



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

Lifting Safety Courses Provided to Site Operational Personnel by Hong Kong Institute of Construction

18th Jun 2021

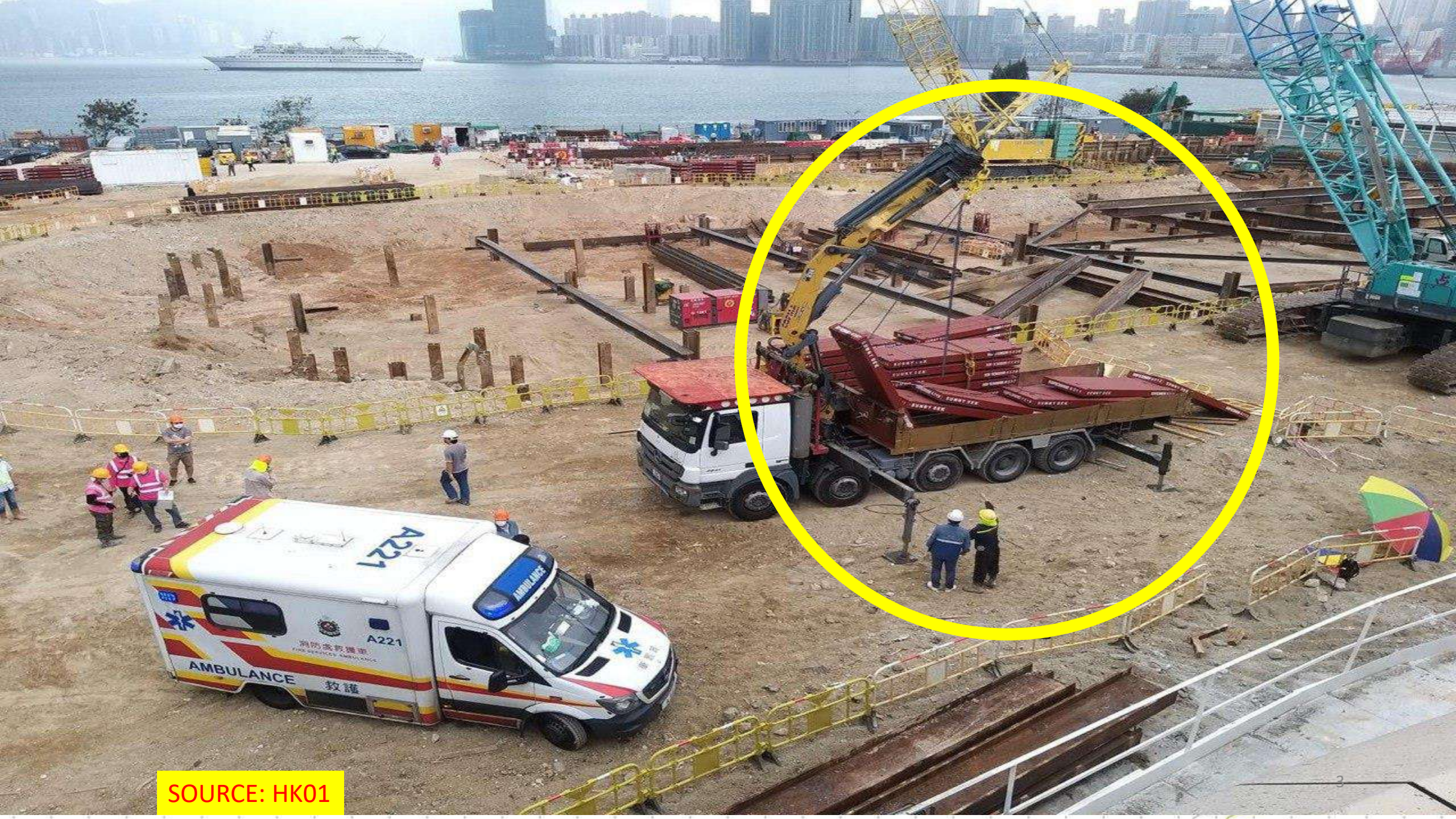
Elton So



Recent Fatal Accident in Kai Tak (14 Apr 2021)

