

Housing Authority

Site Safety Seminar for Capital Works New Works Contract

Lesson Learnt from Accident & Incident

Presented by: Eric Wong (Unit Safety Manager, Gammon Construction Limited)

Date: 12 May 2014

Case 1: Working Near Moving Plants

Description of the Incident

The incident was happened in the morning at a Foundations work site. A 54 yrs old rigger/banksman was crushed between the counterweight of a crawler crane and the steel railings.



Location of
second
banksman

Location of
deceased



Lesson Learnt (Fatal Zone Management)

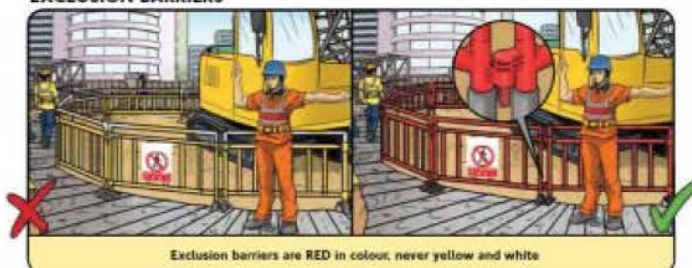


Communication

OUR CHOICES FATAL ZONE MANAGEMENT

ENGLISH - HONG KONG

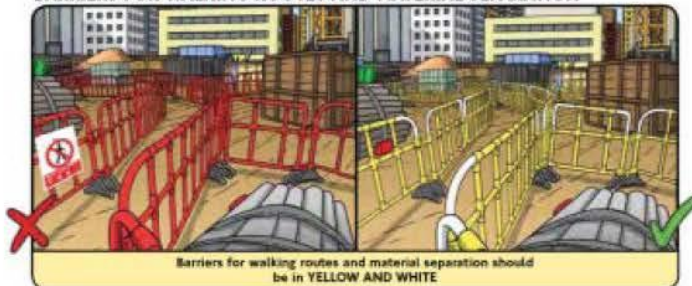
EXCLUSION BARRIERS



EXCLUSION BARRIERS FIXED TOGETHER



BARRIERS FOR WALKING ROUTES AND MATERIAL SEPARATION



REMAIN OUTSIDE EXCLUSION BARRIERS



SIGNAGE ON EXCLUSION BARRIERS



EXCLUSION
BARRIERS HELP TO
KEEP YOU SAFE.

Case 2: ELS Dismantling

Description of Incident

The incident happened in the morning at a Building job site. A gang of workers were engaged in removing heavy steel waler boards and lowering them to the ground. The accident occurred when the steel waler, 4.5 metres in length and weighing approximately 1 tonne, shifted after the final support strut was cut. The waler shifted to the right, rotated and dropped approximately 500mm striking the operative, a 55 year old supervisor on the head with a fatal blow.



Reconstruction of the incident

Lesson Learnt – Pictorial Method Statement

Installation of external metal scaffold

搭建外牆金屬棚架



Step 1

將可調較底板根據同一水平之橫縱構件放置於適當距離，安裝支架於底板上並檢查水平。

Place Adjustable Base Plate at distances apart according to the longitudinal and transverse Horizontal Members. Install the legs or Standard on Adjustable Base Plates, then check levels and verticals.



Step 2

楔緊橫向構件，並檢查水平。
Wedge Horizontal Members with Stirrup. Tightly knock Wedge at Stirrup and Horizontal Members. Check levels and verticals.



Step 3

安裝上層構件於現有水平，並檢查水平。
Install next level by putting other sets of Standard on the existing level. Check levels and verticals.

