

Safety Forum 2021 for Works and Property Management Services 工程和物業管理安全研討 會2021

Topic: Safe Practice of
Foundation Safety initiating
from Behavioral Change

題目: 安全作業之地基安全
始源行為改變



Speaker 講者:

Wong Chi Lok 黃志樂

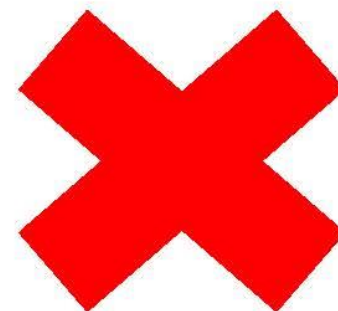
Senior Safety Manager 高級安全經理

Chu Oi Man, Mike 朱愛雯

Division Safety Manager (Foundations)

分部安全經理 (地基)

Unsafe Behavior 不安全行為



PAST 以前

Behavior Improvement 行為改善



RECENTLY
近年

Behavior

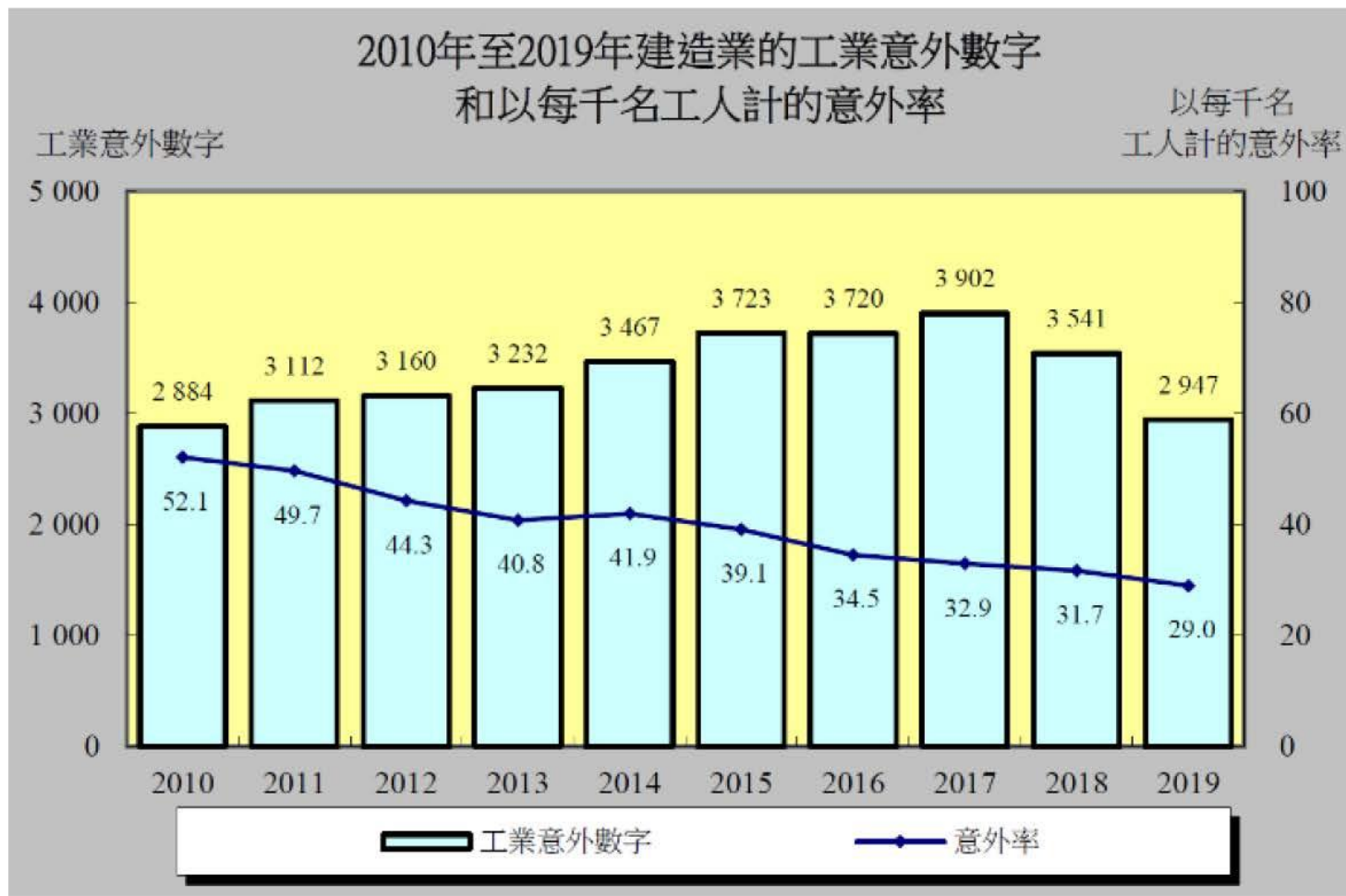
行為



Now現在

Accident Trend

工業意外趨勢



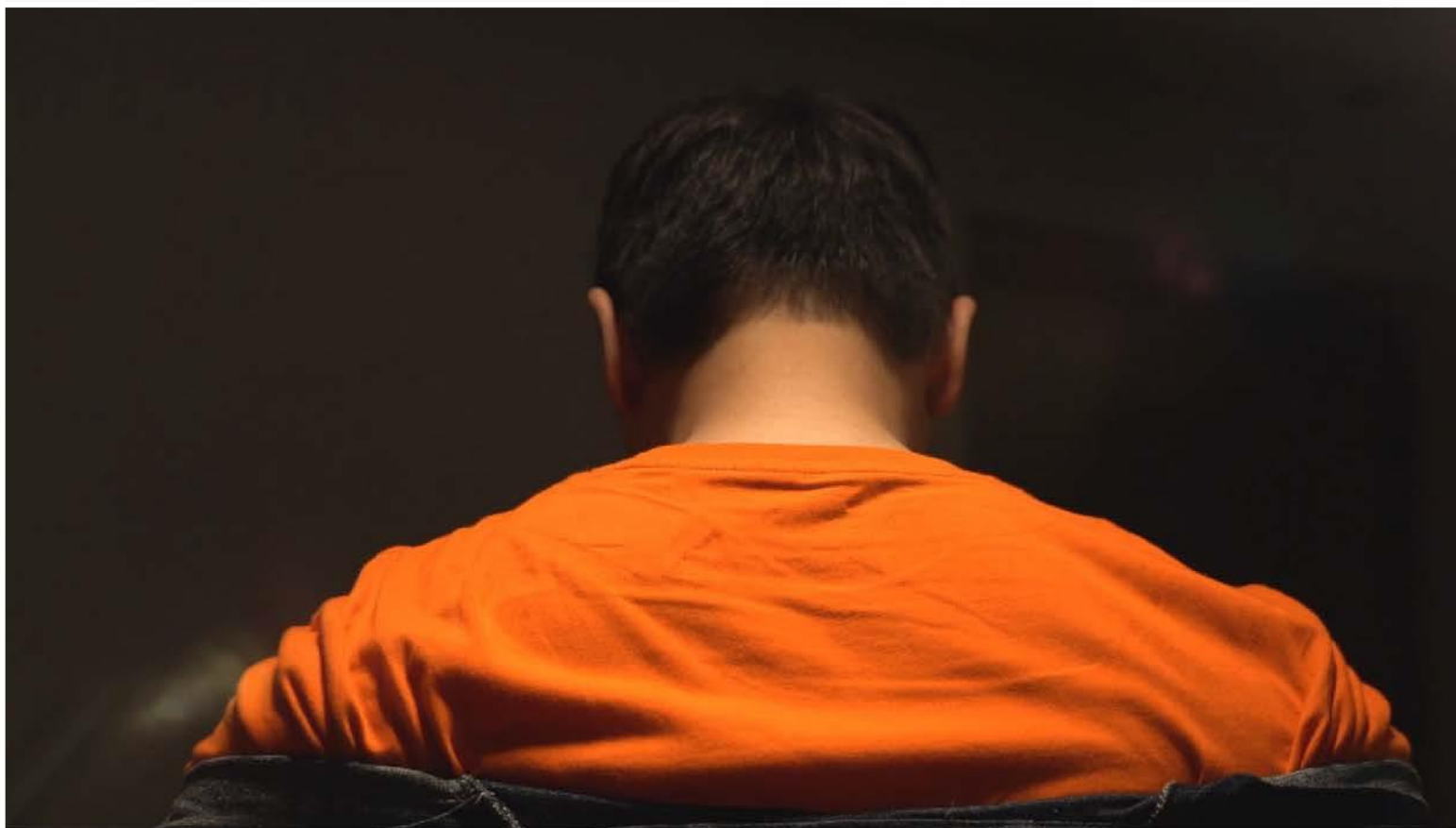
Chun Wo Safe Zone

俊和安全地域