- Hazard of unloading Material





SOURCE: HK01



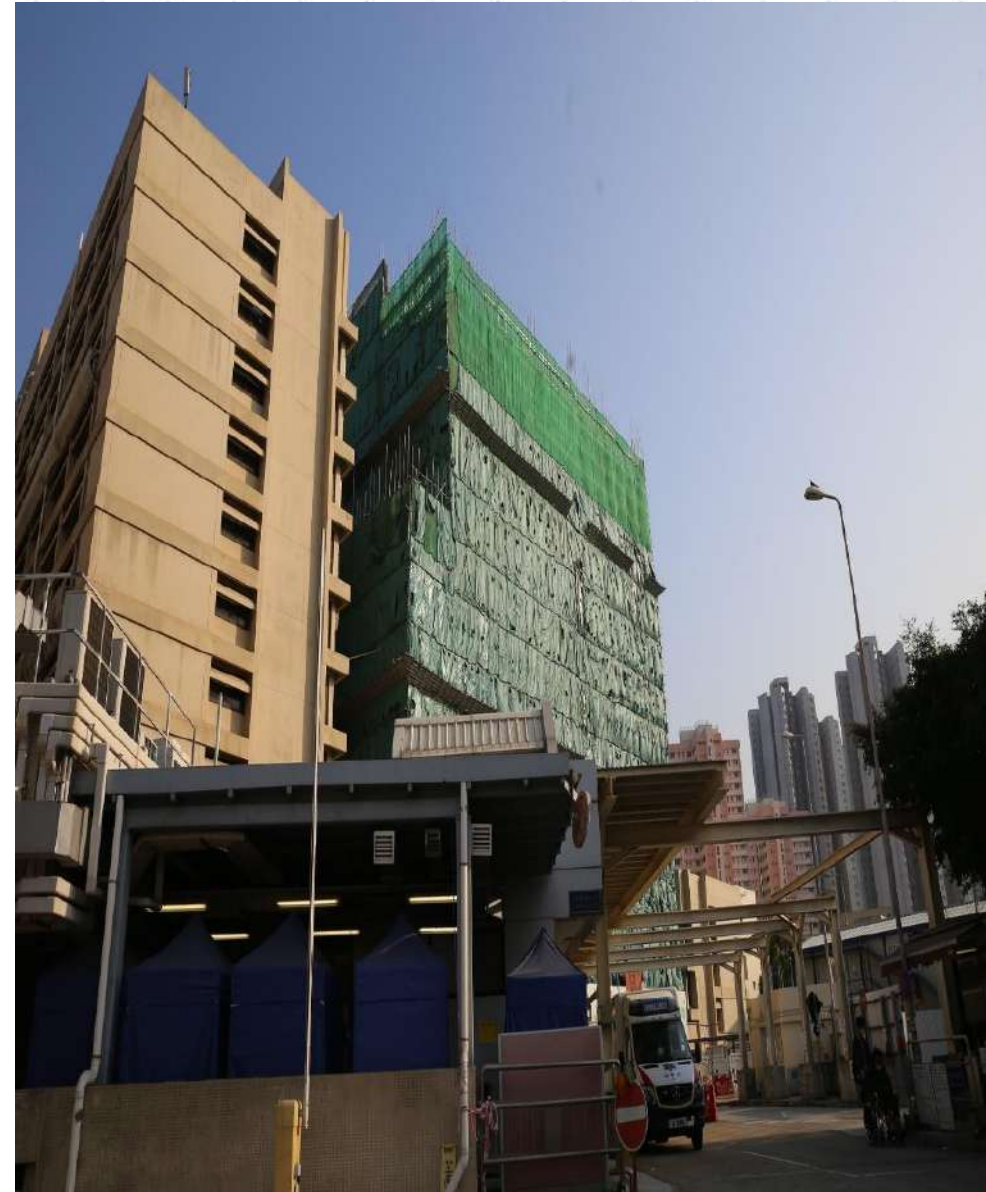
SOURCE: HK01

吊臂操作員屯門醫院兩米高的起重機平台墮下， 留醫10日後不治

一名64歲姓李吊臂操作員，15/01/2021 由地盤兩米高吊機平台墮下，入院搶救後情況危殆，留醫10日後不治。

屯門醫院手術室大樓擴建工程。**當日晚上9時許**，4名吊臂操作員需移走地盤天秤，其中3人正在**兩米高的起重機平台**，事主則在未有繫安全帶情況下，蹲在起重機的邊緣，疑突然踩空由平台墮下，傷及頭骨及左胸骨。

https://www.hk01.com/突發/578925/屯門醫院擴建地盤-64歲工人2米平台墮下-留醫10日不治?utm_source=01appshare&utm_medium=referral



Lifting Safety Courses Provided by HKIC

- Crane Operator Training Courses
- Crane Operator Certification Tests
 - Certificate For Tower Crane Assemble Technician Assistant
- Silver Card – A12 - Construction Materials Rigger
- Silver Card – A12S - Rigger & Signaler
- Refresher Training for Silver Card A12 and A12S
- Lifting Safety Supervisor Course



Cranes Operator Programme	Date	Training Venue
Truck-Mounted Crane Operation Course	12 Days	Tai Po Training Ground
Wheeled Telescopic Mobile Crane Operation	50 Days	
Crawler-Mounted Crane Operation	50 Days	
Tower Crane Operation	37 Days	
Certificate For Tower Crane Assemble Technician Assistant	81 Days	

Certification Test for Crane Operators	Date	Training Venue
Tower Crane	3 Day	Tai Po Training Ground
Wheeled Telescopic Mobile Crane		
Crawler-mounted Mobile Crane		
Truck-mounted Crane		
Gantry Crane		
Derrick Crane		
Re-validation Test	1 Day	Tai Po Training Ground

Construction Materials Rigger (A12)

Module 1 3.5 hours (D1 a.m.)	Kwai Chung Campus, 7-11 Kwai Hop Street	<ul style="list-style-type: none">● Lifting Accidents● Legislation Requirement● Lifting appliances and Gears● Safe working practices● Proper use of PPE
Module 2 4 hours (D1 p.m.)		<ul style="list-style-type: none">● Inspection for lifting gears● Basic principals of safe lifting operations● Case study/ Written test
Module 3 7.5 hours (Day 2)	Tat Mei Road Training Ground	<ul style="list-style-type: none">● Practical Exam



Rigger and Signaller (A12S)

Rigger
Day 1
7.5 hours
Theory

Rigger
Day 2
7.5 hours
Practical
Training

Signaller
Day 3
7 hours

Tai Po
Training
Ground



- Course Content Same as A12 Day One(1)

- Course Content Same as A12 Day Two(2)

- Practice Standard Hand Signals and Radio communication
- Case Study and Practical Test



A12 Vs A12S

	建造工地 吊運操作訊號員	(A12)銀卡課程 -工地建材索具工	(A12S)銀卡課程 索具工 及 訊號員
	(SHO)	(UPDATED)	(NEW)
現況	已開設課程	已開設課程	新開設課程
推出A12S後的 課程未來方向	將會停辦	維持不變	新開設課程
上課時間	七小時	兩天全日制	三天全日制 (第一天及第二天- 內容:A12) (第三天 -內容: SHO)
可從事工作	訊號員	索具工	索具工 + 訊號員
証書有效期	永久有效	三年有效	三年有效
覆証	不設覆証課程	一天制覆証課程	一天制覆証課程
預計開辦/結束 課程日期	2020年第二季 結束課程	已開辦	已開辦
証書持有人 取得A12S銀卡 証書的方法	完成A12S 第一及第二 天課程	完成A12S第三天課程	學員完成三天課程及考試
	完成A12S覆証課程		



A12S - 索具工及訊號員



Certificate for Lifting Safety Supervisors (LSSZ)

