

SAFETY ALERT

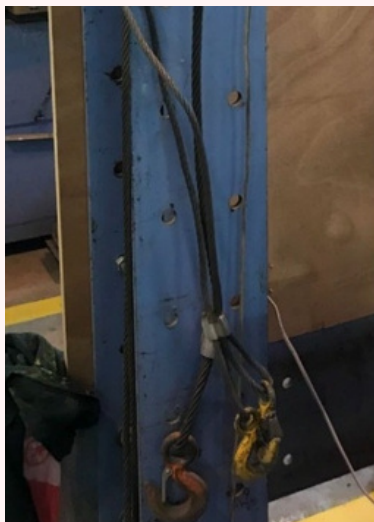
AN ACCIDENT INVOLVING LIFTING APPLIANCES AND LIFTING GEAR (LALG)

An accident involving lifting appliances and lifting gear (LALG) has recently occurred in a workshop at the university, prompting this safety alert. A technical staff suffered a hand injury that resulted in hospitalization and the discovery of a bone fracture. The accident is currently under investigation and it serves as a critical reminder for all laboratories and workplaces utilizing similar equipment to review their safety practices and ensure compliance with the safety requirements of the Labour Department (LD). In fact, this injury accident may result in an LD investigation and unannounced inspections of campus workplaces with LALG, therefore it is imperative that we double check to ensure compliance with relevant regulations.

The safety requirements for the initial inspection, regular examination, safe working load, operator training, and duties of the person-in-charge are summarized in a separate document for reference. If your department or unit has the following lifting appliances and lifting gear, please follow the safety guidelines to inspect, examine and test the equipment.



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Adhering to these safety requirements and maintaining proactive equipment inspection and maintenance can prevent accidents and ensure a safe working environment for all employees.

For further guidance, please refer to the provided references on the use of lifting appliances and lifting gear. If you have any questions, please contact HSEO by ext. 7229 or email: safety@ust.hk.

SAFETY ALERT - SUPPLEMENTARY DOCUMENT

SAFETY GUIDELINES ON INSPECTION, THOROUGH EXAMINATION AND TESTING OF LIFTING APPARATUS AND LIFTING GEAR

Inspection and Examination Requirements

Initial Inspection and Testing

Before any lifting appliances and lifting gear are used for the first time, there are statutory requirements for each equipment. It must undergo rigorous testing and a thorough examination by a competent examiner, referring to a registered professional engineer. This initial examination ensures that the equipment is safe for use and capable of handling the loads it is intended to lift. A competent person, referring to a trained operator, should conduct a visual and physical checking on lifting appliances and gear by a functional check. Lifting appliances are required to undergo weekly inspection within the preceding 7 days prior to use. The functional check can be performed by a no-load test on the mechanism of lifting/lowering, traveling, winging/slewing and safety devices. As for lifting gear, it should be checked on each occasion to ensure that it is free from any abnormal condition.



Regular Examination

Lifting appliances and lifting gear must also be thoroughly examined to ensure ongoing safety and functionality. It is mandatory for the examination to be carried out at least once in the preceding 12 months for lifting appliances and 6 months for lifting gear. This regular examination helps identify any potential issues before they lead to accidents.

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Inspection of lifting gear.
Source: [E&M innoPortal](#); EMSD

Safe Working Load (SWL)

The Safe Working Load (SWL) is the maximum appropriate safe working load that the lifting appliances and lifting gear can safely handle under specified conditions. For lifting appliances, the proof load is in the range of 110% to 125% of the SWL. For lifting gear, the proof load shall be at least twice the SWL. It is imperative that all operations involving lifting appliances and lifting gear are performed within designed safety factors to prevent overloading and potential equipment failure.



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Key Points on SWL:

- **Display of SWL:** The SWL, along with the identity number of all lifting appliances and lifting gear, must be clearly displayed and easily visible to all workers. This ensures that everyone is aware of the limits and can avoid overloading the equipment
- **Compliance:** Always adhere to the SWL during operations. Never exceed the SWL, as this can lead to catastrophic failure and accidents.
- **Condition Checks:** Regularly check the condition of the lifting appliances and lifting gear to ensure they remain safe to use. Any signs of wear or damage must be addressed immediately.

Operators Training

Operators of cranes and lifting appliances in construction sites and factories and industrial undertakings should hold a valid certificate issued by the approved training providers. Additionally, according to general duties, the owners of all workplaces are responsible for providing health and safety training to all operators involved. This training should include the safe use and maintenance of the equipment.

