

03 Jul 2019

Safe Work Practice

Safety Forum 2019 for Works Contracts
and Property Services Contracts

ZEROHARM
MAKE **SAFETY** PERSONAL



Working at Height

ZEROHARM
MAKE SAFETY PERSONAL



WORKING AT
HEIGHT

Bored Pile

Sheet Pile

Hoarding

Working at Height

ZEROHARM
MAKE SAFETY PERSONAL

Pile Installation Work in the Past



Working at Height

ZEROHARM
MAKE SAFETY PERSONAL

Pile Installation Work in the Past



Working at Height

Pile Installation Work in the Past



Working at Height

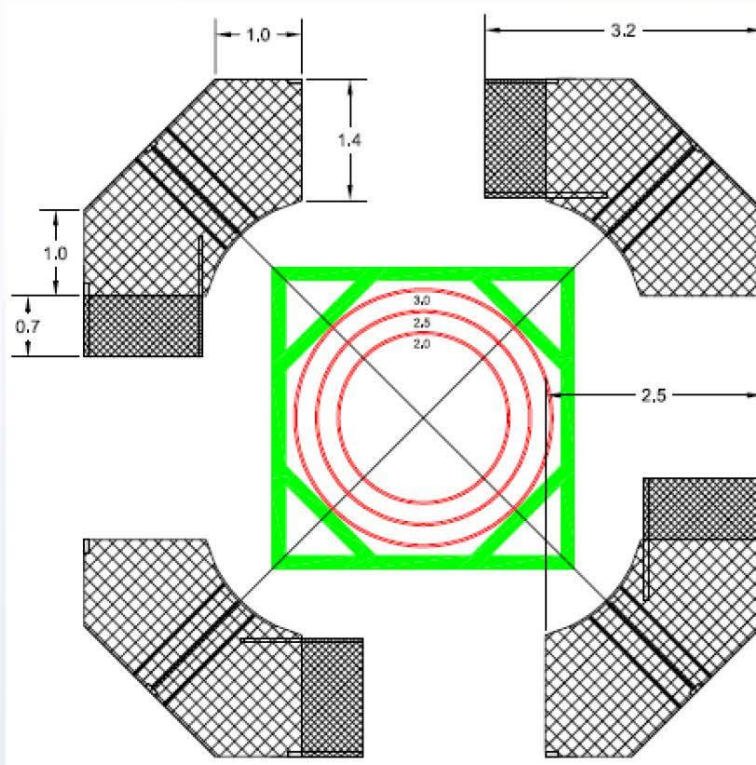
ZEROHARM
MAKE SAFETY PERSONAL

Pile Installation Work in the Past



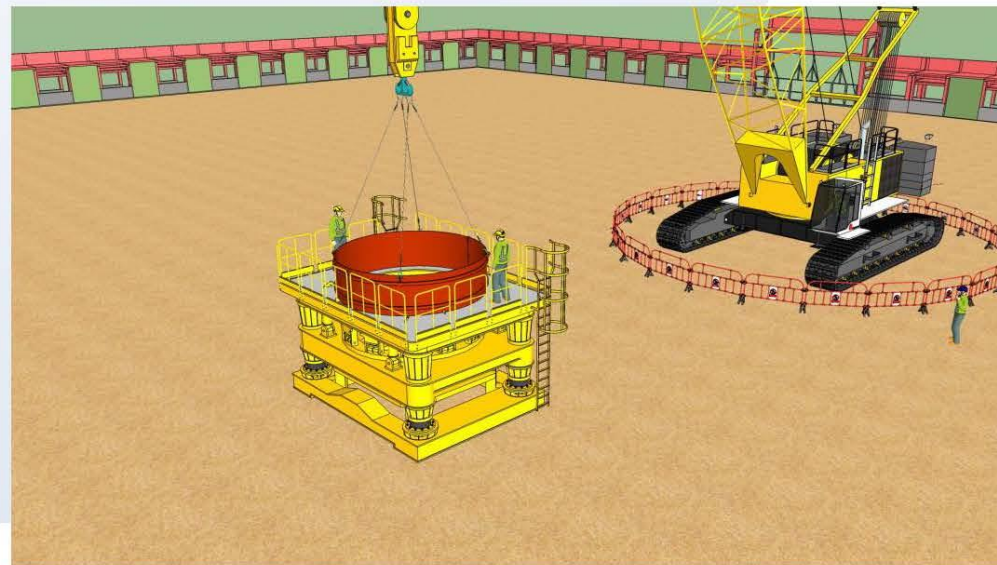
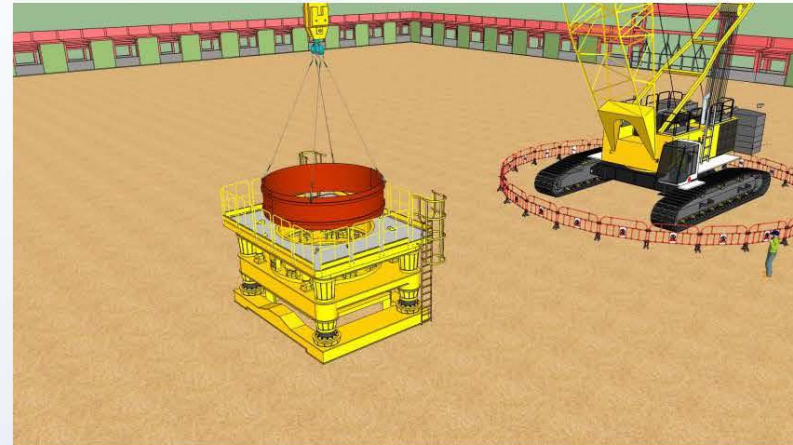
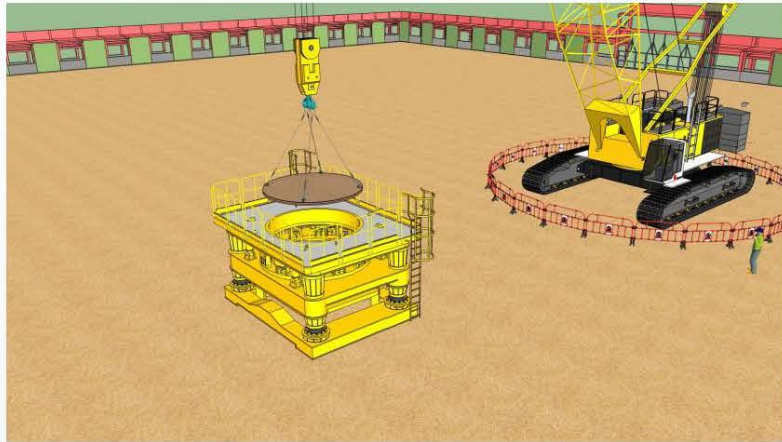
Working at Height