Day 1
7.5 hours

Day 2
7.5 hours

Day 3
7.5 hours

**Kwai Chung
Campus,
7-11 Kwai Hop
Street**

**Tat Mei Road
Training
Ground**

- **Lifting Theory**

- **Risk Assessment**
- **Lifting Plan
Preparation**

- **Issue of Lifting Permit**
- **Practical Exam**



Risk Assessment			
Hazard	Mechanism	Risk	Action



**A12 – Rigger
(Day 1)**

**A12 – Rigger
(Day 2)**

A12S

**A12S – Rigger & Signaller
(Day 1)**

**A12S – Rigger & Signaller
(Day 2)**

**A12S – Rigger & Signaller
(Day 3)**

**Lifting Safety Supervisor
(Day 1)**

**Lifting Safety Supervisor
(Day 2)**


**Lifting Safety Supervisor
(Day 3)**



Certificate for Lifting Safety Supervisors (LSSZ)

- Applicant must have at least 3 years of experience in construction site management and has been employed and recommended by the **Main Contractor**;
- Applicant must present valid certificates of “A12 silver card” AND “SHO signalman” issued by CIC; or a **Valid certificate of “A12S Silver Card”**; AND
- Must have the ability to read and write Chinese and English.



Legislation on Lifting Operation	Theory	3 hrs
Roles and Responsibilities in Lifting Operation		4 hrs
Planning for Safe Lifting Operations		5 hrs
Safe Use of Mobile Crane		6 hrs
Safe Use of Tower Cranes		3 hrs
Safe Use of Other Lifting Machines		3 hrs
Basic Rigging and Slinging Methods	Practical	2 hrs
Lifting Accidents and Emergency Response		3 hrs
Assessment • Written Test and Practical Performance / Role play / Case study		3 hrs
 Singapore Lifting Supervisor Course		Total: 32 hrs
		15



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HKIC Courses For MiC



Modular Integrated Construction (MiC) Courses Provided by HKIC

- **Certificate In Modular Integrated Construction Unit Installation**
- **Certificate in Modular Integrated Construction (MiC) for Foreman**
- **Professional Certificate in Modular Integrated Construction (MiC) for Project Managers and Clerks of Works**



Certificate In Modular Integrated Construction Unit Installation

- Duration : 15 Day (Day Class)
- Venues : Tai Po Training Ground
- Curriculum:
 1. Professional ethics, basic safety and environmental protection knowledge
 2. Basic knowledge and cases of the installation of various assembled composite components



Certificate In Modular Integrated Construction Unit Installation Curriculum:

3. Transportation procedures and application methods (requirements for waterway, land, and tunnel)
4. Assembly tools, operation and construction procedures
5. Risk assessment and hazard identification
6. Building Information Simulation (BIM)
7. Assembly method and safe operation
8. Assembly and construction training
9. Final Evaluation



Certificate in Modular Integrated Construction (MiC) for Foreman

- **Duration : 55.5 Hours (Evening Class)**
- **Venues : Kowloon Bay Campus**
- **Curriculum:**
 1. Duty and professional conduct of foreman
 2. Method and workflow of MiC
 3. Reliable quality and quality control
 4. Construction cycle
 5. Site layout



Certificate in Modular Integrated Construction (MiC) for Foreman - Curriculum

6. Work arrangement and safety use of tower crane
7. Transportation, receipt, storage, lifting and assembly of integrated modules
8. Changes in works and roles of a foreman
9. Site safety and environment protection requirement
10. Levelling & surveying and use of related equipment
11. Use of BIM on MiC
12. Site visit



Certificate in Modular Integrated Construction (MiC) for Foreman - Curriculum

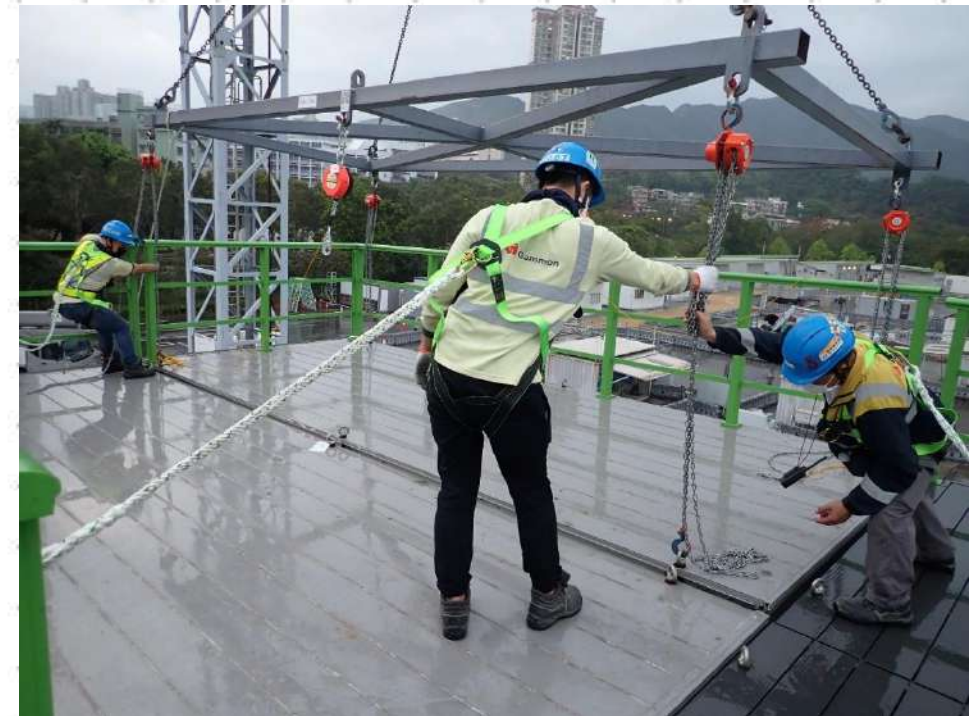
13. Basic Safety Appreciation Course for Crane Operation for Front Line Management (Tai Po Training Ground – One Day Class on Sat)

14. Final assessment



Professional Certificate in Modular Integrated Construction (MiC) for Project Managers and Clerks of Works

- **Duration : 51 Hours (Evening Class)**
- **Venues : Kowloon Bay Campus**
- **Curriculum:**
 1. Understanding Design for manufacturing and assembly (DfMA) and Modular Integrated Construction
 2. Relevant legislative requirements
 3. Roles, responsibilities and work ethics of Project Managers and Clerks of Works



Professional Certificate in Modular Integrated Construction (MiC) for Project Managers and Clerks of Works

4. Construction Method and process of Modular Integrated Construction
5. Process, quality control and related documents for production of modular units in factory
6. Transportation Arrangement of Modular Units
7. Site Layout Planning
8. Selection and use of Cranes
9. Construction Cycle
10. Just-in-time (JIT) Concept



Professional Certificate in Modular Integrated Construction (MiC) for Project Managers and Clerks of Works

11.Lifting and Installation of Modular Units

12.Works Supervision and Inspection for "Modular Integrated Construction" Method and associated testings

13.Construction Safety and Environmental Protection Measures

14.BIM Management Platform

15.Final Assessment





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Module Arrive on Site



How to Get up There?