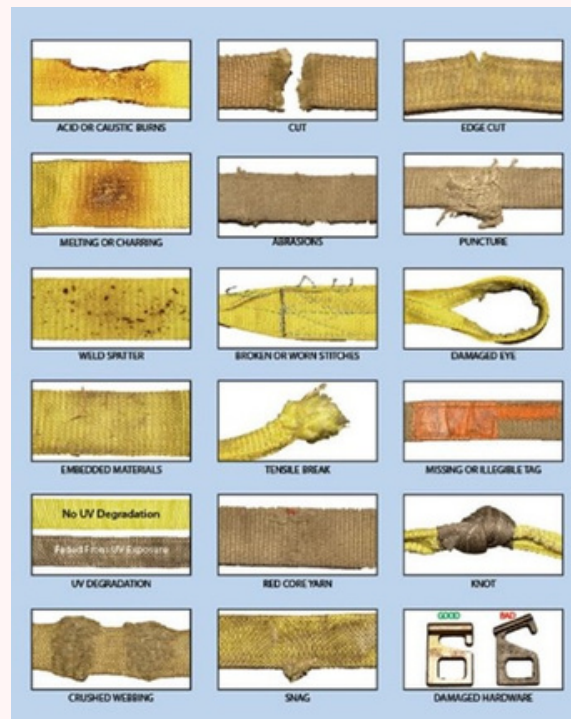
- **Certificate training:** [Certification Tests for Construction Crane Operators](#) offered by CIC
- **General training:** [Safe Use of Lifting Appliances and Lifting Gear](#) offered by OSHC

Operators' Duties on Inspection

Before each use, it is essential to ensure that all lifting appliances and lifting gear are in good condition. This includes:

- **Visual Inspections:** Conduct visual inspections to look for any signs of wear, damage, or deformation.

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Types of wear and tear of webbing slings (Source: <https://www.lift-it.com/info-websling-inspection>)



Types of wear and tear of wire rope slings

(Source: <https://shopmtn.com/blogs/mtn-shop-news/wirerope-slings-characteristics-when-to-replace>)

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- **Functional Tests:** Perform functional tests to ensure that all components operate correctly.

<div> <div> <div>FORM 1</div> <div>表格一</div> </div> <div> <div>[eng TA]</div> <div>[國語版 TA 備]</div> </div> </div>	
<div> <div> <div>Name of owner</div> <div>僱主/人名</div> </div> <div> <div>Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations</div> <div>工廠及工業經營(起重機械及起重裝置)規例</div> </div> </div>	
<div> <div> <div>Address of installation</div> <div>安裝地點</div> </div> <div> <div>Form approved by the Commissioner for Labour for the purposes of regulation 74 of the Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations</div> <div>工廠及工業經營(起重機械及起重裝置)規例第 74 條的獲准表格</div> </div> </div>	
<div> <div> <div>Description of lifting appliance and means of identification</div> <div>起重機械說明及識別標誌</div> </div> <div> <div>Date of inspection</div> <div>檢查日期</div> </div> </div>	
<div> <div> <div>Result of inspection</div> <div>(including all working gear and anchoring or fixing point or gear, and where required the automatic safety load indicator and despatch indicator)</div> <div>State whether in safe working order</div> <div>檢查結果</div> <div>(包括所有操作裝置及錨固/固定裝置或錨固、錨固資料及固定裝置自動離位裝置及人手控制裝置)</div> <div>說明是否處於安全操作狀態。</div> </div> <div> <div>Signature and designation of person who made the inspection</div> <div>檢查者簽署及職銜</div> </div> </div>	
(1)	(2)
(3)	(4)
<div> <div>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.</div> <div>任何合資格檢驗員或合資格人士如向僱主提供一份其知識中在重要細節方面屬假的證書或報告，即屬犯罪。一經定罪，可處罰款二十萬元監禁十二個月。</div> </div>	

- **Maintenance Checks:** Regularly maintain the equipment according to the manufacturer's guidelines and industry best practices.