Chun Wo Safe Zone Video

俊和安全地域影片



Chun Wo Card 俊和安全卡



Foundation Safety

Initiating from Behavioral Change

地基安全始源行為改變

Site Operation

地盤運作



Foundation Safety 地基安全



Lifting 吊運



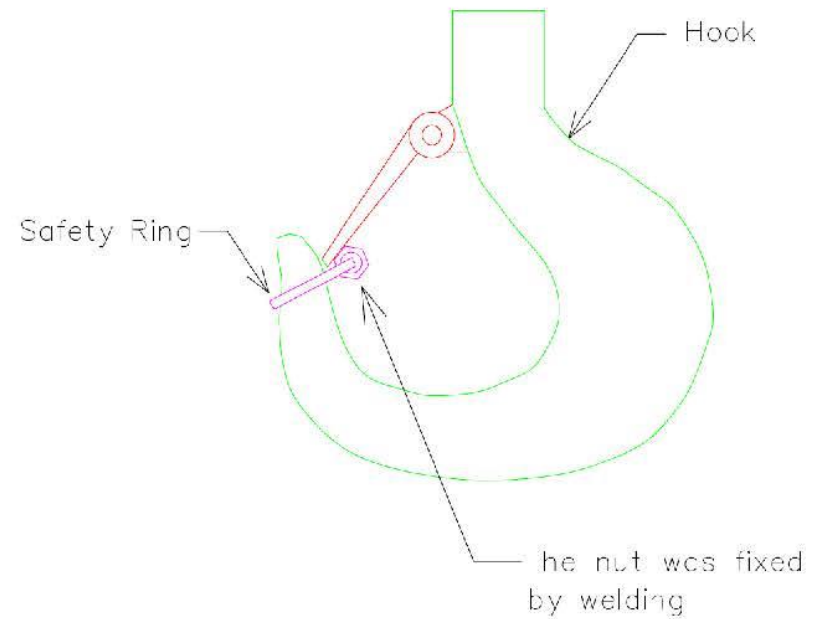
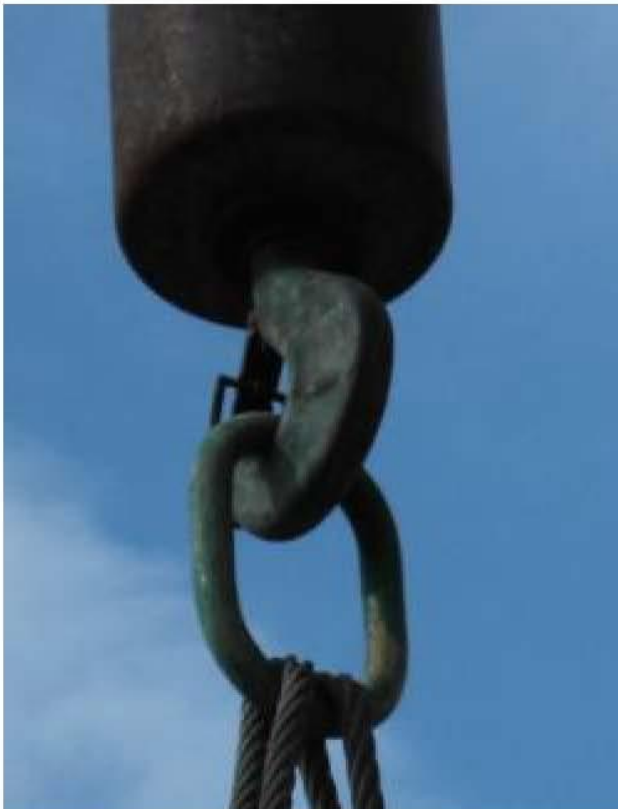
Firm Ground Tester
地面硬度測試機