**Is it Involved Working
at Height ??**



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Legislative Requirement for Working at Height

Construction Sites (Safety) Regulations: Part VA

CSSR – 38A(2) & 38AA(2)

- Safe Suitable and adequate safe access to and egress from every place of work on a construction site shall be provided.
- Every safe access to and egress from every place of work on a construction site shall be properly maintained.



Construction Sites (Safety) Regulations: Part VA

- “Adequate steps ” (足夠的步驟) shall include the provision, use and maintenance of one or more of the following—
 - (a)working platforms;
 - (b)guard-rails, barriers, toe-boards and fences;
 - (c)coverings for openings;
 - (d)gangways and runs.



Working Platform

Lorry Mounted Type



The Telescopic Type



The Scissor Type



The Vertical Mast Type





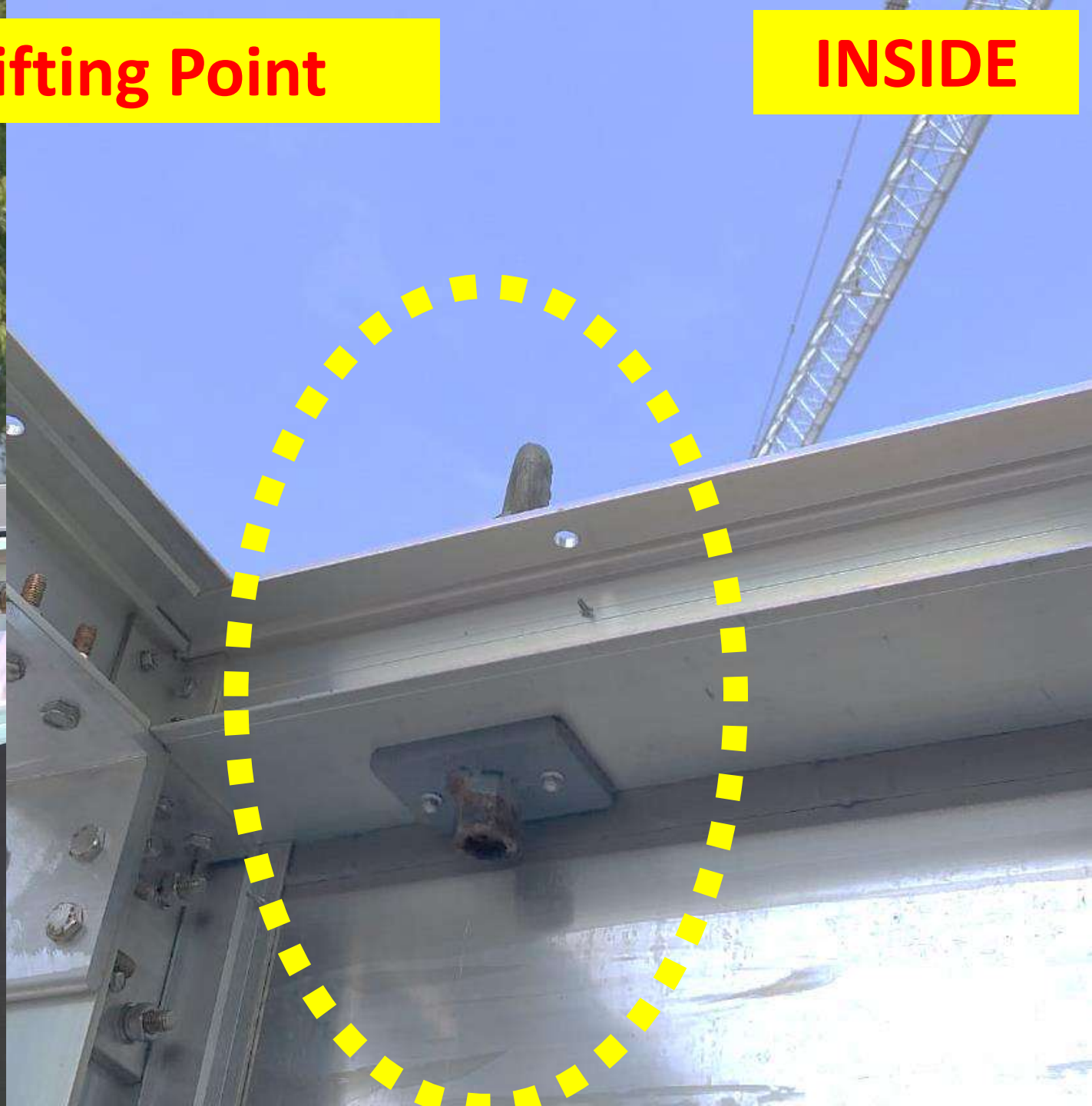




OUTSIDE

Lifting Point

INSIDE



Lifting Point

WLL 1.2T



Lifting Gears



Certification No.: WW-21-MA
Factories and Industries

LG – F.6, F.7

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF CHAINS, ROPES AND LIFTING GEAR

Form approved by the Commissioner for Labour for the purposes of regulation 18(1) of the Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations
工廠及工業經營(起重機械及起重裝置)規例

