HALENSAS – 2016Q2-Q3

Summary on Good and Bad Practices

安全稽核結果

Occupational Safety and Health Council

職業安全健康局

Executive Summary

1. Working at height, housekeeping, falling objects and electrical installations still remain **the key problems** in HA sites
2. Provision of proper working platforms and safe means of access to workplace are the major areas need to be improved by contractors
3. Poor housekeeping remains unsatisfactory and needs special attention.
4. Protection against electrical safety should be improved

1. 高空工作，工地整理，高空墮物及電力工作仍然是主要問題
2. 提供工作平台及安全進出口是主要改善項目
3. 工地整理表現未如理想，須多加注意
4. 改善電力安全

內容 Content

- GOOD PRACTICE 良好作業方式
- BAD PRACTICE 不良作業方式

Safe Scaffold and Workplace
安全棚架及工作場所

- Scaffolding companies need to double check their structures are safe and secure
- Provide adequate protection for people working at height
  - ✓ Precautions must be taken where a person can fall a distance of more than 2m. If there is an increased risk of injury when falling a distance of less than 2m, eg working near a traffic route or above a dangerous surface, then suitable precautions will also be required.
- Ensure workers have adequate and safe means of access and egress
- Provide best practice guidance for kickstool, stepladder, ladder or tower scaffolds users

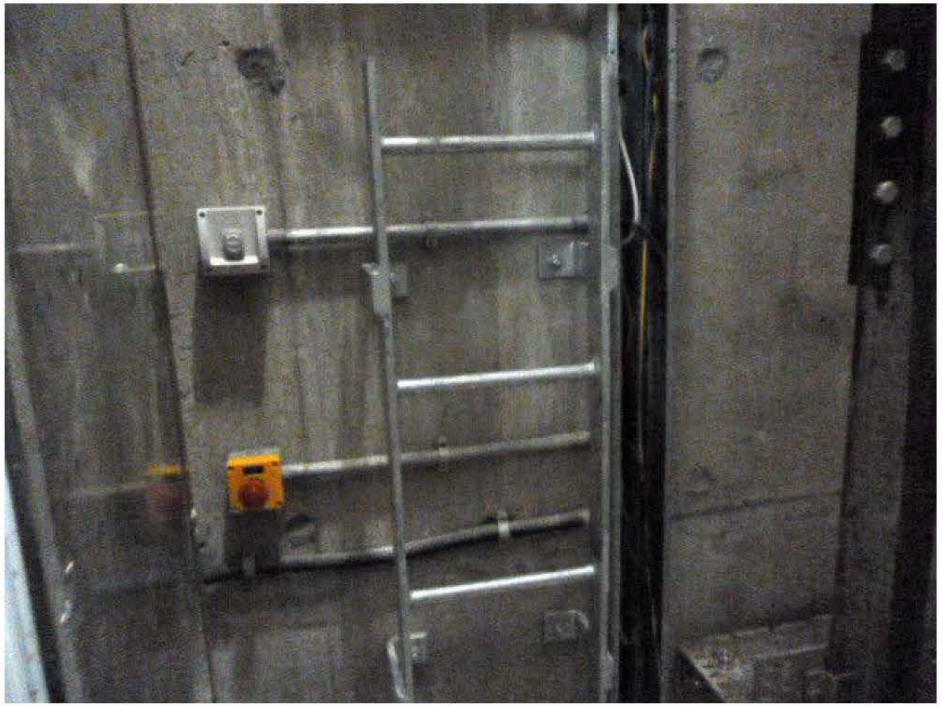
- 搭棚公司須重複檢查所搭棚架，確保安全穩固
- 為高空工作人員提供足夠的安全保護
  - ✓ 如有人可從工作場地墮下超過兩米，搭棚公司須採取預防措施。即使下墮距離少於兩米，但如果受傷風險增高，例如工作場地接近車路或危險表面之上，亦須採取適當的預防措施。
- 確保工人有足夠而安全的進出口
- 為使用踏凳、踏梯、梯子或塔式棚架的人，提供良好作業指引

GOOD PRACTICE 良好作業方式

- Working platform with toe boards
- 工作台妥善安裝圍欄及踢腳板

GOOD PRACTICE 良好作業方式

- Lift pit entrance with emergency stop switch
- 於井底提供上落通道



GOOD PRACTICE 良好作業方式

- Covered floor openings in lift machine room
- 地洞已妥善覆蓋

Good Housekeeping
良好工地管理

- Poor housekeeping causes trip accident
- Promote the importance of good housekeeping and site waste management
- Manage the site to ensure that it is kept in good order:
  - ✓ The procurement of materials should be managed to ensure that only the minimum amount of materials are stored on site at any time .
  - ✓ Everyone working on the site should be aware of the site policy for managing the movement & storage of materials around the site, and the removal of waste from work areas.