- Adjustable Working Platform

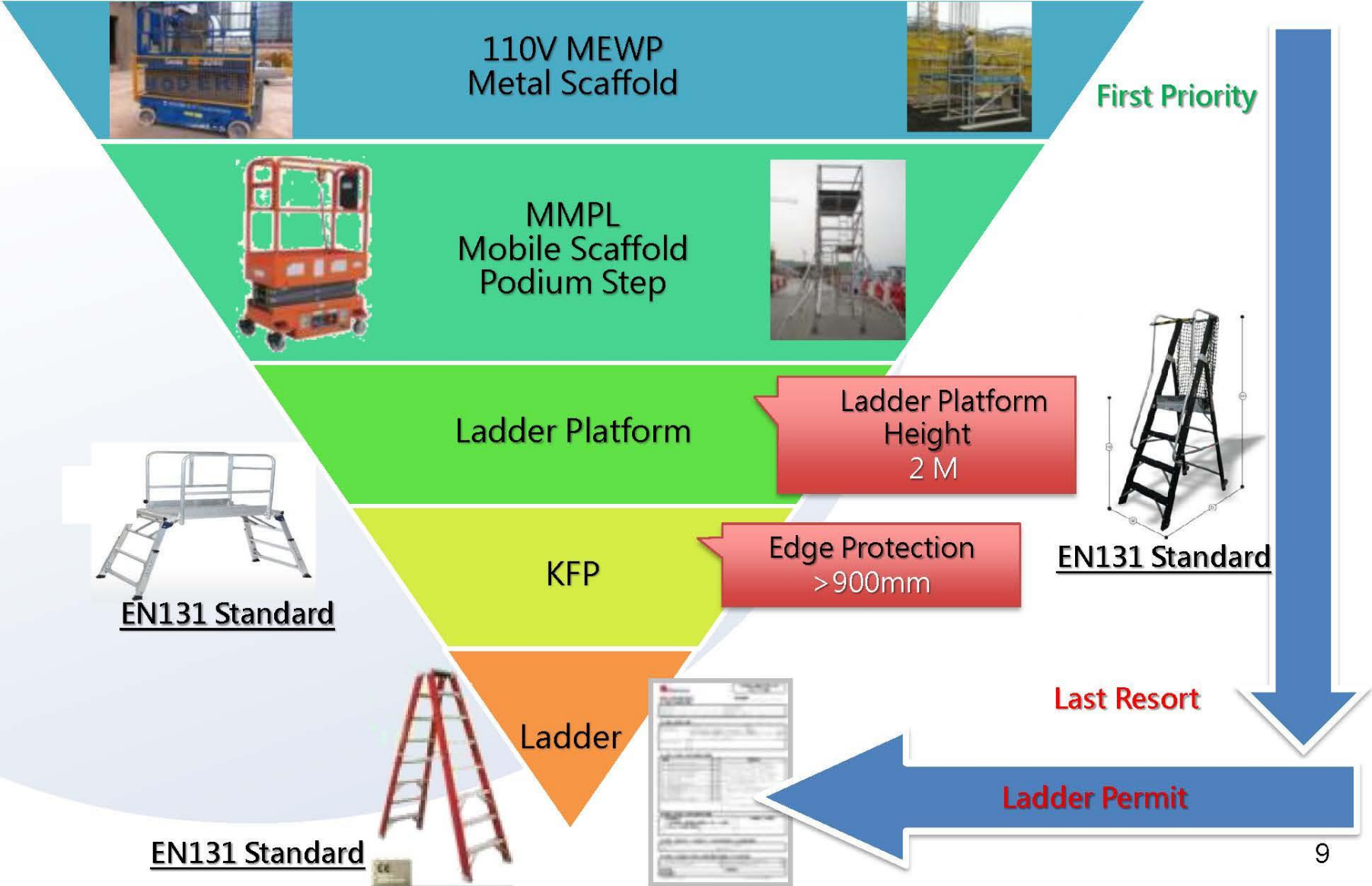


Working at Height

- Fall Protection - Rotator ring guard



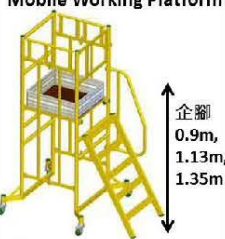


Working at Height



Working at Height

Equipment Used	Works Involved
 <p data-bbox="728 673 929 715">Man Cage</p>	<p data-bbox="1473 545 1863 593">Rigging Operation</p>

