

Here is the footage of "Site Safety Forum for Works Contracts and Property Services Contracts 2017" which was held on 6 July 2017.

The speaker is

Deputy Director of Housing (Development & Construction)

and also the Chairman of the Housing Department Site Safety Sub-committee

Ms. Ada Fung.

She is now delivering a speech.

Chairman of the Occupational Safety and Health Council, Mr Conrad Wong Tin-cheung,

Chairman of the Construction Industry Council, Mr Chan Ka-kui,

Commissioner for Labour, Mr Carlson Chan Ka-shun,

representatives of supporting organisations, distinguished industry guests,

dear colleagues, ladies and gentlemen, good afternoon.

We have been co-organising the Site Safety Forum

for 11 years.

I would like to express my gratitude to all of you for the tremendous support over the years.

This forum provides an opportunity for members of the industry to exchange experience

in enhancing safety at workplace.

The theme of the forum this year is "Prevention through Design".

With innovative thinking,

we have been promoting safe design, safe working cycle,

upgrading safety equipment and fostering safety awareness in a bid

to achieve "Careful Design can Reduce Accidents and Ensure Smooth and Safe Execution of Works".

Firstly, please let me introduce the Housing Department Site Safety Sub-committee (HDSSSC),

I serve as the chairman.

We are accountable to the Environment, Health and Safety Committee of the Housing Department.

Its members comprise the representatives from all supporting organisations present today

and the staff of our Department.

We have 2 meetings per year, not too frequent.

We are providing a platform to disseminate information

as well as to collect opinions and exchange views with the industry

for the enhancement of site safety management measures in construction and property services contracts

of the Housing Authority (HA).

I would like to share with you

HA's performance on construction safety,

the three-pronged approach on safety management

and the construction safety of temporary works.

I will finish my speech with a conclusion.

First of all, I will review the performance of HA on construction safety.

Since 1990,

the accident rate of HA's New Works and Maintenance Works per 1000 workers

dropped to single digits in 2009 and 2010 respectively.

In the 1990s, our accident rate per 1000 workers is similar to the industry's figures.

However after a quarter of a century, our achievements are obvious to everyone.

In 2016, the accident rate of HA's new works and maintenance works

were 6.8 and 1.5 accidents per 1000 workers respectively,

which were lower than the accident rate of 34.5 accidents per 1000 workers in the local construction industry.

We can't be slack because of this.

Let's take a look at the statistics on industrial accidents and the number of workers

under the construction industry and the Housing Authority works contract.

According to statistics, the number of front-line workers on HA's New Work sites continued to rise, which

has doubled from 6400 in 2011

to 12,000 in 2016.

Nowadays, the volume of construction works remains at a high level,

however, the supply of site supervisory staff is unable to meet the demand.

The new comers are not familiar with the dangers in construction works or construction sites and the construction workforce is ageing. All these are challenges to construction safety and we need to handle the situation carefully.

Since 1990, HA has been adopting the three-pronged approach safety management strategy, through enhancing the performance monitoring mechanism, strengthening contract requirements on the design of hardware and software, and making practical efforts on research, training and promotion of site safety awareness to raise site safety standards.

This is the achievement on site safety that we can see. First of all, these achievements do not come easily. They are the results of effective implementation of performance monitoring mechanism and the concerted efforts of every sector involved. The first prong of three-pronged approach is the PASS for Building Works that has been running since 1990. Everyone is very familiar with it. HA introduced an independent Safety Auditing System with OSHC in 1996 and then the Surprise Safety Inspection Programme in 2013. In 2017, we strengthened the existing performance monitoring mechanism by enhancing the Safety Auditing System,

incorporating the safety audit score of building services contractors into the BSPASS scoring system, and banning contractors who have failed the safety audit in two consecutive quarters from tender for three months. The second prong of the three-pronged approach is strengthening our contractual requirements by formulating more stringent standards, and continuously implementing a series of enhancement measures.

Six enhancements were implemented in 2017. Under the enhanced measures, workers are required to use hand straps and waist belts when they are carrying handheld tools. Those engaged in lifting operation, road works and vehicle traffic control have to wear reflective vests. The safety helmets and Y-type chin straps need to be supplied by the same manufacturer. Anti-heat stress uniforms are to be provided to site workers. Fifth, make sure the suspension ropes of gondolas are to be kept in vertical condition.