Foundation Safety 地基安全

Lifting 吊運



Double Latch 雙重吊勾保險掣



Foundation Safety 地基安全

Lifting 吊運



Video Recording Device 吊機監察儀器



Foundation Safety 地基安全

Lifting 吊運



Angle Indicator
吊機角度器



LED Light Belt
機尾燈帶



Foundation Safety 地基安全

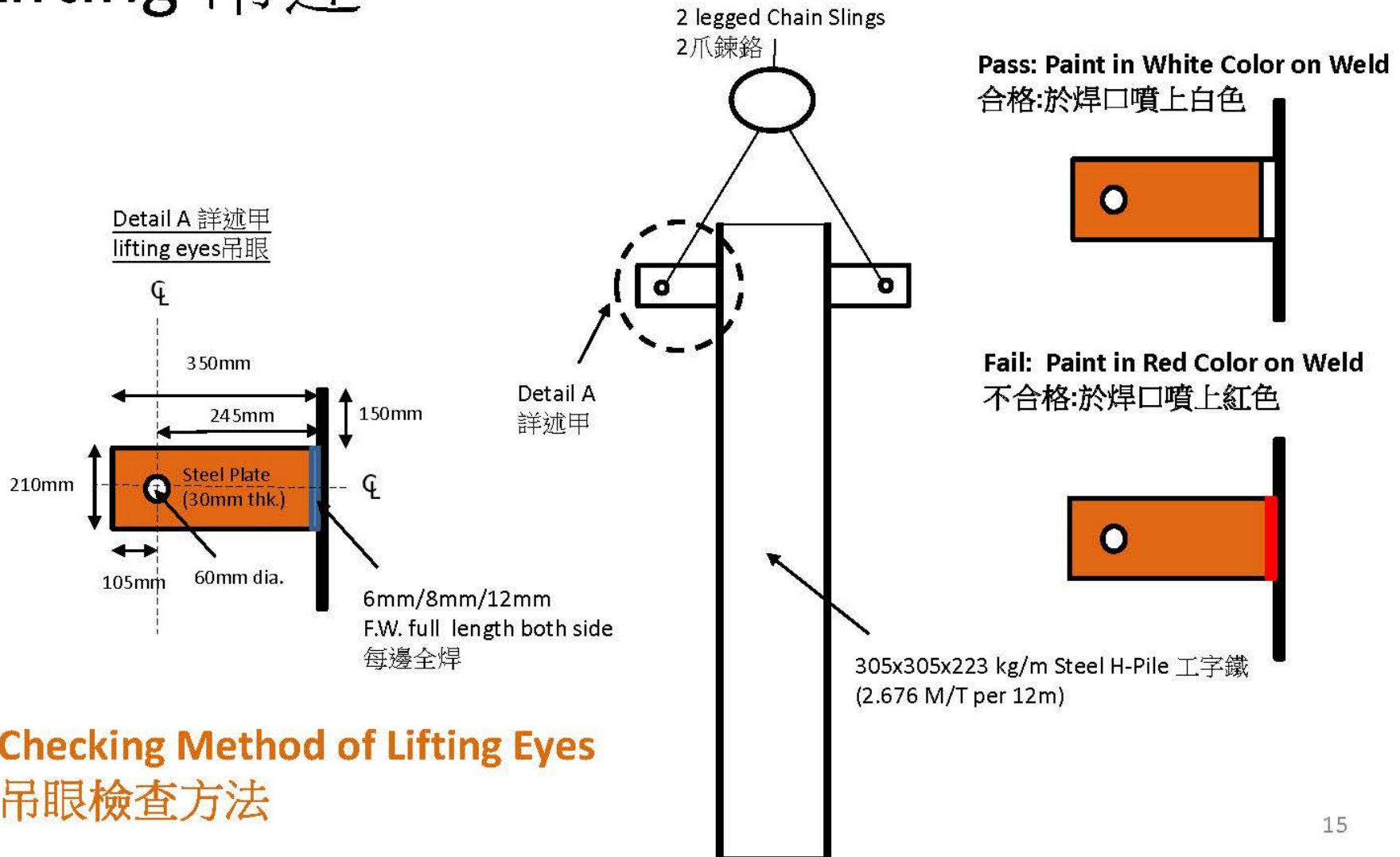
Lifting 吊運



Proper Fencing and Sufficient Lifting Signage
妥善圍封及展示足夠吊運警示

Foundation Safety 地基安全

Lifting 吊運