Lesson Learnt – Dynamic Risk Assessment (DRA)

- A continual process of identifying what might go wrong, taking action to remove or control risks by continually monitoring the changing circumstances at the workplace
- Must be completed for all activities at least twice a day

Dynamic 動態風險評估 Risk Assessment

PEOPLE 人員

- Insufficient Supervision 監督不足
- New / Inexperienced Workers 新工 / 經驗不足的員工
- Inadequate Communications 溝通不足
- Insufficient Resources 資源不足
- Competence 工作能力

EQUIPMENT 機械設備

- Scaffolding / Ladders / MEWPS 腳架工程 / 梯 / 移動式升降工作平台
- Incorrect Use of Tools 不適當使用工具
- Stability / Collapse of Equipment 機械的穩定性 / 機械失穩
- Inadequate Maintenance 缺乏維修
- Equipment Failures 機械故障
- Damaged / Faulty Equipment 損壞 / 有缺陷的機械

MATERIALS 物料

- Hazardous Substances 危險物品
- Flammable Substances 易燃物品
- Explosive Substances 爆炸品
- Dimension / Weight / Centre of Gravity 尺寸 / 重量 / 重心
- Waste 廢料

ENVIRONMENT 環境

- Confined Space 密閉空間
- Working at Height 高空工作
- Concurrent Work 同時進行的工作
- Temperature 溫度
- Lighting 燈光
- Ventilation 通風
- Vibration 振動
- Weather Extremes 極端天氣

Mindful 用心致志

What are the **two** most serious things that could go wrong and what will you do about it? 列舉兩個可能出錯的嚴重事件，而你會如何處理？

Other Comments 其他意見

Date 日期 _____

Area of Work 工作範圍 _____

Job Description 工作簡介 _____

2 * Must be done at least daily 必須每天進行 3

Lesson Learnt – Real Risk Review meeting

- A platform for a team discussion to identify, discuss and mitigate 'real' risks and issues arising from our activities on site
- Focused on identifying risks arising from upcoming activities and enable us to be sufficiently ***informed*** to know that appropriate mitigation measures are in place.
- On biweekly basis. No subcontractors involved