Equipment Used	Works Involved
<div data-bbox="331 833 1348 1177"> <p>梯台 Ladder Platform (LP)</p>  <p>Dr. Ladder PL-SFY: 企脚 0.8m, 1.1m, 1.4m</p> <p>Bailey FS133: 39 or 40: 企脚 0.86m, 1.15m</p> <p>Jinmao F025: 企脚 0.87m, 1.14m, 1.41m</p> <p>Good-SSE Korea GSP-20: 企脚 1.3m, 1.6m, 1.9m</p> </div> <div data-bbox="331 1184 571 1487"> <p>脚踏台 Footstool (FS)</p>  <p>Hasegawa Zero Step WD: 企脚 0.5m, 0.75m</p> </div> <div data-bbox="577 1184 1102 1487"> <p>功夫梯 Kung Fu Platform (KFP)</p>  <p>Jinmao F074: 企脚 0.72m, 0.91m</p> <p>Dr. Ladder SPL-NFB: 企脚 0.75m, 1m</p> </div> <div data-bbox="1108 1184 1348 1487"> <p>流动工作台 (MWP) Mobile Working Platform</p>  <p>Modern sMart / Step: 企脚 0.9m, 1.13m, 1.35m</p> </div>	<p data-bbox="1438 1056 1908 1343">Drill Bit Maintenance, Rigging Operation, Hoarding Erection, Site Office Maintenance</p>

Working at Height

ZEROHARM
MAKE SAFETY PERSONAL

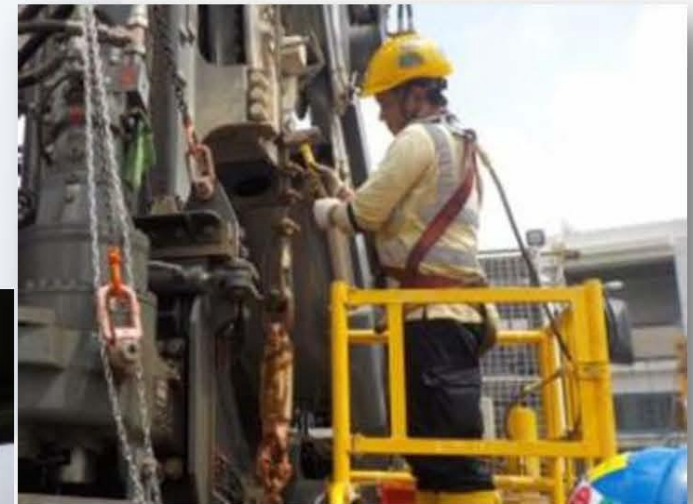


Man Cage
Rigging Operation



Working at Height

- Use of Kung Fu platform and Step platform with guardrail when work above ground



Working at Height

Equipment Used	Height
 <p data-bbox="602 879 860 922">Cherry Picker</p>	<p data-bbox="1189 435 1883 651">≥ 2.0M</p> <p data-bbox="1137 655 1906 727">Works Involved</p> <p data-bbox="1341 802 1700 868">Sheet Piling</p>
Equipment Used	Height
 <p data-bbox="398 1417 1066 1460">KFP / Podium Step / Step Platform</p>	<p data-bbox="1189 1007 1883 1222">< 2.0M</p> <p data-bbox="1137 1227 1906 1299">Works Involved</p> <p data-bbox="1249 1326 1792 1481">Maintenance, Rigging Operation</p>

Working at Height

Ladder is prohibited in general and only & be used as last resort under permit control



Gammon 使用便攜式直梯許可證
(重要聲明: 便攜式直梯只能用作上落通道用途)

甲部: 基本資料 (由申請負責人填寫)

上落通道位置及高度:	位置	高度 (米)
開始時間及完成時間:	於 (年) (月) (日) 至 (年) (月) (日)	
便攜式直梯註冊編號:		

乙部: 安全措施

檢測項目	是	否
已完成動態風險評估及相關	<input type="checkbox"/>	<input type="checkbox"/>
便攜式直梯結構良好未有損	<input type="checkbox"/>	<input type="checkbox"/>
便攜式直梯已適當的牢固 (有關蓋蓋的直梯梯身高度 (H) 比例) 及伸出距離最少 1 米	<input type="checkbox"/>	<input type="checkbox"/>
工作範圍沒有未受適當保護的鋼筋或突出物件	<input type="checkbox"/>	<input type="checkbox"/>
申請人已依照以下兩節「便攜式直梯使用安全守則」簽署	<input type="checkbox"/>	<input type="checkbox"/>
使用者已清楚明白「便攜式直梯使用安全守則」並承諾遵守	<input type="checkbox"/>	<input type="checkbox"/>
使用者 (1) 姓名 _____ 簽署 _____ 姓名 (2) _____ 簽署 _____ 姓名 (3) _____ 簽署 _____		