- 不良工地管理會引致絆倒意外
- 推動業界重視良好工地管理和工地廢物管理
- 妥善管理工地，確保符合各項要求：
  - ✓ 物料採購應管理得宜，確保任何時候在工地存放的物料減至最少； 以及
  - ✓ 所有工地的工作人員，應留意關於管理在工地移動和貯存物料，以及從工作地點移除廢物的工地政策。

Good Housekeeping
良好工地管理

- Everyone on site needs to play their part.
  - ✓ Walkways and stairs should be kept clear and free from obstructions.
  - ✓ Work areas should be kept as clear as possible of unnecessary materials and waste.
  - ✓ Materials should be stored safely, whether in the site compound or around the site
  - ✓ Workers should comply with the site arrangements for the removal of waste.
  - ✓ Problems should be reported to site management

- 所有工地人員均有責任確保：
  - ✓ 行人路和樓梯應保持暢通無阻；
  - ✓ 施工地點應盡量保持整潔，沒有多餘的物料和廢物；
  - ✓ 不論在工地範圍內或周圍地方，應以安全的方式存放物料；
  - ✓ 應遵從關於移除廢物的工地安排；以及
  - ✓ 如有問題，應向工地管理人員報告。

GOOD PRACTICE 良好作業方式

- Stock of PPE in site office
- 個人防護裝備妥善擺放

Electrical practices
電業作業方式

- All leads and portable electrical equipment should be regularly inspected, connected and tested by a competent person.
- All leads and cables in accessible areas they must be buried or protected from damage by matting or covers, which do not cause a trip hazard. Where this is not possible, leads and cables should be suspended at a height of at least 2.5m above the ground on stands or poles, if they are located where persons can walk, or at least 5.5m from the ground if located where vehicles can drive under them.

- 所有引線和輕便型電力設備，須由合資格人士定期檢查、接駁和測試。
- 所有在可觸及範圍的引線和電纜必須埋藏，或以保護墊或覆蓋物防護，並應避免絆倒行人。如不可行，在有人路經的地方，引線和電纜須置於離地最少2.5米的支架或支柱上；在車輛可駛過的地方，則須離地最少5.5米。

GOOD PRACTICE 良好作業方式

- Warning signs with lighting & cable suspension in lift shaft entrance
- 提供警告告示及工地電線掛高

Others

- Machinery guarding
- Hand tools
- Lifting gear
- Inspection form

GOOD PRACTICE 良好作業方式

- Proper machine guarding in machine room
- 機器轉動部分安裝護罩

GOOD PRACTICE 良好作業方式

- Hand tools were properly maintained
- 手工具妥善擺放

Protruding Steel Bars Protection

WISA block™

Making construction safer

The inadequacies of mushroom type protective caps

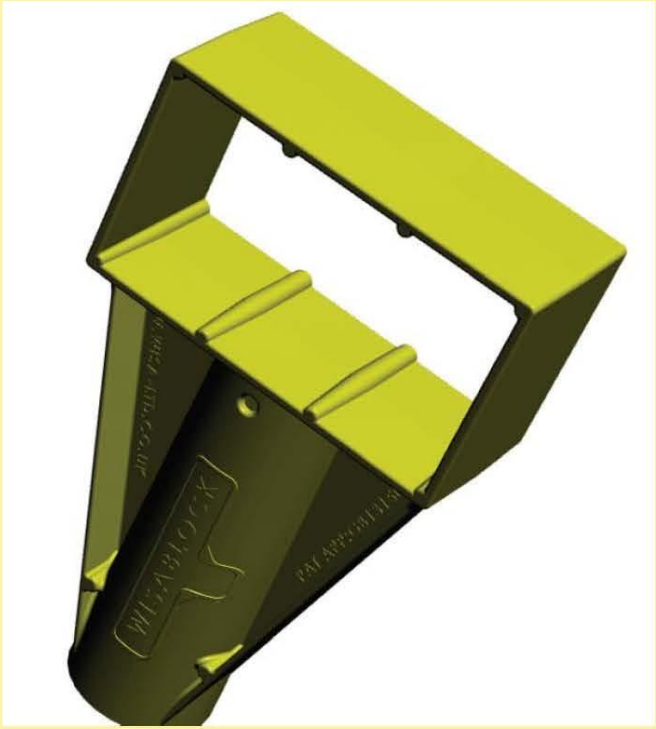
- Incorrectly ordered sizes
- Wind blowing caps off
- Caps causing tripping hazards
- Ops smashing caps with hammers
- Constant re application
- Long and laborious application times
- Ops failing to install due to inadequate protection provided
- As stated by OSHA in standard 1926.701 and corroborated by suppliers –only provides protection against cuts and abrasions and visual aid.