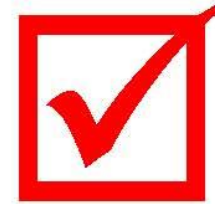
Checking Method of Lifting Eyes 吊眼檢查方法

Foundation Safety 地基安全

Lifting 吊運



Checking Method of Lifting Eyes
吊眼檢查方法



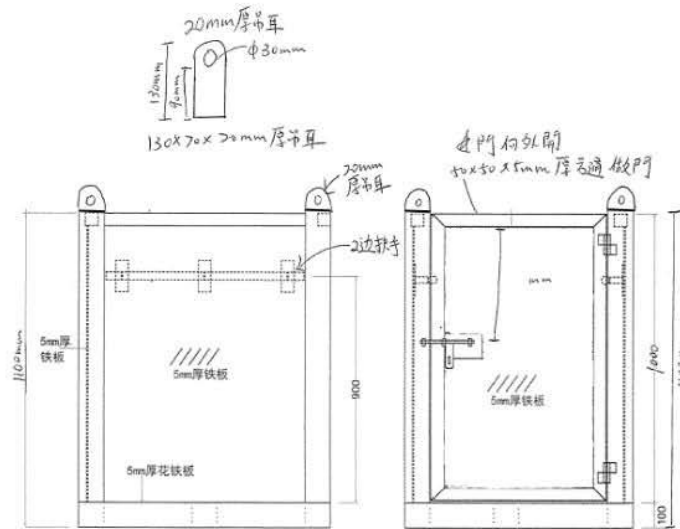
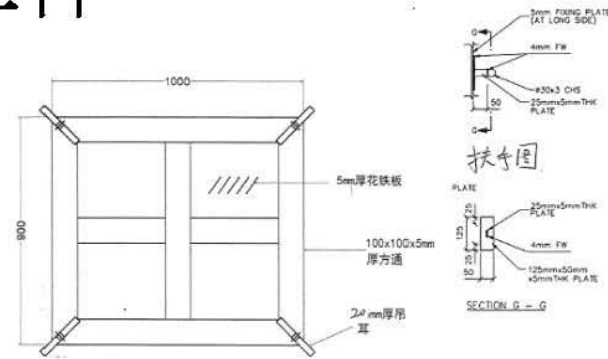
Foundation Safety 地基安全

Working at Height 高空工作

Falling Objects 物料下墜



俊和地基工程有限公司
 Chun Wo Engineering Co., Ltd.
Man Cage 人籠
 No. : CW-MAC06
 SWL: 0.5T
 Person Max. : 2