丙部: 便攜式直梯使用安全守則

- 1 便攜式直梯只可用作上落通道用途, 不可當作工作平台使用。
- 2 便攜式直梯於每次使用前, 必須先作檢查 (包括檢查梯身、梯架及變形)。
- 3 每次上落梯子前, 必須先將梯身鎖緊 (包括梯身及梯架) 檢查安全範圍沒有可導致滑倒之障礙物。
- 4 上落便攜式直梯期間, 必須用雙手握緊梯子, 雙手不可拿取物品; 應使用穩妥戴手套工具, 以保持三點接觸的原則。
- 5 如動態風險評估確認於上落直梯時必須使用安全帶及使其繫於獨立救生繩上; 使用者必須執行相關安全措施。
- 6 如再轉換工作位置並重新架設便攜式直梯作臨時上落通道用途, 使用者必須通知負責人以便重新申請使用許可證。

丁部: 確認及批核

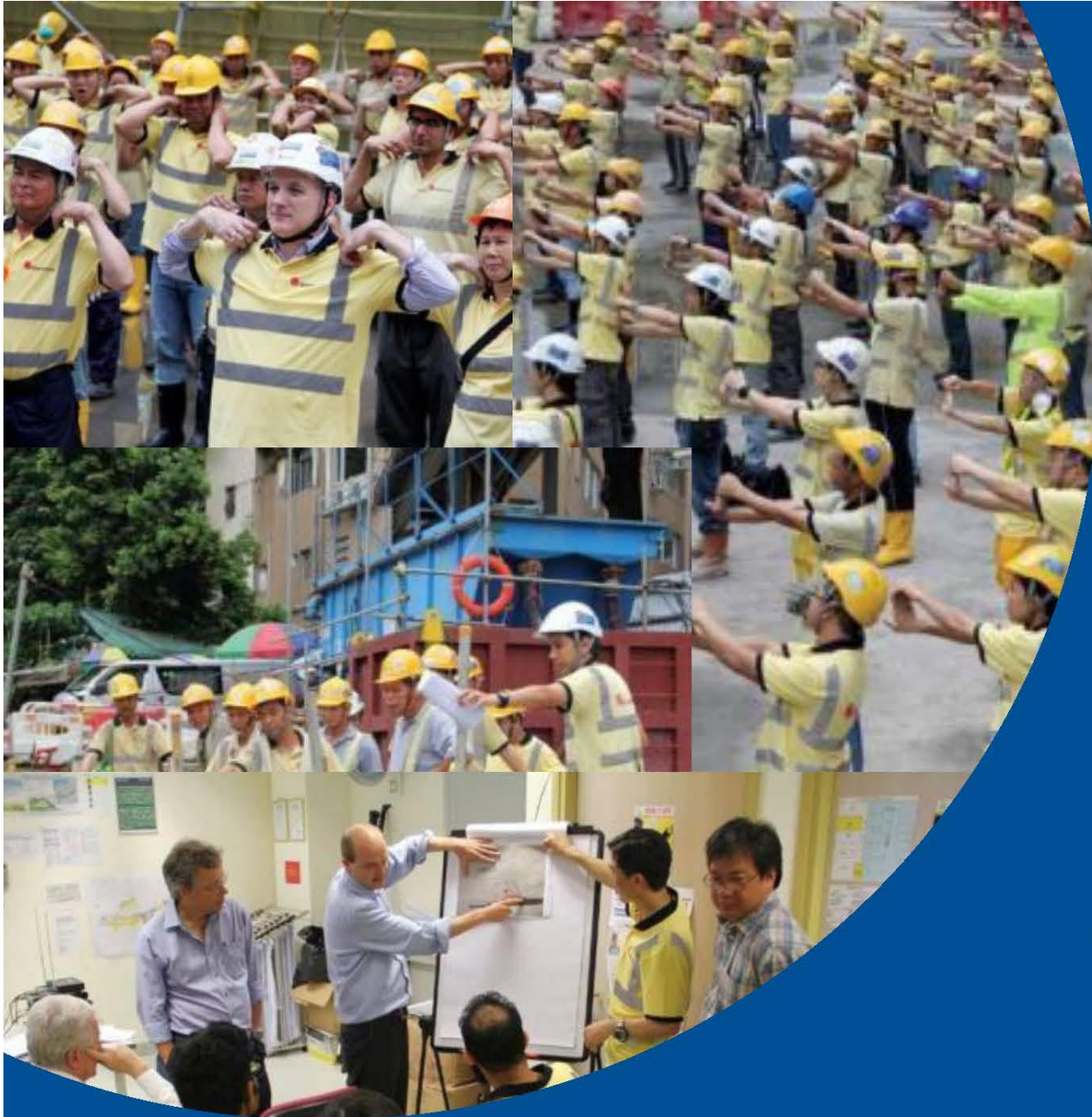
申請使用便攜式直梯許可證 (由申請負責人填寫)