鏈條、纜索及起重裝置的測試及徹底檢驗結果證明書

本表格乃由勞工處處長就工廠及工業經營(起重機械及起重裝置)規例第18(1)(d)條的需而認可

Name of owner and address of installation of the chain, rope or lifting gear tested and examined. 接受測試及檢驗的鏈條、纜索或起重裝置的擁有人姓名及安裝地址		CONSTRUCTION INDUSTRY COUNCIL Test Site : J&P Workshop, Luk Keng	
Description of chain, rope or lifting gear tested and distinguishing mark 接受測試的鏈條、纜索或起重裝置的說明及識別標誌	Test load applied (tonnes) 測試時所使用的負荷 (以公噸為單位)	Safe working load (tonnes) 安全操作負荷 (以公噸為單位)	Defects noted If none enter "None" and state whether in safe working order. 註明所發現的毛病 如無不妥，則填「無」字並註明是否處於安全操作狀態
Master Link Size: dia. 25 mm x 140 mm(W) x 270 mm (L) Owner's I.D.: K99 & K100	16.00 t	8.00 t	"None" In safe working order

I hereby certify that on 5-May-21 the gear described in this certificate was tested and
茲證明本人曾於二〇 年 月 日 依照附表1的規定測試及徹底檢驗本證書所指的
thoroughly examined by me in accordance with the First Schedule and that the above particulars are correct
起重裝置，且上述各項均屬確實無訛。
J & P SURVEYORS AND TEST HOUSE LIMITED
驗業公證行有限公司

Signature of Registered Professional Engineer
註冊專業工程師簽署 Ir Kwok Kin Wai

Qualification BSc(Eng)(Hons), MBA, MHKIE, MIEAust, RPE (RP 0406630)
註冊資格

Discipline Mechanical, Materials

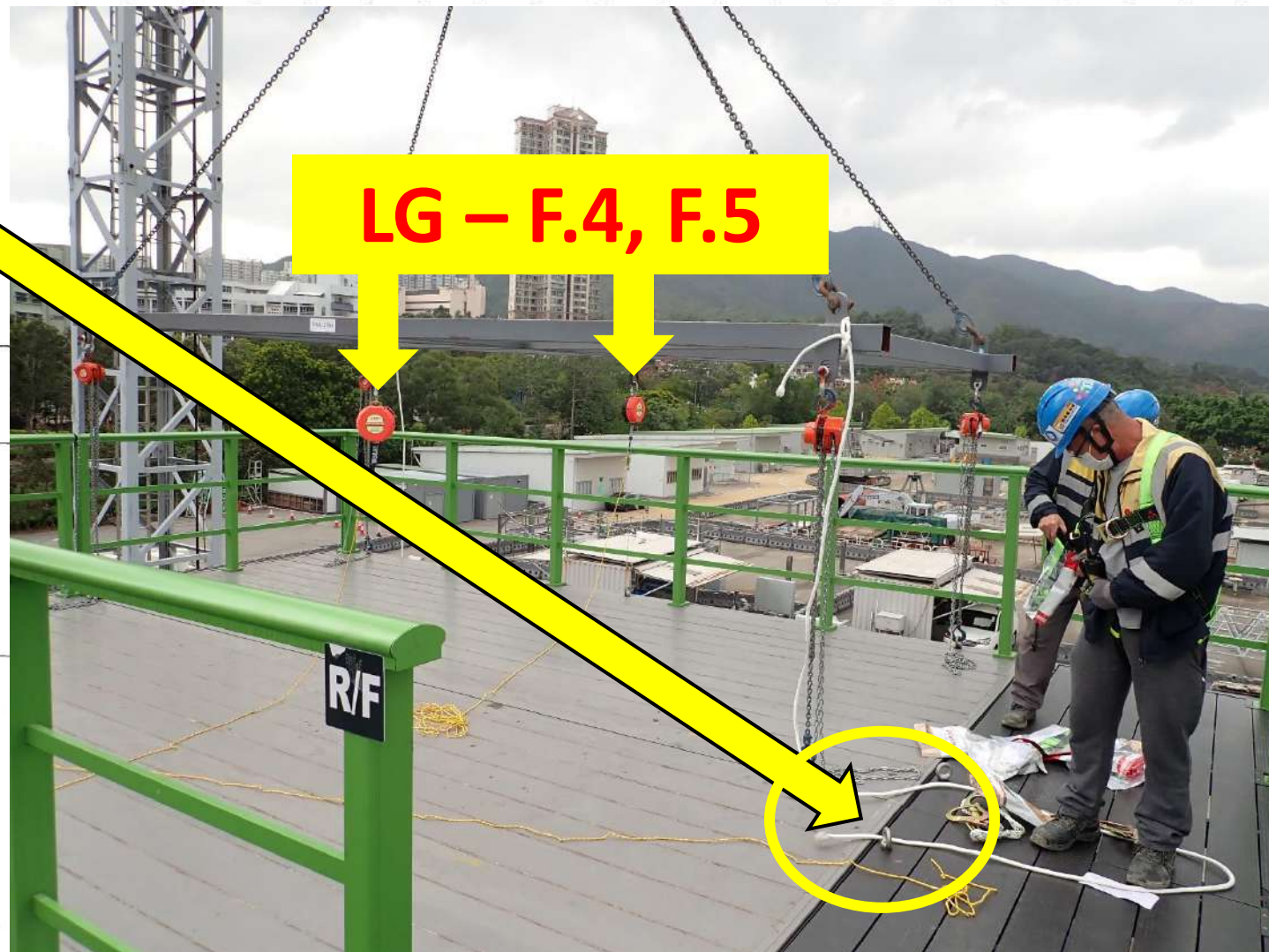
Person or firm by whom person conducting the test and
僱用執行此項測試及檢驗
examination is employed.
的人士或商號

J & P SURVEYORS AND TEST HOUSE LTD.
Room 210, 2/F, Poly Centre, 15 Yip Fung Street, On Lok Tsuen,
Fanling, New Territories, Hong Kong.
Tel: (852) 2770 6296 Fax: (852) 2374 3531
驗業公證行有限公司
新界粉嶺安樂村樂豐街15號寶利中心2樓210室