The failures of protective caps

https://drive.google.com/file/d/0Bzg_5AscvlK0aFpUWEJWMWxwUXM/view

Design Brief

- Robust device
- Simple to use
- One size fits all
- Withstand impact to OSHA Requirements
- Withstand multiple applications



Design Solution

Designers created a unique finned securing element which would allow one product to fit all size bars between 10mm – 32mm

Additional strengthening and force distribution cross was created to dissipate vertical forces

Testing

Tested using 114 kg bag at 3m height to OSHA Requirements

WISAblock was stringently tested to OSHA requirements by testing engineers and recorded for view. The Test report and videos can be found on website www.wisablock.co.uk

OSHA is a US requirement – A British standard which categorises anti impalement devices do not exist at this time

Testing

Initially the 10mm bar was tested as this would prove the greatest risk of penetration. After 6 tests, 2 tests at 3m, it is found that the bars did not penetrate through the WISAblock into the timber.

- https://drive.google.com/open?id=0Bzg_5AscvlK0bE9aZTdQeDJDOXc

Results

The blocks performed positively on all size bars, bars failing to penetrate the WISAblock.

80% Time Savings

Labour time calculation:

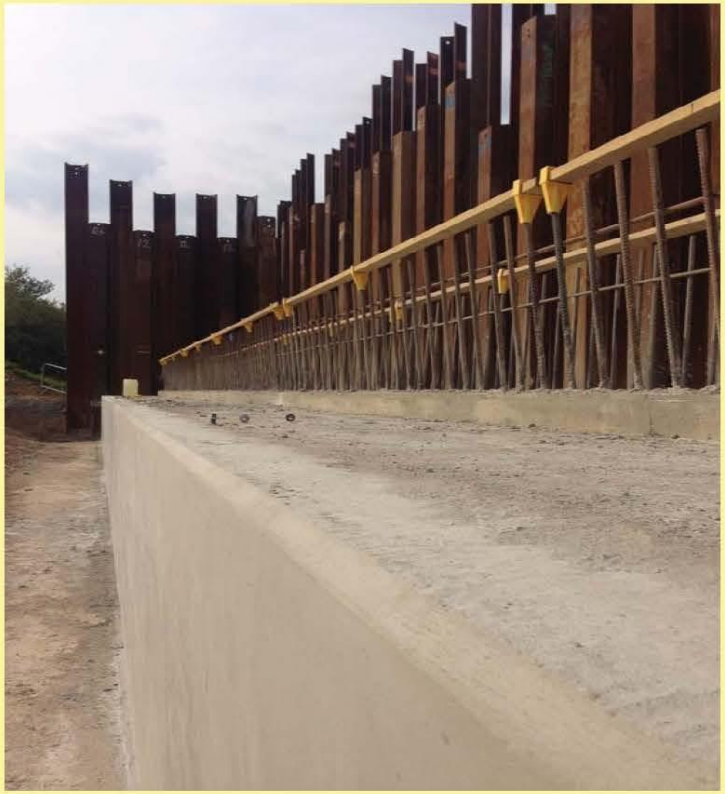
Time to install a single mushroom cap was estimated at 5 seconds/bar

Time to install 2 rows of 1200 starter bars would equal 200 minutes

In comparison, time to install the WISAblock system per bar was timed at 1 second/bar

Therefore time to install 2 rows of 1200 bars equates to 40 minutes

A time saving of 160 minutes/2hrs 40mins



Cost efficient

- Case studies proved that WISAblock were used up to 7 applications on different sites, for the same user.

The END

Thank You!