

Hello, everyone, my name is Keung.

I am the technical manager of Hilti (Hong Kong) Ltd.

Today, I will not introduce products.

I'd like to share something with you

the trend of safe construction site in Hong Kong.

We promote wireless and dust-free construction site in Hong Kong.

that's what I want to share with you.

We have seen some innovative methods

for installing lifts abroad

with higher safety standard.

We have communicated with the Housing Department before, and we'd like to share with you.

I think you have seen this diagram several times.

What does it mean?

It is about the age distribution in Hong Kong construction industry.

It is forecasted by the Construction Industry Council of Hong Kong.

that in the future golden 8 and 10 years, .

There will be a shortage of 30,000 workers in Hong Kong

Then, why is it related to the safe, wireless and dust-free construction sites?

We have found a special situation.

Workers of age above 50 years old,

Amounted to more than 40% of all the workers.

that means nearly half are relatively old.

Then, what shall we do?

We need to build a safe and comfortable working environment.

Meanwhile, we shall improve productivity.

It is just the wireless and dust free construction site that can help.

We will not directly or only take care of those above 50 years old.

It is often mentioned by you,

and the Construction Industry Council as well that

we shall attract new comers to join us

I believe that the employers or the friends of construction industry

are responsible to provide an appropriate tool,

so as to attract young people to join this industry.

If the construction sites are dusty.

Or, just as what you have seen in the photos.

For example, the electric wires are connected in a mess.

Tools have been used for long.

When some young people see

such a bad working environment

they will perish the thought of joining the industry.

Later, I will talk about three common

working procedures with high risks on construction sites.

The first one is electric wires of tools.

Usually, tools are usually connected with electric wires.

What solutions can we have?

The second one is related to dust.

As we all know, construction sites are always dusty.

Then, what kind of method can be taken to deal with it?

The third one is just what I have mentioned.

It is related to working at height in lift works.

We have solutions
with the help of data.

It was mentioned by the Labour Department just now.

We won't talk it in detail.

Usually, we will pay attention to the following three problems.

The first one is getting stumbled by electric wires.

The second one is falling to the ground after electric shock at height

The third one is related to electricity and moisture.

This will lead to an electric shock easily.

As to the first accident,
here is one more picture.

Except for the Y-shaped mentioned just now,
there are a lot of extension cords and sockets on the site.

These sockets are found everywhere on the site.

Maybe they are provided when constructing a new building,
and there will be an electric distribution box every several floors.

When we want to drill a hole,
the worker may need to connect a 10-20m long cable.

When dozens of workers work together, it will be a mess.

Then, how can we change this situation?

The answer is to use the wireless tool in the building.

The second problem is related to electric shock.

There are a lot of tools with cables.

We find that,
all workers like binding damaged places of electric wires with tapes.
or, they want to cut off a plug
to replace another one
they will do it by themselves .

After that,
they will use the plug immediately after making it connected roughly .

In fact, as a manufacturer,
we do not suggest doing in this way.

We will use the wireless tool to solve this problem.

The third problem is about working outdoors.

it is moist outdoors.

As we mentioned just now.

Usually, a better practice is

to hang electric wires to high above the walls.
Nevertheless, when it comes to practical operation,
this may fail to be achieved,
as affected by time or other factors.
When some electric wires run into water,
workers will easily get an electric shock.
Then, what is the solution?
To use tools with double insulation,
such danger can be avoided.
In summary,
you will see that, in terms of electricity,
wired electrical tools of 220V were used before
on construction sites.
We know that, some construction sites
with good practice adopt 110V.
The benefit is that, the voltage is low.
Thus, it will be safer.
But, in our opinion,
if wireless tools are used
as far as possible,
risk of being stumbled by electric wires,
electric leakage and electric shock can be eliminated.
Just now, we have mentioned about dust.
Later, I will mention some issues about dust prevention.
In fact, generally small tools are used on construction sites .
Despite this, a great amount of dust will be produced.
Then, what measures are taken now?
Masks are provided
Workers will wear it.
Some good employers will distribute masks.
We usually find that, workers do not like masks very much?
When working on sites,
on one hand, workers feel uncomfortable to wear it;
on the other hand, they feel very hot.
It's not a good solution,
nor is it healthy.
because,
they may wear the mask for a whole day.
In fact, there are a lot of dust removal tools today.
They can help to remove most dust.
Later, I will show you.
Therefore, since 2011,
we have cooperated
with contractors even owners on various construction sites of Hong Kong,

to promote plans of wireless site.