Date of certificate 5-May-21
簽發日期

Any competent examiner or competent person who delivers to an owner a certificate or makes a report which is to his knowledge false as to a material particular shall be guilty of an offence and shall be liable on conviction to a fine of \$200,000 and to imprisonment for 12 months.
任何合資格檢驗員或合資格的人，如向擁有人交付他明知有任何要項屬虛假的證明書或作出他明知有任何要項屬虛假的報告，即屬犯罪；一經定罪，可處罰款二十萬元及監禁十二個月。

LG – F.4, F.5



Jan - Mar 一月至三月	BLUE 藍	
Apr - Jun 四月至六月	YELLOW 黃	
Jul - Sept 七月至九月	GREEN 綠	
Octe Dec 十月至十二月	ORANGE 橙	
To be removed from the site 不能再使用 待移離工地	RED 紅	
Equipment under quarantine 工具待驗	WHITE 白	
Not used for lifting purpose 不可作吊重用途	BLACK 黑	





Hand Tool Strap

Hand Tool



Lorry Crane Lift up the Module From the Truck



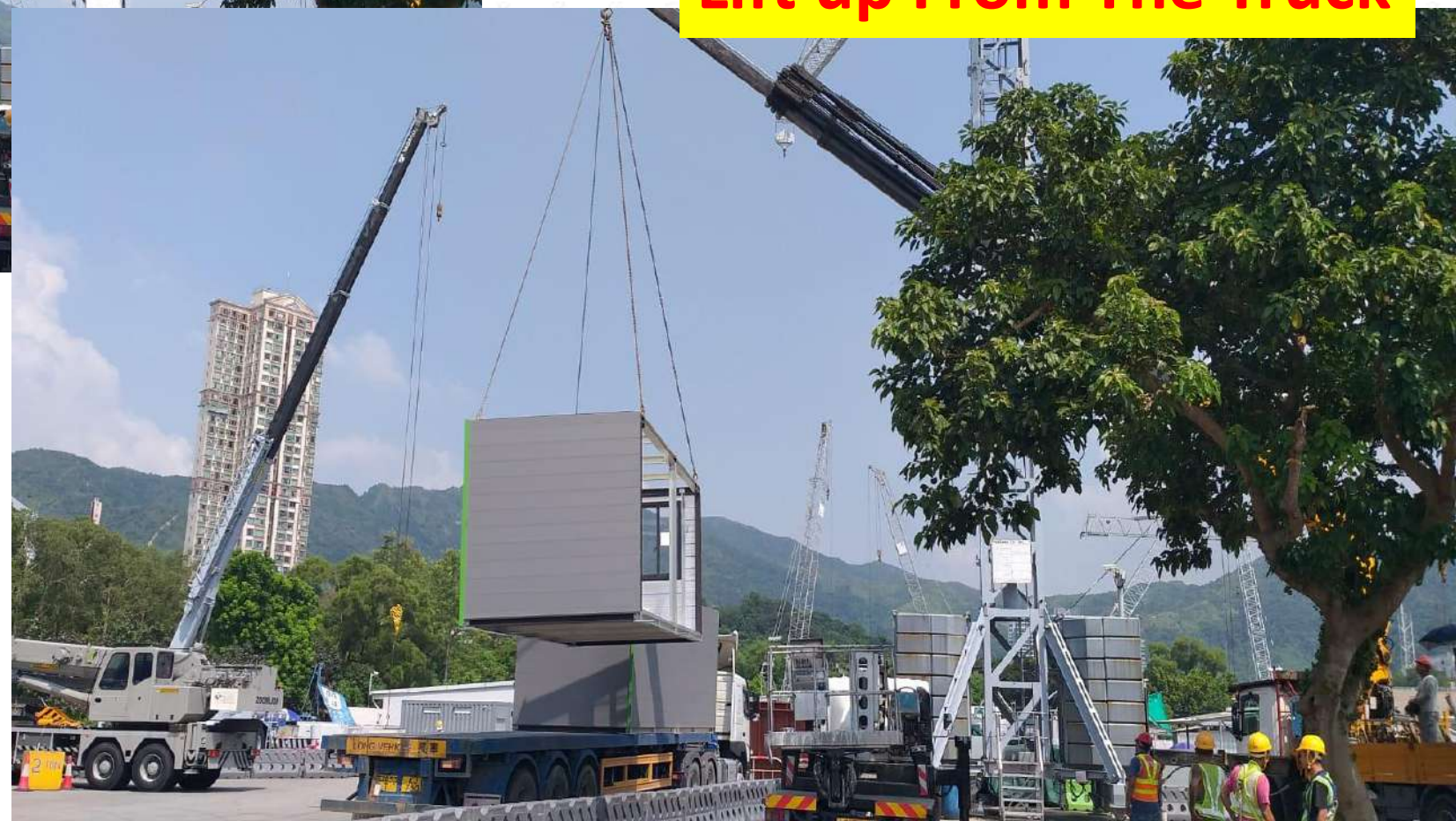
Lorry Crane Lift up the Module From the Truck