Sixth, the requirements on the design of temporary stairs have been issued, and warning signs have to be posted in dangerous zones. Within the relevant safety auditing system, contractors will receive tributes, and they are the contractors who just obtained the certificates. They provided 15 safety innovations, and have been paid under the Pay for Safety Scheme. Therefore we have both awards and penalties.

We are studying the feasibility of implementation of their safety innovations in New Works contracts, which included, the first item is an audio visual alarm system for detecting height of material trucks. Second, a mobile alarm device for lifting operations. Third, the use of nylon mesh to cover bar bending yards. Fourth, aluminium working platforms for bamboo scaffolds. Fifth, the application of radio-frequency identification (RFID) in the operation of plant permits. Sixth, the installation of an automatic sensor to stop the engines of forklift trucks. Seventh, the use of smart cards in forklift truck operation.

Eighth, the installation of a foot pedal and an interlocking guard to bar bending machines.
Ninth, the use of a plant speed monitoring system,
Tenth, the installation of an interlock device to crane hooks.
Eleventh, the use of virtual reality (VR) technology and building information modeling (BIM) in safety training.
Twelfth, the use of RFID technology in fatal zone warning system.
Thirteenth, the installation of noise barrier and dust guard to grinding machines.
Fourteenth, a tower crane lifting warning system.
Fifteenth, the installation of an angle indicator to bar bending machines.

Everyone's creativity on their work can be presented on the safety audit, it can also be paid and included in the New Works contracts. We are still reviewing to enhance the Pay for Safety Scheme. Five of these measures include subsidised lunchtime safety talks, timely reporting of accidents and incidents, adjustment of the threshold for critical pass in safety auditing system and adjustment of the accident rate limit to no more than nine accidents per thousand workers. Fifth, the contractors need to submit the specifications of safety innovative measures in order to get the payment under Pay for Safety Scheme. It can also be an incentive to submit technical specifications earlier. After this, we will include the guideline of the Construction Industry Council (CIC) into the works tender and require the contractors to observe. It also included the "Guidelines on Work-Above-Ground Safety" which was published last year, "Guidelines on Planking Arrangement for Providing Working Platforms on Bamboo Scaffolds" which was recently updated, and "Guidelines on Safety of Lift Shaft Works" Volumes 1 to 4, etc. As for the three-pronged approach, the third prong is about research, training and promotion. It is especially important for building a safety culture. The Housing Authority held a workshop in 2010 and published the "Pictorial Guide to Planning and Design for Safety". After the workshop, we continuously collect more safe and best practices for the design of temporary and permanent works. An updated version of 2017 is available now. At the same time, the "Site Safety Handbook" published in 2008 has also been updated.

We have brought 600 sets of Guidelines and Site Safety Handbooks with us today. You can distribute them to your peer. The online version is available for download at the Hong Kong Housing Authority Site Safety website. We worked with OSHC to standardise the oral commands of the Pointing-and-Calling practice for use in high risk activities. The relevant competition was held the year before. Now, three related posters on safety in lifting operation, electrical work and working at height have been published. We will keep going. Please visit our Site Safety Website of the Housing Authority for safety alerts, accident rates or information on various safety schemes.

The website is now compatible with mobile phones and you can use it anytime and anywhere to search for information on site safety.

HA Occupational Injury and Disease Surveillance System (OIDSS) has been applied to all HA new works contracts since May 2016 and information on accidents or incidents can be instantly reported to the management and project managers.

Development Bureau and CIC have launched apps on mobile devices with loads of information on site safety for download and let us work together to promote the site safety.

Now, let's focus on a relatively new project.

The Housing Authority's new project uses the "Construction Industry Safety Climate Index Survey" to raise workers' awareness on safety culture.

We have put in place a Safety Auditing System

to assess the safety management system of contractors and work environment, and with the adoption of the Safety Climate Index (SCI), understand frontline personnel,

including management staff, supervisors and workers.

and gauge their safety perception and awareness.

The Work Safe Behaviour Programme is implemented

to assess workers' safe operation and behaviours by observation.

