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CRANE SAFETY IN THE UNITED ARAB EMIRATES

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Abstract: Crane safety plays a crucial role in the construction industry, particularly in the United Arab Emirates (UAE), where rapid urban expansion and large-scale infrastructure projects depend on efficient and secure lifting operations. This paper delves into the importance of crane safety, shedding light on the key risks, challenges, and best practices that ensure safe and effective crane operations. It provides a comprehensive look at the UAE's construction landscape, the essential role cranes play in heavy lifting, and the potential dangers that arise from improper handling, inadequate maintenance, or overlooked safety measures.

To maintain high safety standards, the document highlights critical measures such as thorough pre-lifting inspections, ensuring operators are well-trained and certified, and adhering to strict regulatory guidelines. It also explores the significance of proper documentation, including lifting permits, operator licenses, and third-party safety certifications. Additionally, the paper underscores the value of continuous training, active supervision, and strict compliance with safety protocols to minimize risks and prevent accidents on construction sites. By adopting strong crane safety practices, companies can create safer work environments, reduce workplace incidents, and boost overall efficiency in construction projects. The study concludes with practical recommendations to enhance crane safety regulations in the UAE, aligning them with international best practices and industry standards.

1. Introduction

Crane Safety is regarded as an important element of all industries, especially in the Construction Industry where the occurrence rate of accidents is at the highest level. The working pattern in the Construction Industry is highly vulnerable, and accidents in the industry are mainly associated with an individual (unsafe human conduct) or with sector factors (a risky working state). As a result, the construction site is regarded as the most dangerous workplace, as the concerns related to the health and safety parameters of the workers are minimal.

2. Background

Crane Safety at work is defined as the condition in which an individual is protected from any crane hazardous incident that could lead to fatal results. On the other hand, accidents are sudden or unexpected incidents that cause injury, harm, damage, or death to an individual or to groups of individuals. While considering the Crane lifting Industry, each assignment and project is different from others and poses different promises and challenges for the workers. Moreover, the working environment in the crane lifting in Construction Industry is also constantly changing frequently, which causes inherent risks to the employees. The Construction Crane Industry involves different work like fabrication, installation, maintenance, repair, painting, decorating, etc. All these activities are highly risky and must be performed under supervision and the right equipment so that risks associated with the work can be averted. Therefore, to ensure that no harm is caused to the employees while working at heights on ladders using drillers, cutting boards, special blades, glazing knives, etc., the workers must perform construction activities under the management and regulation of supervisors. The supervisor provides personal guidance by developing a positive relationship with the workers, encouraging, and ensuring that they adopt safety measures while working.

3. UAE

The Middle East (particularly the Gulf States) are making great strides in regeneration and development and creating a competitive environment in the world. As a result, all these countries are proving themselves against lawsuits from construction accidents as a huge construction boom with favorable demographics of the growing youth population. Like other neighboring states, the UAE is investing in public ad infrastructure heavily so that it can reduce its dependency on the dwindling reserves of oil and gas. Although the government of the UAE is focusing on diversification of the global economy from purely oil-based to multifunctional activity, it has introduced reduced measures to provide safety to the construction workers. Therefore, it can be said that all these efforts have resulted in a big growth in the Construction Industry. An examination of the major development projects in the UAE mainly includes projects that are estimated to exceed US$478 billion, which are registering the growth rate of 83.4 percent in 2006. The UAE also announced 332 projects with a total value of US$381 billion.

4. CONSTRUCTION INDUSTRY

The Construction Industry in the United Arab Emirates is growing at an exponential rate and registered more than US$0.5 trillion investments. A growth rate of 83.4 percent was reported in the Arab World Competitiveness Report, 2007. The UAE Construction Industry has expanded and crossed the US$124 billion mark by developing more than 325 islands such as Sayara, Mangrove, and the Lagoons in Dubai. In 2006, construction contractors and companies in the UAE declared the inauguration of more than 332 projects valued at more than US$0.4 trillion. Accordingly, due to the high expansion of the Construction Industry, a higher number of suboptimal workers are employed in the sector, which has resulted in a higher rate of accidents and fatal injuries. For example, in 1999, 923 accidents were recorded in Construction Site. As per the Qatar Statistical Yearbook of Construction (2000), 1097 deaths were recorded in countryside Construction Site. Moreover, the Construction Industry's fatal accident rates in Gulf countries like the Kingdom of Saudi Arabia have been recorded as high as 29 percent (Kuwait). In KSA was 23.3 percent in which 16.9 percent were caused by falls from a ladder at a Construction Site. In total, 249 workers met with accidents while working at heights in the Construction Industry in Dubai, UAE, in 2007. Hence, it is essential to introduce safety measures so that the injury and mortality rate in the Construction Industry will be reduced to a minimum.