Case 3: Fall of Person from Lift Shaft Opening

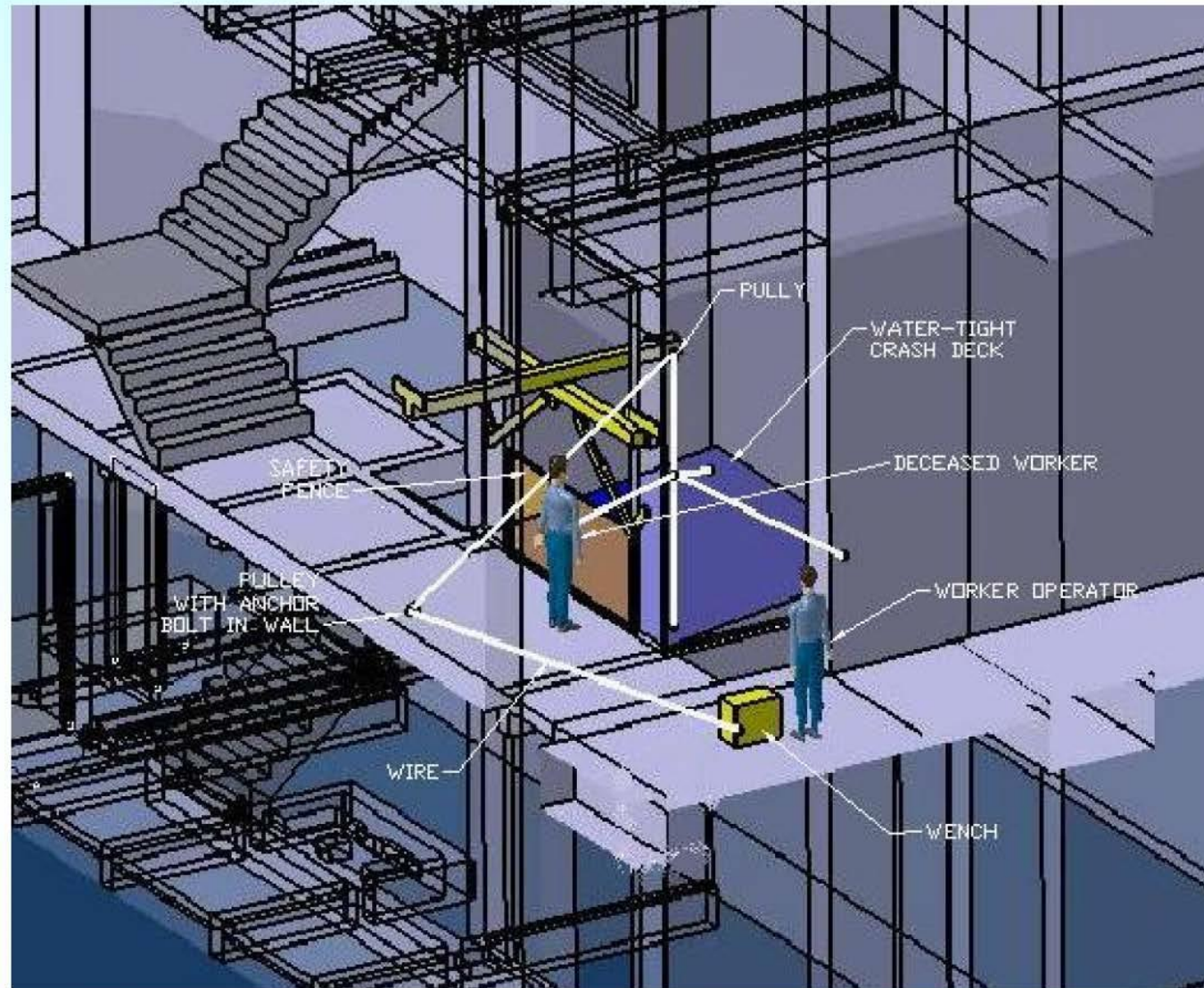
Description of Incident

The tragic incident happened on a Sunday afternoon at a commercial building project. A work gang with three workers were assigned to lift a so called "Crash Deck" from 14th to 20th FI inside the lift shaft.

The Crash Deck was lifted up by means of a lifting system which involved an electric winch, pulley blocks & lifting beams configuration.

At the time of the incident, the deceased was standing in front of the lift shaft opening and act as the banksman for the lifting operation. It was believed that the wall mounted pulley block was being pulled off due to the anchor bolt seriously deformed; and that caused the Crash Deck started to free fall under a unrestrained weight, at which point there was a sudden snapping action, which ripped the winch from its floor mountings and pulled it into the lift shaft together with the guy.

Accident Scene Schematic



Lesson Learnt

The possibly causes of the incident were:

- deficiency in the design of the lifting system
- deficiency on the quality of installation of the lifting system



Lesson Learnt

- Enhancement had been made to Temporary Works procedure
- Stringent control on Restricted Hours Work (required the approval by respective Divisional Director)
- Technical Directives and Best Practices Guidelines on anchorage system
- Management of subcontractors designs

Case 4: A worker sustained burn injury

Description of Incident

The case happened in the afternoon after lunch break within a shopping mall which was under renovation. At the time of incident, the a welder (41yrs old) was igniting the oxy-acetylene flame cutting equipment, a flash over occurred and burned the guy's right forearm, knees and abdomen.



Details of Incident (Findings)

- Before the commencement of the flame cutting operation, the welder (the I/P) intended to wet the area with water in order to prevent the splashing of welding spark. However, the co-worker mistakenly passed him a bottle of “water” (thinner), and the I/P poured on top of the fire blanket. When he started the welding, the spark ignited the flammable substance and caused a flash over.
- The guy had put on a mask throughout the operation and that's why he might not smell the thinner
- That bottle of thinner with no label and was left by another subcontractor. The co-worker thought it was a bottle of drinking water and passed to the I/P

Lesson Learnt

- The effectiveness on implementation of Hot Work Permit
- Control of chemical substances

Video: Moment of Truth

we would everyone to rethink:

Am I taking the responsibility?!