SCI is an important indicator

reflecting the level of safety culture in an organisation,

and its sampling size

should not be less than 30% of all its employees.

There are seven factors contributing to an organisation's SCI.

We have compared its SCIs

in 2008 and 2016.

The overall SCI was on the rise from 2008 to 2016.

Factor 4, perception of safety rules and procedures,

was at the lowest both in 2008 and 2016.

In 2016, the SCI of contractors was lower than that of the sub-contractors,

with the latter showing a remarkable improvement of 10% from 59.6 in 2008 to 65.5 in 2016.

SCI for managers and supervisory staff was generally higher than that of the workers with differences ranging from 2 to 9, they are less likely to get injured and breach safety rules.

Staff members with higher awareness of safety culture are usually those with longer length of service or with more family members to support.

Because of these, we launched the Caring Programme for New Workers to raise new comers' awareness on safety culture.

As SCI survey can indicate

the current SCI level and the areas needed to be improved,

we can find out whether the indicators have been improved through regular SCI surveys.

In view of the results of SCI survey,

we will consider implementing enhancement measures in relation to the contributing factors.

First, for factor 4: perception of safety rules and procedures,

we will strengthen our communication with contractors, subcontractors and workers to enable better exchange of views,

simplify the safety rules and use graphics to illustrate rules and procedures.

Second, for factor 6: safe working attitude and peer influence,

we will encourage more active employees' participation to foster a learning culture.

We will continue on incorporating SCI survey

into contractual requirements

and standardise the checklist for observing safety behaviour of various trades.

Another key point to explain

is the construction safety of temporary works.

At the design stage, our construction team will consider

construction methods, procedures and materials

involved in different kinds of temporary works. The team also will work out feasible options

to address the potential risks associated with temporary works.

For example: Construction of the footbridge in Shui Chuen O Estate, Sha Tin,

which involved a large amount of temporary works,

we had to conduct numerous force analysis carefully.

Since large panel metal formwork,

precast components and mechanised construction methods were used in buildings residential blocks,

we used BIM

to help project teams rationalise the operation modes and work processes of demolition and construction

and identify the areas and procedures of temporary works

so as to ensure smooth and safe execution of works.

Not only the construction team needs to design but the design team also needs to conduct a safety review.

The industry already has some guidelines on temporary works like the Code of Practice for Precast Concrete Construction for use, and international standards such as the BS 5975 are also useful reference.

We are actively considering the installation of canopies onto gondolas, this design is proposed by the workers in the regular meetings which are held twice a year.

There should be a chance to be successful by this year, cooperating with all relevant regulatory agencies.

It can also win an award from CIC.

In addition, we insist on the motto proposed by the Housing Authority, which is one, two, three, four, five, safety comes first.

The second one is to stick to our two mottos, "do it right the first time",

and "what gets measured gets done".

I always encourage the working habit and culture of "three earlies", Early Planning, Early Design and Early Management.

Fourth, we have four core values, that is Caring, Customer-focused, Creative and Committed.

The last is the fifth one,

we hope that our contractors can aspire to the "5-zero" target: zero accident, zero incident, zero conviction, zero complaint and zero dispute.

We can enhance safety culture and work safety with the help of technology, everyone should keep in mind of that.

It is always easier to nip the problem at its bud than looking for remedy after the problem materialised.

In this way, "Prevention through Design: Careful Design can Reduce Accidents and Ensure Smooth and Safe Execution of Works"

We often say: "ensuring site safety is everyone's responsibility"

I call upon design teams, contractors, subcontractors and workers to pay attention to safe work design and work processes.

Project team should take a few more steps to foster a safety culture.

All workers can go to work with a happy frame of mind and return home safe and sound to their families.

Maybe you will ask how to take a few more steps?

Look at the photos,

contractors and workers organise daily morning exercises and safety talks.

Last December, our chief architects and frontline architects recommended participating in the safety teams that were attended by workers.

encouraged and appreciated the teams for implementing occupational health on the construction site, and trying to achieving a neat, clean working environment and culture.

This is the story of the Housing Authority taking a step forward.

I am happy to see that partnerships and the safety awareness can be passed on from generation to generation.

Thank you.

Thank You For Watching.