5. CRANE

A crane is a machine used to move materials both vertically and horizontally, utilizing a system of a boom, hoist, wire ropes or chains, and sheaves for lifting and relocating heavy objects within the swing of its boom. The device uses one or more simple machines, such as the lever and pulley, to create mechanical advantage to do its work. Cranes are commonly employed in transportation for the loading and unloading of freight, in construction for the movement of materials, and in manufacturing for the assembling of heavy equipment.

The first known crane machine was the shaduf, a water-lifting device that was invented in ancient Mesopotamia (modern Iraq) and then appeared in ancient Egyptian technology. Construction cranes later appeared in ancient Greece, where they were powered by men or animals (such as donkeys), and used for the construction of buildings. Larger cranes were later developed in the Roman Empire, employing the use of human treadwheels, permitting the lifting of heavier weights. In the High Middle Ages, harbor cranes were introduced to load and unload ships and assist with their construction—some were built into stone towers for extra strength and stability. The earliest cranes were constructed from wood, but cast iron, iron and steel took over with the coming of the Industrial Revolution.

For many centuries, power was supplied by the physical exertion of men or animals, although hoists in watermills and windmills could be driven by the harnessed natural power. The first mechanical power was provided by steam engines, the earliest steam crane being introduced in the 18th or 19th century, with many remaining in use well into the late 20th century.[1] Modern cranes usually use internal combustion engines or electric motors and hydraulic systems to provide a much greater lifting capability than was previously possible, although manual cranes are still utilized where the provision of power would be uneconomic.

There are many different types of cranes, each tailored to a specific use. Sizes range from the smallest jib cranes, used inside workshops, to the tallest tower cranes, used for constructing high buildings. Mini cranes are also used for constructing high buildings, to facilitate construction by reaching tight spaces. Large floating cranes are generally used to build oil rigs and salvage sunken ships. Some lifting machines do not strictly fit the above definition of a crane, but are generally known as cranes, such as stacker cranes and loader cranes.

6. SAFETY OF THE CRANE

Crane safety refers to a set of practices that an organization follows to ensure that they reduce the risks and hazards associated with operating a crane. Cranes are a mainstay in modern construction sites and play a major role in lifting materials and equipment to build large buildings and structures. In the US, the safety factor must be between 2:1 and 3:1 for hoisting devices. Employers must ensure that the load capacity of the gantry crane is not exceeded and that the crane is used only for its intended purpose.

Load Management: Avoid improper loads or speeds that could lead to the tipping or instability of the crane. Always adhere to the crane's operating limits as specified by the manufacturer. Distance from Power Lines: Maintain a minimum clearance of 10 feet from power lines.

7. CRANE LIFTING

Cranes-lifting is a crucial process in the construction and building industry that involves the use of heavy-duty machines known as cranes to lift and move heavy loads from one point to another implement Safe Lifting "3, 3, 3" as a hold point of lifting procedures before lifting, which can effectively improve the safety of lifting operation:

- Keep 3m away from materials being lifted.
- Lift up the materials 300mm from ground; and
- Wait for 3 seconds for stabilizing the lifting object before lifting.

The 5-4-3-2-1 program is a program that aims to take advantage of periodizing training frequency by training one lift five times per week, one lift four times per week, one lift three times per week, one lift twice per week and one lift once per week