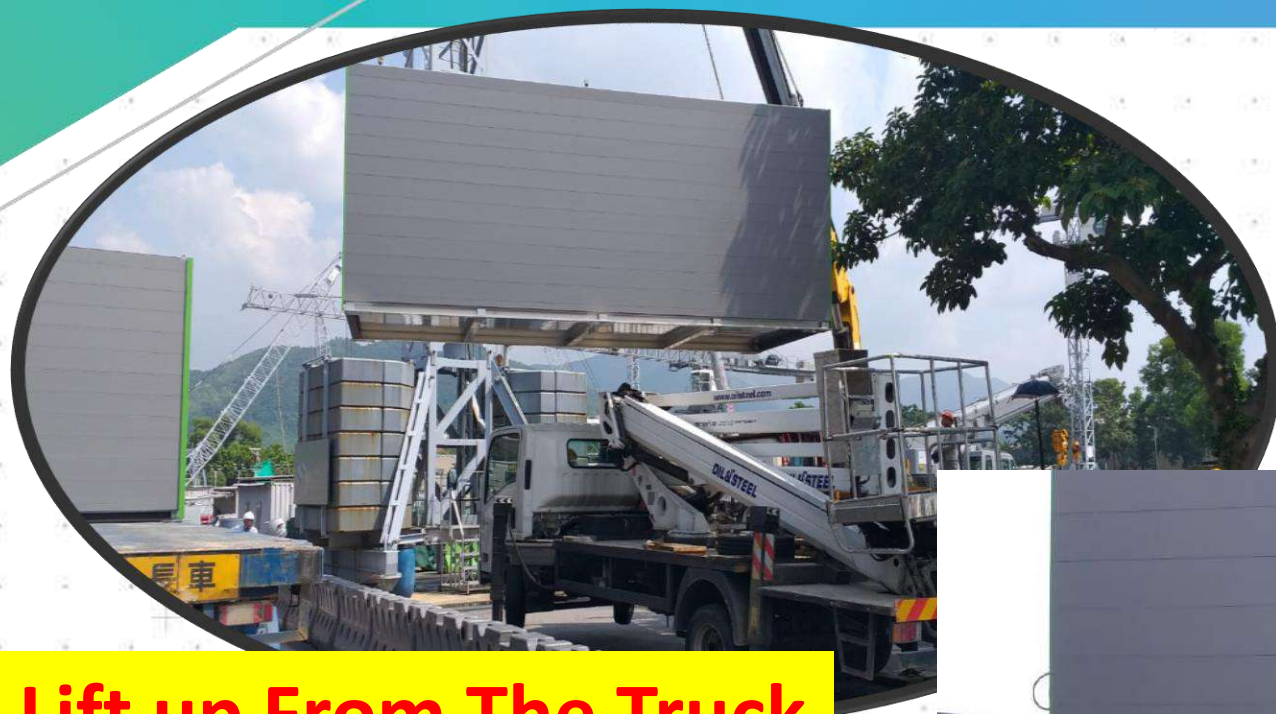


Lifting Safety Supervisor Monitor the Operation



Lift up From The Truck





Lift up From The Truck

Use Tag Line to Control





Hold the Correct Position

**Lift Down
onto the Ground**



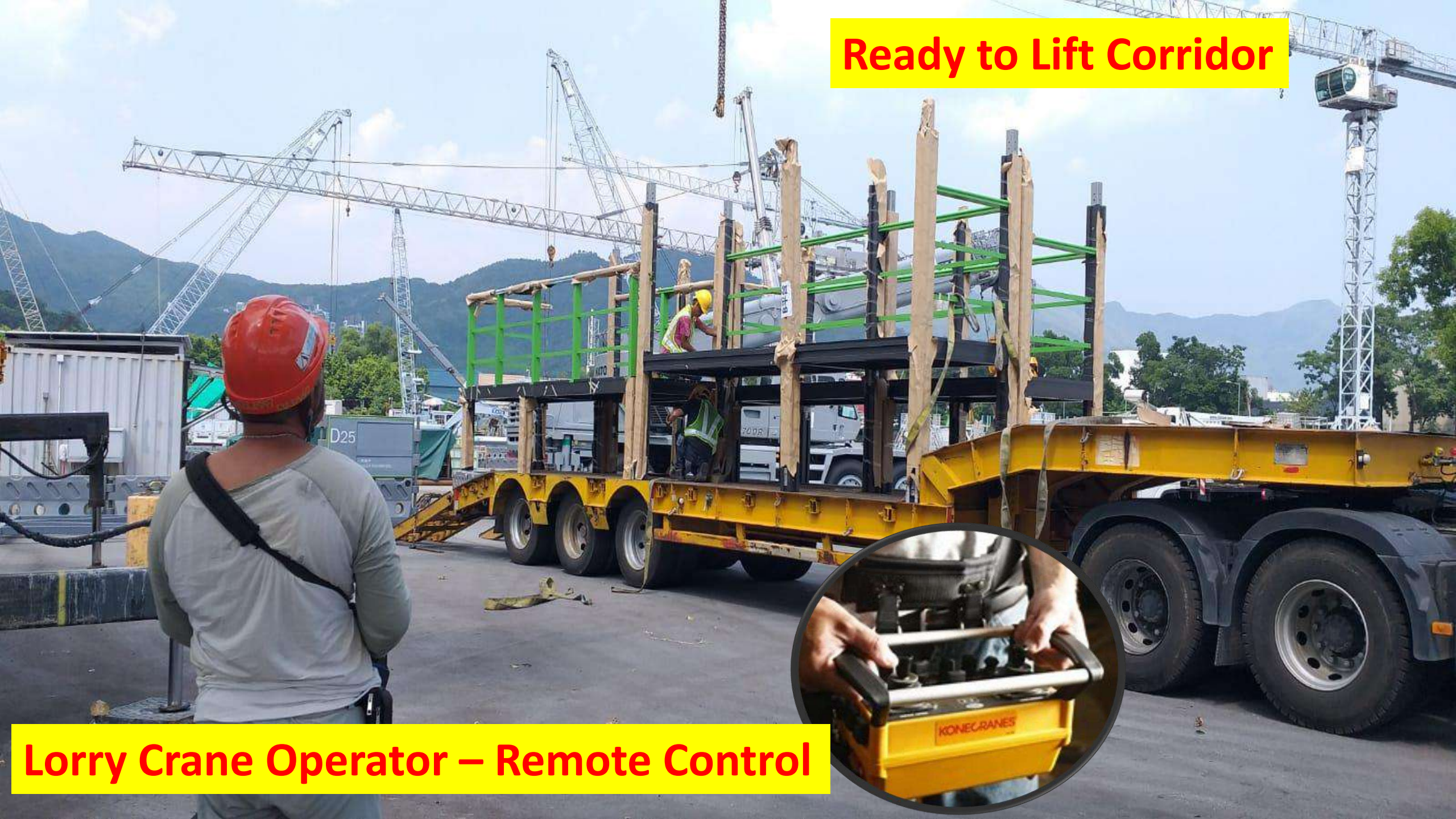
Provision of Safe Means of Access



Supervisor to Check Module Condition After Lifting



Ready to Lift Corridor



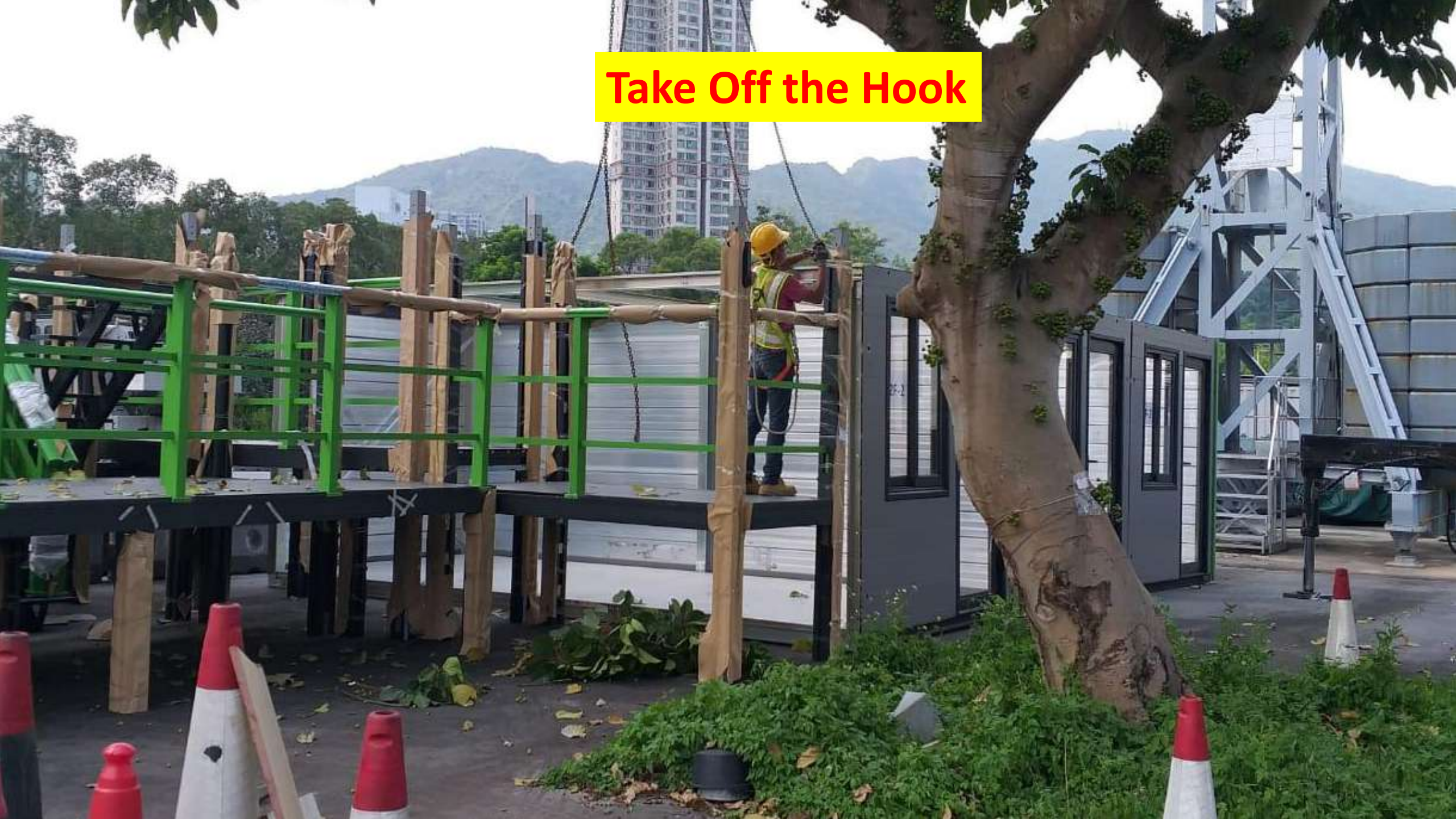
Lorry Crane Operator – Remote Control



Lift up From The Truck



Take Off the Hook



On Site Safety Measure

- Person (人)
- Machinery
- Material
- Method (法)
- Environment



Appointment of Lifting Team (Competent Lifting Team)

- A. **Lifting Safety Supervisor** is appointed & Perform Duties on site
- B. **Banksman/ Signaller** (with A12S) is appointed
- C. **Riggers** (with A12) are appointed & Perform Duties on site
- D. **Crane Operator** is appointed and perform Duties on site
- E. **Elevated Working Platform Operator** (If Necessary)



Lifting Method

- Assessment of the load and Fence off Radius operation area
- Beware of Work at Height/ Work Above Ground