本人 (姓名) _____ 聲明直梯只用作上落通道及上述安全措施已經執行並 (簽署) _____ 確認

批核許可證 (由金門批核人員填寫)

本人 (姓名) _____ 已檢查上述直梯及其工作位置並 [滿意 / 不滿意] 有關安全措施, 現 (簽署) _____ [批核 / 不批核] 許可證予上述申請負責人

**Permit
Control
by PIC**



ZEROHARM
MAKE SAFETY PERSONAL

Thank You

Here is the footage of

“Safety Forum 2019 for Works Contracts and Property Services Contracts”

which was held on 3 July 2019

by the Hong Kong Housing Authority

The Speaker is

Mr. Leung Man Hong Assistant Project Manager

Gammon Building Construction Limited

His topic is Safe Work at Height

Next, may I invite

Assistant Project Manager of Gammon Building Construction Limited

Mr. Leung Man Hong to share with us

Mr. Leung, please

Chairmen, greetings

I am from Foundation Department of Gammon Building Construction Limited

I am one of the assistant project managers

I am Anthony Leung

Thank you, Housing Authority (HA)

for this opportunity to make a brief presentation

regarding work at height

or recently using the term work above ground for this job

There is plenty of work above ground in foundation work

The first few slides are about

work above ground

Foundation works involves handling large-diameter

bored pile, sheet pile and hoarding

The photos of working at height I shared just now

were taken when I was new to the trade

For a large-diameter pile over 20 years ago

The casing oscillator in those days

would press the casing to the bottom excavation

There they removed the soil

In the process

we had to measure the depth by going to the top of the casing

Only by this could we know how much had been done

In those days, we measured the depth

by climbing on a rope ladder

We lowered a measuring tape to take the depth

It was not one pile we need to measure

we need to measure all casings

Predecessors accomplished the task in this way

Irrigation of concrete

After removing the soil, concrete was poured in

Working on a working platform should be a safe situation

A flat and square platform to work on, stand there

When the concrete bucket was delivered to the platform

open the bucket to pour in the concrete

It was not an easy task at height

When I joined the industry 20 years ago

I did use rope ladders

Nowadays, we use working platforms

Working platform has a characteristic

The opening in the centre can be adjusted

to suit the different diameters of the piles

One platform would satisfy the diameters of different piles

Piles of different sizes no longer require different working platforms

Thus spaces for storing platforms can be saved

Thus spaces for storing platforms were saved

Today, the design allows the diameter to be adjusted

Also, about casing oscillator

the biggest problem of casing oscillators

is the hole in the middle when a pile is not there

Workers going up the platform from the oscillator

face the risk of falling into the hole

In the past, I reminded workers

to wear a safety harness when working on the platform

But I realised it was not enough

The new design now has added a ring to the hole in the middle

The new design now has added a ring to the hole in the middle

Besides the safety harness, it prevents the worker from falling

Besides the safety harness, it prevents the worker from falling

In case the safety harness is problematic

the ring in the centre

will guarantee that he does not fall down

Regarding work above ground

we still have many work to do

The ideal is, of course, to eliminate this type of work

Not to do it

But there are situations where it is inevitable

There are better tools now

such as elevating platform, electric platform, metal scaffold

step platform, hop-up platform, podium step

The industry is familiar with them all

My slide is an inverted triangle

When we choose a tool, we set priorities

When we choose a tool, we set priorities