Person-in-charge's Duties

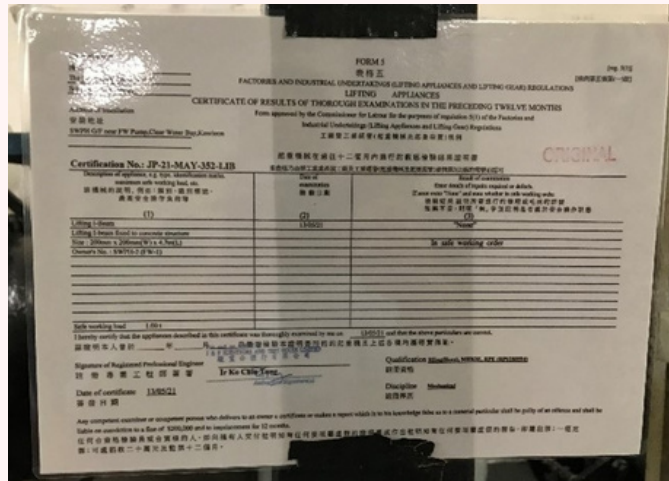
All laboratories and workplaces with lifting appliances and lifting gear must conduct a thorough examination of their equipment. This includes but is not limited to:

起重機械及裝置規例檢查、檢驗及測試表格 LAG REGULATIONS FORMS FOR INSPECTIONS, EXAMINATIONS AND TESTS							
項目 ITEM	表格編號 (起重機械及裝置規例) FORM NO. (LAGR)						
	1	2	3	4	5	6	7
起重機 Crane	✓		✓		✓		
設有錨定及 壓重裝置的起重機 Crane with anchoring or ballasting devices	✓	✓	✓		✓		
絞車、起重滑車 Winch, Crab	✓		✓		✓		
滑輪組、起重輪、 腳架起重機、 打樁機、拔樁機、 挖掘機、架空軌道、 拉索挖機等 Pulley Block, Ginsheel, Sheerlegs, Pile Driver, Pile Extractor, Excavator, Overhead, Runway, Dragline, etc.	✓			✓	✓		
起重裝置 Lifting Gear						✓	✓
纖維纜索 Fibre Rope							✓
周 期 Period	7 天 7 days	架設後 After erection	4 年 4 years	使用前或重大修理、 重新架設、失靈、 翻倒或倒塌後 Before use or after substantial repair, re-erection, failure, overturning or collapse	12 個月 12 months	使用前 put into use	6 個月 6 months
表格 LAG Form							

(Source: [Lifting Safety Handbook](#); CIC)

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These items must be inspected, examined, and tested according to the regulations governing lifting appliances and lifting gear. A copy of the relevant and the most recent certificate or report shall be displayed on the equipment to which it relates or in a prominent place nearby.



General Duties

To prevent accidents and ensure the safety of all persons involved, it is crucial to follow all mandatory safety requirements and establish safety guidelines/procedures for the use of lifting appliances and lifting gear. This compliance includes:

- **Following Manufacturer's Instructions:** Always adhere to the manufacturer's instructions for the use, maintenance and inspection of lifting appliances and lifting gear.
- **Training and Competence:** Ensure that all workers are adequately trained and competent in the use of lifting appliances and lifting gear. They should be familiar with the safety procedures and the correct operation of the equipment.
- **Safety Procedures:** Implement and enforce strict safety procedures for all lifting operations. This includes proper planning, risk assessments and supervision.
- **Incident Reporting:** Report any incidents or near-misses involving lifting appliances and lifting gear to HSEO and investigate thoroughly to prevent recurrence.

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Conclusion

The recent accident involving lifting appliances and lifting gear highlights the critical importance of stringent safety measures and regular equipment inspections. All person-in-charge of laboratories and workplaces must take immediate actions to review their lifting equipment and ensure full compliance with safety regulations and guidelines.

By adhering to these safety requirements and maintaining a proactive approach to equipment inspection and maintenance, we can prevent accidents and ensure a safe working environment for all employees.

For further guidance or assistance, please refer to the following references on the use of lifting appliances and lifting gear. If you have any questions regarding the examination of lifting appliances and lifting gear, please contact Mr. Edmond Wong of CMO-LS by ext. 6850 or email: eoedwong@ust.hk.

Your commitment to safety can make a significant difference in preventing future accidents.

Reference

- [A Guide to the Factories and Industrial Undertakings \(Lifting Appliances and Lifting Gear\) Regulations; Occupational Safety and Health Branch, Labour Department](#)
- [Lifting Safety Handbook; Construction Industrial Council](#)
- [Guidance Notes on Inspection, Thorough Examination and Testing of Lifting Appliances and Lifting Gear; Occupational Safety and Health Branch, Labour Department](#)
- [Online Seminar on Lifting Safety; Occupational Safety and Health Council](#)