- Check Automatic Safe Load Indicator (ASLI) is function properly
- Correct Use of Lifting Gear and Lifting Point
- Proper colour code, identification number and safe working load are provided for lifting gear
- Use of Double Tag Lines for guiding the Load



Lifting Method

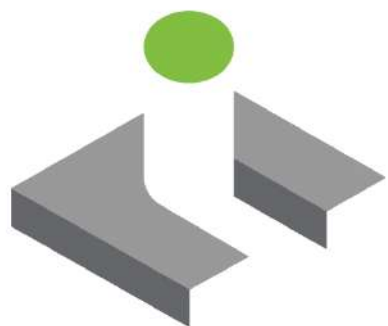
- Assessment of the Load and Fence off Radius Operation Area
- Safety Measures for Work at Height/ Work Above Ground
- Check Automatic Safe Load Indicator (ASLI) is Function Properly
- Correct Use of Lifting Gear and Lifting Point
- Proper Colour code, Identification Number and Safe Working Load (SWL) are provided for Lifting Gear



Lifting Method

- Ensure Clear Communication between Crane Operator and Banksman
- Checking the Route for the Lifting and Unloading Area
- Issue Permit to Lift, and ensure it is in place
- Check again Lifting Area is Properly Fenced Off with Warning Notice Display





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CONSTRUCTION

To Dedicate To Excel



專業樂業 精益求精

Safety

Mic Operational
Training

Crane
Operation



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Thank you