

b Transcription: English subtitles

Here is the footage from “Site Safety Seminar for Capital Works New Works Contracts” organised by the Hong Kong Housing Authority on 30 April 2015.

The speaker is Mr. Jack FONG, Senior Consultant of OSHC

His presentation topic is “Housing Authority Safety Auditing System (HASAS) Version 1.5 (For Building and Engineering Contracts) – Findings in Q4 2014 and Q1 of 2015”

Mr. Jack FONG:

Good afternoon, fellows of the industry!

I am Jack Fong from the Occupational Safety and Health Council (OSHC). I would like to report the results of the Housing Authority

Safety Auditing System (HASAS) and good examples in the past two quarters. I will report in several parts.

First, I would like to look at the results of the Housing Authority Safety Auditing System (HASAS) in the past two quarters,

That is, the performance of new works contracts. Then, we will have the findings

There are certainly some good examples, And some safety innovations,

That is to say, I will share the innovative safety concepts with you.

In the end, I will talk about the Housing Authority Safety Auditing System (HASAS) in respect of the Housing Authority Lift and Escalator Nominated Sub-contracts Safety Auditing System (HALENSAS),

That is, the assessment results in respect of lifts. Reviewing the results in the past four quarters, We can see that

There were 29 projects in the Q2 of 2014, And there were 39 projects in the Q1 of 2015. In terms of score,

If we take 80 points as the benchmark,

and there are 97% of projects with the score 80 points or above in the Q2, then by the Q1 of 2015,

there are 92% of projects, with the score 80 points or above. The score is slightly decreased,

But overall, it is acceptable and very ideal.

Reviewing the past four quarters, we have critical pass items. There are 7 items altogether,

Including 7 items,

i.e. job hazard analysis, site housekeeping, lifting operation, tower crane, working at height, falling objects, supply system and the mobile cranes.

The average score of these 7 items has slightly decreased,

But the average score was kept at 80 points or above as a whole. We need to pay special attention to housekeeping.

Overall, the scores in these 4 quarters are the lowest among these items, But their average score can reach 80 points or above.

Let's look at a big table, Let's review the history.

The previous qualified score to the current Part A and Part B, which are both at 70 points or above.

In the last quarter, 92% of projects reach the passing scores in Part A and Part B. As for the critical pass items,

In the last quarter there are 97% of projects which can get 70 points or above.

In reviewing the results of the HASAS and HALENSAS,

We can see that in the last quarter we have achieved an ideal result in respect of the electrical, fire services and air-conditioning nominated subcontractors,

with the average score at 70 points or above.

The electrical nominated subcontractors get relatively low scores, and 94% of contractors get total score at 70 points or above.

Let's look at the results of working at height in the past two quarters. In general, most projects achieved very good results.

For example, the working platforms on scaffolding are ideal, with sufficient planking, railing and toe boards.

Access equipment and work places at heights ladders, railing and toe boards are well equipped. Especially that means of access were done ideally, and also designed working platforms,

which utilized step platforms.

The step platforms can be designed with a platform for standing for carrying out certain works.

All of them are ideal.

I would like to make an advertisement.

We have recently launched several subsidy schemes for step platform. If you are interested,

please contact us and collect the relevant information. Moreover, provision of handrails to stairs for access for example, to open excavation.

In this regard they are ideal.

Some other access for unloading platform such as at the location of material hoist are perfect.

There are railings preventing workers from falling alongside. Access the suspended

working platform is perfect,
and provided with step platforms And the access to scaffoldings,
we can see they used platform for standing and are all relatively ideal.
Openings are sealed and provided with warning notice.
And these are working at heights which are provided with safety nets to prevent
workers from falling.
This is done well.
In addition, fall arresting system was used at height conforming with safety standards
such as British Standard.
These are temporary anchor points,
hand tools are mostly provided with hand straps
to prevent them from falling when working at height. Housekeeping on site is mostly
done well,
Include applying 5S method for the storage of tools.
Moreover, the dangerous areas were separated from traffic of workers. The
delineation of working area is relatively ideal.
We can see the outriggers of cranes were extended, which were perfect.
These protruded reinforcement bars were well protected.
Some protruding positions were covered with plastic covers. Many refuse chutes
were maintained in an ideal condition, including good enclosures.
Housekeeping in proximity was carried out well.
There are also companies implementing the 5S method, which applied a museum
mode 5S method on sites, that is to display the good examples or standards,
enabling the sites to follow.
In terms of electrical work, it is well done on many sites. The requirement of
suspending cable is properly arranged. 110V tools were also used.
In this respect there is also a registration system, especially relating to new tools
brought to the sites.
These tools are required to pass the safety inspection and registration by the Safety
Department before
they can be used on sites.
Some companies have done a good job in the lifting operation. De-rating chart was
provided.
for the convenience of workers or lorry cranes

To review the allowable lifting weights at different lifting angles, providing a
reference for workers.
Some companies installed anemometers on cranes

in order to understand and assess the effects of wind speed on the lifting operation. Lifting gear is provided on sites. These gear is suitable and inspected, for the convenience of new vehicles The gear could be borrowed in case for lifting operation. In addition, some aspects are also well done.