Design on Man Cage
 人籠設計及統一

Foundation Safety 地基安全 Working at Height 高空工作 Falling Objects 物料下墜



Provision and Use of Ladder Platform and Step-up platform
提供及使用梯台及功夫橈

Foundation Safety 地基安全

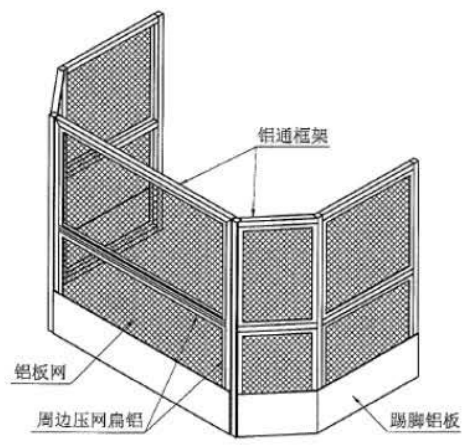
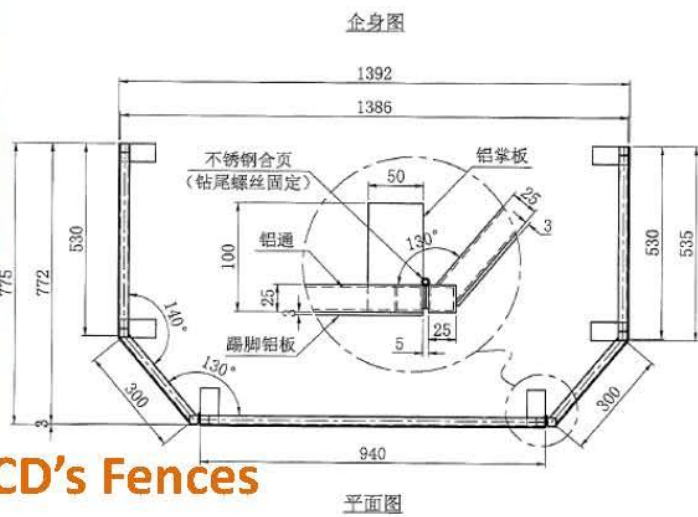
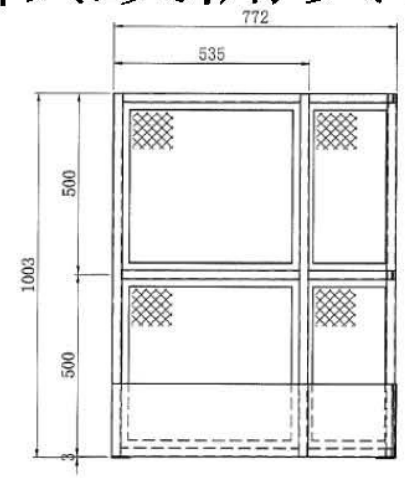
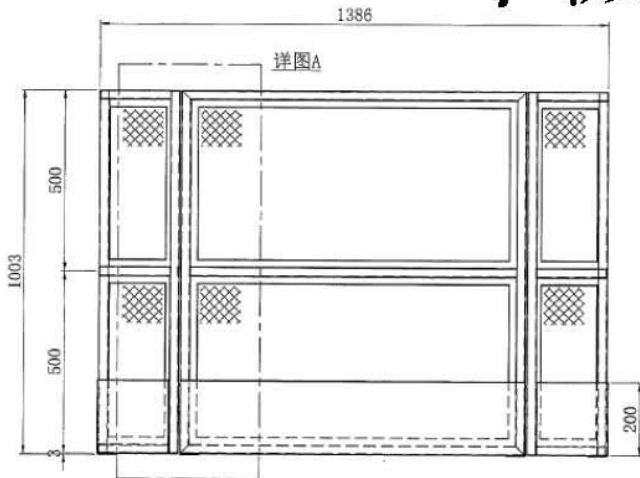
Plant and Equipment Safety 機械設備安全



Standard of RCD Equipment
鑽機設備統一

Foundation Safety 地基安全

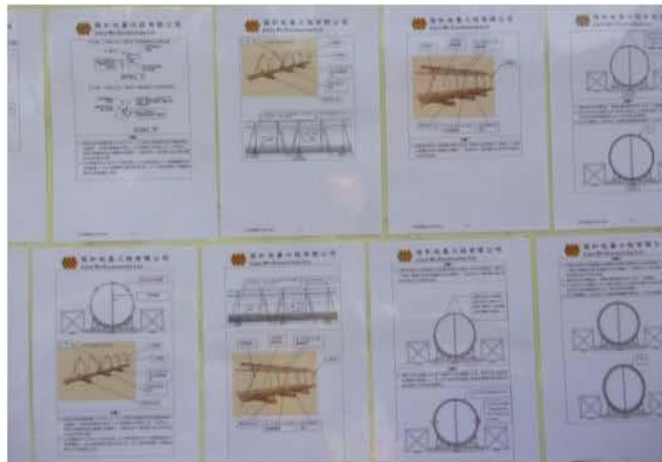
Plant and Equipment Safety 機械設備安全



Improvement to Rigid RCD's Fences
改善鑽機鑽動圍欄

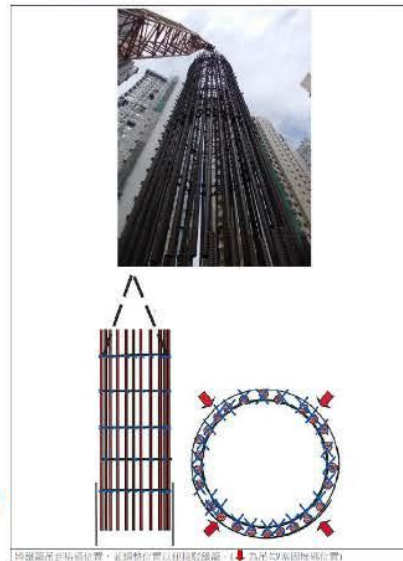
Foundation Safety 地基安全

Steel Fixing Safety 扎鐵安全



Graphical safe work procedure
圖示化安全施工程序

俊和地基工程有限公司
CHUN WO FOUNDATIONS LTD.



