identify the chances of getting hurt and implement preventive measures,  
effectively deal with risks and critically review the risk assessment so as to tackle any new risks arising  
from new machinery, materials, procedures.

Raise our awareness at all time, adopt preventive measures in time  
strengthen communication and support, conduct proper risk assessment, enhance safety on  
construction sites.

In the industry, there have been numerous unfortunate incidents.

Are those accidents attributable to the problems of risk assessment? Is risk assessment sufficient?

Carrying out good risk control, preventing accidents from occurring.

Risk assessment is the key to site safety.

I act with a caring heart

Thank you.