When we do rigging operation, we use man cages

When we do rigging operation, we use man cages

When we carry out maintenance of drill bit

drill bit is huge that

we need to use a step platform or a mobile working platform

to reach the top of the drill

This is a man cage

I have just mentioned about drill bit maintenance

Workers doing drill bit maintenance on site

have to stand on a working platform

and wear a safety harness

On the left is a hop-up platform or a tower platform

They are often used in the industry

I have also mentioned sheet piling in foundation works

We use cherry picker (mobile lifting platform)

We use cherry picker (mobile lifting platform)

to assist workers

It is usually used for work at greater heights

When we have to get to the top of the sheet pile for rigging

cherry picker is a better choice here

At the bottom of the slide

are a hop-up platform and a working platform

for working under 2m above ground

Ladder is at the bottom of the inverted triangle

In the opinion of my company

it is highly risky to be working on a podium step

Basically our entire company

avoid working on a podium step

But there are circumstances where a podium step is necessary

So, what to do

We have a permit system

Many in the industry do use the permit system

This permit is not signed by the foreman

Not by the site supervisor either

It is signed by the person in charge of the site

Under what circumstances would he agree to sign

After careful consideration, there is no alternative method

This is the only way, then he will sign

When he signs, he needs to understand he must help the team

to formulate measures to reduce risks

then he can sign

The company conducts regular inspections

to see if the signature is appropriate

I am a person in charge of a site

I have never signed a permit

I am afraid of being inspected

I have never signed

Our site has never used

a podium step for work at height

although it is a tool

Thank you everyone

I have briefly introduced the methods our company adopts

to work at height

Thank you, Mr. Leung

Mr. Leung, please ask a question

See if our audience has the answer

In my presentation just now

I mentioned old methods used when people worked at height

I mentioned rope ladder

That was not the only way

In the past, the industry had a way to reach the top of the sheet pile

Anyone?

Someone has his hand up

Is the question clear?

Besides rope ladder

what method did our workers use to climb up the pile?

Please

Rope with knots

Correct

Didn't expect a young colleague would know

A rope with knots

Feet gripping the knots to climb a knot at a time

Rope ladder and rope with knots

I have experienced both

When I first joined the trade

I asked my mentor for a ladder to climb to the top of the pile

Haven't I given you a rope with knots

You go ahead

I knew no fear then, I went ahead

Any difference between rope ladder and rope with knots

Rope ladder are for higher heights

If it was only a little higher than a man's height

only rope with knots will be used

These were the old method

It is fine just listening to the experience

These tools are no longer used today

and must not be used

Thank you

Let us give Mr. Leung another round of applause

Please be seated

We noticed, we have come a long way

We noticed, we have come a long way

The industry is moving forward, still looking for ways to improve

Decades ago, a rope ladder or a rope with knots was used

Decades ago, a rope ladder or a rope with knots was used

Honestly, now it is hard to imagine climbing up a rope to get there

With era improving and technology advancing

we have many choices of working platforms

Not all working platforms need not to be on the sites

It takes only one platform to satisfy all needs

Thank you for watching