吊機吊起吊籠位置，並調整位置以作吊籠穩定。吊籠吊起後吊籠位置。

俊和地基工程有限公司
CHUN WO FOUNDATIONS LTD.



在吊籠吊起後，再作加會鬆可吊的鎖鍊，吊籠和穩定。

俊和地基工程有限公司
CHUN WO FOUNDATIONS LTD.



如果吊籠吊起後，便開始進行各組鐵籠加工及打緊螺絲，使鐵籠更穩定及牢固。

Foundation Safety 地基安全

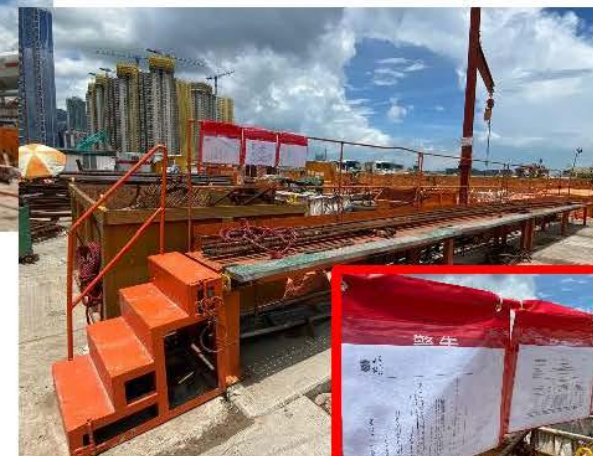
Steel Fixing Safety 扎鐵安全



Design and calculation for working platform and T-frame for lifting Re-bars
 設計扎鐵工作台及吊鐵架



CHUN WO FOUNDATIONS		Project: 2014/0002	
Working Platform for Fabrication of Steel Cage		JOS Development of Civil Eng. Bldg., Ngan Tau Hsi	
Drawn by:	Checked by:	Scale:	1:1
Issue:	Revision:	Date:	10/10/17
Reference: 10/10/17			
1.1 Check Compression			
Max. Compression Force, F_c	=	18.88	kN
L_e	=	1.0 * L	= 6.85
λ	=	200.0	= 20.0
λ	=	32.4	
Compression Strength, R_c	=	242.7	kN/m ²
Compression Resistance, F_{Rd}	=	242.7 * 28.8 / 10	= 701.0
	=	223.36	kN
	>	18.88	kN
			[0.8]
Use: 220/20/37.08 Channel is adequate.			
1.2 Check Bending of Bolt between B1 & B2			
Double 3 mm fillet weld all round			
Steel section W400	S	=	250
Weld length, L_w	=	122.4 + 76.2 * 2	
	=	364.8	mm
L_e	=	3 * L _w	
	=	1094.4	mm
Weld capacity, F_w	=	1.17 * 200.00 / 100.0	= 2.34
	=	218.70	kN/mm
	>	18.88	kN
			[0.8]
Use of 3mm fillet weld is adequate.			
1.3 Check Bending of Bolt between B1 & B3			
Profile 4 mm fillet weld all round			
Steel section W400	S	=	182
Weld length, L_w	=	152.4 + 76.2 * 2	
	=	304.8	mm
Steel strength, F_t	=	57 / L _w	
	=	18.71 * 304.8 / 304.8	= 18.71
Weld capacity, F_w	=	0.7 * 4 * 120	= 336
	=	404.16	kN/mm
	>	18.88	kN
			[0.8]



Foundation Safety 地基安全 Concreting Safety 落石矢安全



Continue monitor the concreting work by using different tablets and mobile phones with Wi-Fi network at the same time
利用科技以持續監察整個落石矢過程

Unpiloted Concrete Skip 遙控石矢斗

Chun Wo Safety Handbook 俊和安全手冊



承諾互信 · 共建未來
Building a better future with trust and commitment



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