We hope that,

more workers can learn about new technological tools.

This can also reduce accidental injuries.

Usually, when we make a plan for wireless site,

we will discuss with the contractor

about what work to do or what assistance shall be provided.

We come to the conclusion that,

usually, for large tools,

for example, large electric hammers, electric chisels

or some heavy duty electric drills

usually heavy duty electric drills

refers to those for drilling holes above 30mm,

we will suggest

voltage of 110V

because it's a heavy duty tool

while small tools

actually

the most of them

is currently designed as wireless.

For various kinds of tools

for example, electric saws, mills and electric drills have been put into use for long time.

Some small tools featured by back and forth sawing are provided with wireless tools.

When we talk about wireless site,

we have found that,

for all work types of different industries,

wireless tools are quite suitable to be popularized.

We have also found that,

wireless tools are most suitable for application in working procedures at mid- to-late stage of some sites.

For example, for the industries of electric work, fire service and water pipes, water connection or decoration,

wireless site is a good option.

other working procedures such as decoration of metalwork and marbles or door installation

are also suitable for the implementation of such wireless site.

However, when a construction site is just occupied,

and construction workers begin to work on upper floors,

they need large tools.

Then, the use of 100V is better.

In fact, in Hong Kong

the concept of wireless site was and has been promoted and shared.

we will not check one by one.

Then, you will ask how to implement it?

Or, how could we manage to do so?

Usually, we will have different promotion channels for different construction sites.

For example, some contractors will add it to their subcontracting tender document.

All subcontractors shall take wireless tools as their first choice as much as possible.

There will be such a requirement.

Or, during the site safety inspection,

if it is found that wireless tools are especially suitable for some procedures .

they will be required to do so.

We will also find that,

at a number of sites, especially some metro construction sites,

special allowance is provided

to the workers.

If the workers have bought such tools,

they will get an allowance

Such tools will be popularized with great efforts.

Some large companies

will have some procurement guidance.

and let the Procurement Department to buy such tools.

In respect of the sharing of such construction site,

let's take an example:

there is a midfield passenger terminal building in the international airport under construction.

When we proposed it,

all the parties concerned made great efforts.

For example, the Safety Department of the Airport Authority Hong Kong

they agreed that the use of wireless tool as much as possible.

will not only increase the site productivity,

but also ensure the safety of workers.

When we negotiated with the principal contractor of the construction site.

They also gave great support .

and various seminars were arranged.

The workers from some construction sites

were even provided with allowance

Subcontractors will buy such tools.

In fact, this is a win-win-win situation.

By doing so, not only the construction site is safe,

but also the productivity is promoted as well.

Apart from wireless tools,

dust-free tools are also

a new field developed by our tool manufacturers in recent years.

In the past, you may think that,
vacuum cleaners will be used to remove the dust of one site.
Actually, today's technology is more advanced.
as mentioned just now,
dust-free tools
more exactly, dust-free working procedures.
do not refer to the simple use of masks.
Together with the use of wireless tools,
less dust will be inhaled by the workers.
As you know,
the current vacuum cleaners
are not required to be connected with power supply.
It is ideal for some remote construction sites,
and tunnels
some tools may need to be connected with vacuum cleaners.
In fact, you needn't worry how far is the site.
Such vacuum cleaners can also provide power to low-voltage tools.
Here is a small experiment.
Let's make it clear what it is about.
If I dig a trench of
13m long and 50mm wide in concrete,
dust of 9kg will be generated.
The dust generated will weigh about 9kg.
That is the weight of dust swept together.
In fact, the dust is enormous.
If I dig a trench in concrete with a grinder,
enormous dust will be produced.
However, if such procedure is completed with a dust suction grinder,
the dust left will only be about more than 100g.
It is a great progress to workers and construction sites.
moreover, it is much better to the health of workers.
With such dust-free tools, not only cleanliness of construction sites
and health of workers are secured,
and disturbance to nearby areas,
even to nearby residents
can be greatly reduced.
In fact, working procedures with great dust
will affect isolated nearby neighborhood.
As I just mentioned,
besides drilling,
a lot of common procedures will adopt dust-free tools.
For example, some electrical hammers, grinders, timber cutters, stone cutters, etc.
can be used together with the dust-free tools.
This is not just as simple as sucking with a vacuum cleaner.

