

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 the Construction Project Manager of Hip Hing Engineering Company Limited, Mr. Chow Ka-lun.

His presentation topic is innovative methods during construction and measures to monitor vehicular safety.

Good afternoon, distinguished guests, friends from the industry, everyone.

Today's theme is "Prevention through Design"

Today, I am going to share some measures and innovative ideas deployed for site safety on the construction site.

Different from previous speakers,

I will have a question inserted in the speech.

Firstly, about the construction method of the roof concrete water tank.

Formerly, in-situ casting the water tank was adopted.

After design modification, precast top slab was placed on water tank as an enhanced method.

The traditional practice involved installation of metal falsework and timber formwork, before completion of the top slab of water tank.

Using this enhanced method can reduce the processes and

Firstly, the advantages are reducing the duration of working in confined spaces.

Secondly, reducing the chance of heat stroke, and

thirdly, complete the processes ahead of time.

The following pictures show the construction method of the prefabricated top slab.

The second one is a temporary protective canopy.

The fixed wall mounted temporary protective canopy shown on the left-hand side is a traditional design.

Two improvements were suggested as follows:

Firstly, adopt a U shape design and mounted on the canopy and the protective canopy is foldable.

The advantages firstly to avoid the complicated process of traditional work of work at height, such as the installation of the anchor bolt and welding work by workers on the outer wall.

The new method can allow workers to complete the process by installing screws on the first floor canopy directly.

Secondly, because the canopy is foldable, therefore, more storage space is available on the ground.

We can see from this photo,

it can be installed by using only one large crane.

It won't affect the operation of the tower crane

and can be used repeatedly.

The third enhancement is about the frequent accidents involving human body falling through the floor openings.

The traditional way is to cover the openings by wooden boards or protected by guardrails.

Before concreting, install a wire mesh to cover the opening

It can reduce the number of accidents involving fall of persons from height.

The wire mesh was subject to design calculation by engineers,

Plywood or steel covers were then added for better safety and appearance.

The following is an innovative concept on railing.

The traditional approach is to use screws to mount the steel mesh on the wall.

We have two types of newly designed railings.

A question will be asked after this.

The first one you see is the metal clamp directly installed and mounted on the concrete wall.

The second model extends the guardrails like a cantilever by using the window frame in the façade.

My question is, what are the effects of these?

You can think about why it needed to be done like that?

This question requires a little thought.

Host :

Are there any friends trying to answer it at this moment?

A friend raised his hand.

Audience answer the question

Reusable and easy to install.

Guest response

you have answered two of them, very smart!

The guest continued to give the speech

As mentioned by that guest just now, they can be used in different sizes.

We can repair the concrete with good flexibility by adjusting the components of the railing.

It doesn't even need to remove the railing, and this enhances the safety standard.

Also, anchor bolt installation is not required.

Lastly, the colours are eye-catching and easy to be detected.

If there were sand and gravels on the inclined plane to the material hoist,

it would be easy to slip during the transportation of materials.

We apply white glue and cement to the inclined plane for anti-slipping

and reducing risk of the slippery situation.

Fitting trolley with hand brake system can reduce the number of accidents.

For construction plant,

forklifts are more prone to accidents.

We made some improvements,

such as the reversing siren, seat belts and gradienter.

When it tilts more than 5 degrees, an alarm will be triggered in order to

prompt the driver to drive in reverse mode.

There are danger labels

and a seat sensor in which the forklift will stop the engine automatically

when the operator is away from the seat for five seconds.

We also have general driving signal lights,

and wire mesh is installed in front of forklifts to

reduce the unnecessary contacts with the joystick.

There are card readers which can be operated by an authorised operator only.

There are also key ropes and identification document ropes,

one end is fastened to the operator to ensure that the operator is carrying the documents and keys when he is away from the seats.

Besides, radio frequency identification system (RFID)

is used to monitor the operator's driving attitude and situation.

Radio frequency identification system (RFID) readers are placed

at the main passageway, such as readers A and B.

Radio frequency identification system (RFID) tags are also stuck on forklifts to calculate the speed of the forklift through two points.

When a violation occurs, the data will automatically be transmitted to the safety officer's mobile phone via a wireless network

which can instantly report the incidents and trigger warnings.

The sharing finishes here, thank you all.

Disclaimer

Safe Work· Zero Incident

Site Safety Forum 2017 for Works Contracts and Property Services Contracts

"Careful design can reduce accidents and ensure smooth and safe execution of works"

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