The excavator is prevented from being used for lifting operation.

Lifting hooks are blocked

to prevent workers from using them for lifting operation.

Mini loaders are also installed with reverse camera

to allow workers to observe the surrounding environment easily.

Moreover, the abrasive cutters are additionally provided with emergency stop button.

These aspects are well done.

Relevant signs and legally required data are available. Mobile type manual warning switches are also installed. If the works are carried out in a remote area on sites, these devices can be used

and can be activated in emergency or when necessary. For example, warning alarms can be activated.

Now many sites

are provided with water closets and hand washing facilities. Within the buildings, first-aid devices can be provided.

For example, stretchers are well provided on many sites. Next I will introduce you the innovative measures.

This is a protection guard.

Actually, the protection guard has the function of sound insulation roughly reducing the noise by 6~8 Decibel levels,

and reducing the dust concentration by approximately 100 ppm . The principle is rather simple.

That is to say, put the protection guard over the materials during work,

and then work pieces are placed into the protection guard for processing. We can see the necessary information are provided,

such as legislation required information and emergency stop button.

This is the cloud technology

by which the relevant certificates and workers' information are posted on the

network cloud

and the application software is used to read the relevant data from the cloud. Take the certificate of this machine for example.

As well as the authorization of the workers or operators, training certificates of

workers, etc.

The related information can be quickly acquired by using the cloud technology. This is an advanced grouting system, which is installed on sites.

Cement was directly pumped into the tank by pump truck.

The process was controlled by the operator in the independent control room, without manual handling.

After mixing up, the cement is directly pumped out, without any manual handling.

This can reduce the problem arising from manual handling operation, eliminate the contact of cement and the dangerous parts of mixer.

This also reduces the risk of inhaling dust. This is an aluminum working platform.

The aluminum platforms with toe boards are prefabricated.

The advantage is that they are lightweight, i.e. they can be fitted on the double scaffolds,

the length is adjustable

To meet the work requirement they are recyclable, environmental-friendly and convenient.

This company designed the safety measures for prefabricated units by using the Building Information Modelling

such as information for storage, lifting operation or installation, which can be applied on sites

this allows the relevant staff to understand the job requirements and working methodology.

I consider this safety training is practical.

This is the application of Radio Frequency Identification technology (RFID). First, put the RFID tag on the lifting hook.

Install the antenna and processor at the lifting area.

When the antenna emit signals at the height of about 15m,

If the lifting hook with the RFID tag reaches the lifting area or in vicinity, The alarm and buzzer will be triggered and inform responsible persons of the location of the lifted object

so that relevant measures can be taken.

In addition, this is also an application of RFID,

Stick the RFID chips on the machine body.

For example, RFID chips can be applied on excavators or other mobile machines.

This chip is offered with relevant certificate of the designated machine. Related persons, especially management officers and safety officers,

Can use mobile phone to read the chip and get the condition and information and certificate expiry date of the machine, related risk assessment report, and which operators are authorised to control the machines. Meanwhile, by using this RFID technology, the information of related workers can be read, such as whether Worker Registration Card or Construction Industry Safety Training Certificate had been expired or not.

Relevant information can be easily acquired. This is another application of RFID technology.

In this application, three radio frequency receivers are placed on both sides and the back of the machine respectively and the alarming apparatus is installed inside the machine, while the RFID chip is placed on the safety helmet of worker who needs to work nearby.

If the worker is too close to the machine, say within around 2 meters, warning signals will be given in the machine informing the worker or operator that there is a worker approaching the machine and give relevant prompt that when there is any worker entering the dangerous zone, so that a corrective action can be taken.

Moreover, this is also an application of RFID technology, which is to install two RFID receivers

in an area with speed limit, that is, the speed control area. When a vehicle passes, since the vehicle is installed with a RFID chip, which is installed either on the vehicle or on the safety helmet of the operator, when the machine passes between the two points in the speed control zone, the vehicle speed could be calculated.

If it exceeds the speed limit, prompts will be given to the management officers, who will know that the vehicle exceeds the speed limit and take corresponding control measure.

In addition, the system can record related data for analysis in the future.