There are other examples
which are quite popular abroad.
Since there are higher requirements for safety,
at different places, there will be working procedures producing a lot of dust.
For example, 10,000 holes shall be drilled,
and metallic sealant shall be injected.
Injecting metallic sealant is in fact a working procedure producing a lot of dust.
This is because, after sticking ferrous glue and drilling 10,000 holes, dust shall be
cleaned.
To pump away the dust inside the holes,
a lot of dust will be produced as well.
By using dust-free tools as mentioned by us,
i.e. the products with dust-absorbing drill bit,
all dust will be absorbed into
the vacuum cleaner.
Here is a short video.
You can see what the drill bit looks like.
Just now, you saw a charged vacuum cleaner.
Here is a wireless electric drill for comparison.
Besides, a dust-free drill bit is provided.
The vacuum cleaner is charged with electricity.
We have just mentioned the procedure with high volume of dust.
that's to say, after drilling holes,
if you want to insert a bolt
you need to clear such holes.
In fact, enormous dust will be produced on site.
So much for the dust-free tools.
Another topic I'd like to share is
a new lift installation technology.
The technology itself is not very new.
It is known as the prefabricated metal channels .
Then, why do I want to share it with you today?
In fact such prefabricated metal channels are very common in Hong Kong.
the only difference is that
They will be usually fixed by main contractors on the external wall,
for installation of glass curtain wall.
As we all know
lift installation is a time-consuming procedure,
the main task is to install the rails.
There are rails in the lift shaft.
three rails allow the lift to move up and down.
Then, what's the main problem?
The concrete wall in the lift shaft
is generally full of structural steel

Usually, workers may have to drill a few times before a hole is completed successfully.

As a result, to complete such a dusty procedure in such an airtight space,

A worker has to drill many such holes.

It is now popular abroad

to use members known as prefabricated metal channel.

When a lift shaft is constructed,

a metal channel

will be installed in the wall of lift shaft by the main contractor.

This is convenient.

For installing lift, you are only required to take the styrofoam or three sponges out.

Put the bolts in the channel and fix the guide rails directly onto the bolts.

Then just tighten the bolts.

Thus, time can be greatly reduced.

I mean the time of drilling and dust inhalation inside can be reduced.

This is because that lift shaft is quite airtight.

Time of dust inhalation is reduced.

In fact, it is worth sharing.

It is used in India as well.

Let's look at a project

that requires to install both standard and high speed lifts.

They'd like to install lifts

in a short period of time.

So, they will have main contractors to help them to embed such channels into lift shafts.

When installing lift,

only sponges need to be taken away.

After completing this project,

a building of 110 storeys in Bombay, India,

let's calculate the cost of labourers and fastening screws.

a cost of CHF 600,000 .

equivalent to HKD 500,000 can be saved.

When fixing these metal channels,

chance of error is less than 2%.

Here are some site construction photos.

When installing metal channels,

a prefabricated metal channel shall be nailed inside.

After that, reinforcement bars shall be fixed.

Finally, add concrete.

Let me make a quick summary.

Today, I have shared with you

the promotion of wireless construction site in Hong Kong.

In fact, we have initiated the promotion

since 2011.

We hope that, every stakeholder in the industry can advance this safety work.

We will also launch some new dust-free tools,

which can help the workers

to work in a more healthy way.

We have also shared some new methods of lift installation.

now, let's share some more photos.

During the promotion of wireless construction sites in Hong Kong.

We always cooperate with different contractors.

We have some short videos of safety

and we play them for workers on construction sites.

Some media organizations

have mentioned how we have promoted a wireless construction site in Hong Kong.

Workers will also be taught

how to use these wireless tools on site.

and how to use in a right way

Different sites will also arrange different seminars.

The workers will be taught what kinds of tools are appropriate for what types of procedures.

So much for this topic.

Ok, thank you, Mr. Keung.