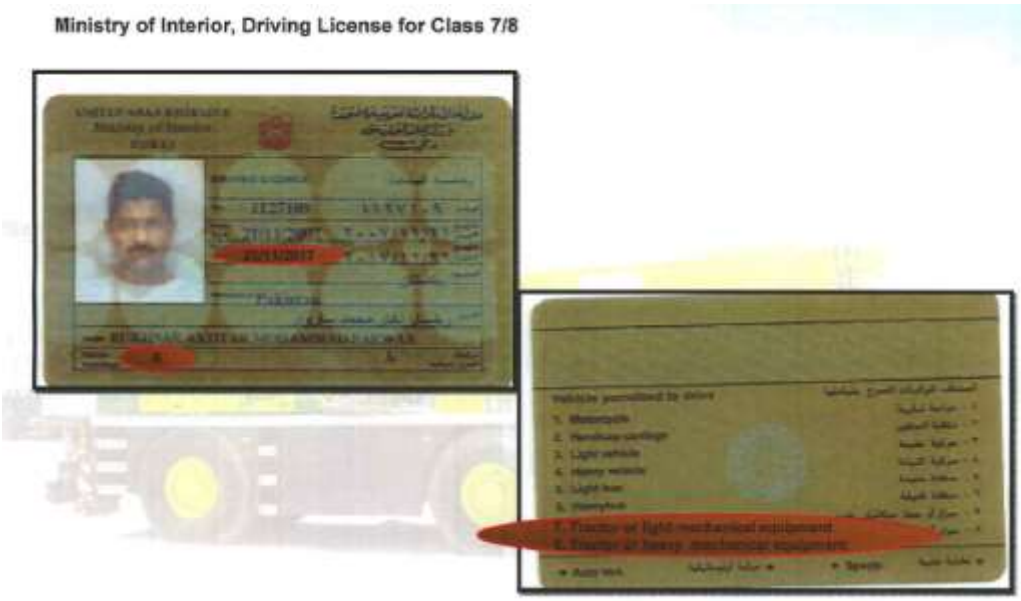
8. BEFORE LIFTING OPERATION

The lifting operations carefully to ensure they are carried out safely. Your plan should result in a safe system of work and this information should be recorded. This record is sometimes known as a method statement, and you must ensure that everyone involved understands it. Always ensure lifts are properly rigged. Never operate under the influence of drugs or alcohol. Never leave the crane unsecured. Never operate in the blind without the assistance of a signal person. Never allow anyone to ride the load or ball. Start with a walk-around of the crane. Check for any visible signs of wear, tear, or damage. Look for loose or missing parts, cracks, and dents. Pay attention to the overall cleanliness of the machine.

9. LIST OF REQUIRED DOCUMENTATIONS FOR SAFE LIFTING OPERATIONS

A. Driving license category no7/8 (10 Years)
B. Operator Competency certificate from Dubai municipality approved agency (1Year)
C. Operator should have “Crane safety inducted operator” certificate from the company (Once)
D. Lifting supervisor should be certified from Dubai municipality approved agency (2 years)
E. Rigger & signalman should be certified from Dubai municipality approved agency ((2 years)
F. Lifting Machine should have a 3rd party certificate from Dubai municipality approved agency (1 year for material lifting or 6 months for human lifting)
G. The lifting machine should be approved by the company
H. Lifting permit (signed by Construction Manager, site manager etc.)
I. Operator daily check list by operator (daily)
J. All lifting gear should be certified from Dubai municipality approved agency (1year)
K.

A. Driving license category no7/8



B. Operator Competency certificate from Dubai municipality approved agency (1Year)

C. Operator should have "Crane safety inducted operator" certificate from the company (Once)

D. Lifting supervisor should be certified from Dubai municipality approved agency (2 years)

Competence Certificate for Lifting Equipment Supervisor from DM Approved Agency

E. Rigger & signalman should be certified from Dubai municipality approved agency ((2 years)

Certificate of Rigging Operations Safety for Rigger/Signalman

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Quality & standardization Consultants
Vocational Training Services

مرجف لاستشارات الأمن والسلامة
واستشارات الجودة والمعايير والتقييم
ومجال التدريب الفني

Approved By Ministry of Labour , Dubai Municipality, JAFZA, and Dubai Civil Aviation

CERTIFICATE

JETSADA KARAJAK

COMPANY NAME: DURL (DUBAI RAPID LINK CONSORTIUM)
HAS ATTENDED ONE-DAY TRAINING COURSE ON MARCH 23, 2008
AND HAS ACHIEVED THE LEVEL OF COMPETENCE REQUIRED FOR

RIGGING OPERATIONS SAFETY

CERTIFICTAE NO.MSSC-RM-1411-2008
Issued Date 23.03.2008
Expiry Date 22.03.2010

M.Alami
Mohamed Izzat Al Alami
General Manager

DR Waseem Al Alami
HSE Director

Head Office: Tel No.: 04-3353125—Fax No.: 04-33:2047, Karama Dubai —Website: www.mirdifsecurity.com—E-mail: info@mirdifsecurity.com
Training Center Tel: 04-258-4441, Fax: 04-258-4442, Al Qusais, Dubai

F. Lifting Machine should have a 3rd party certificate from Dubai municipality approved agency (1 year for material lifting or 6 months for human lifting)

Certificate of Inspection , Testing and Examination of the Lifting Machine by DM Approved Agency.

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واستشارات الجودة والمعايير والتقييم
ومجال التدريب الفني

Certificate of Inspection, Testing & Examination of Crawler Crane

Company Name:	YONGNAM HEAVY & Const. PTE Ltd.	Date of Inspection:	04.05.2008
Telephone No.:	04-223-0905	Validity Date:	03.05.2009
Fax No.:	04-223-0943	Certificate No.:	
Inspected By:	HANS XANDAN	Standard Ref.#:	BS 5950: 1990

Machine Details:

Manufacturer by:	SANY
Year of Manufacture:	2007
Serial No.:	SCC800C
Model/Type:	
Automatic Safe Load Indicator:	
Location of Inspection:	JT Metro Site, Jafiliya Station, Dubai

Length of Jib (Mtr.)	Radius (Mtr.)	Safe Working Load (Tons)	Proof Load Test (Tons)
43 Mtr	36	4	5
	32	3	3.75

Capacity: 50 Ton

Length of Jib	Radius (Mtr.)	Safe Working Load (Tons)	Proof Load Test (Tons)
Fly Jib Inner Length : 13.5 Mtr	38	2	2.5

IIB 505

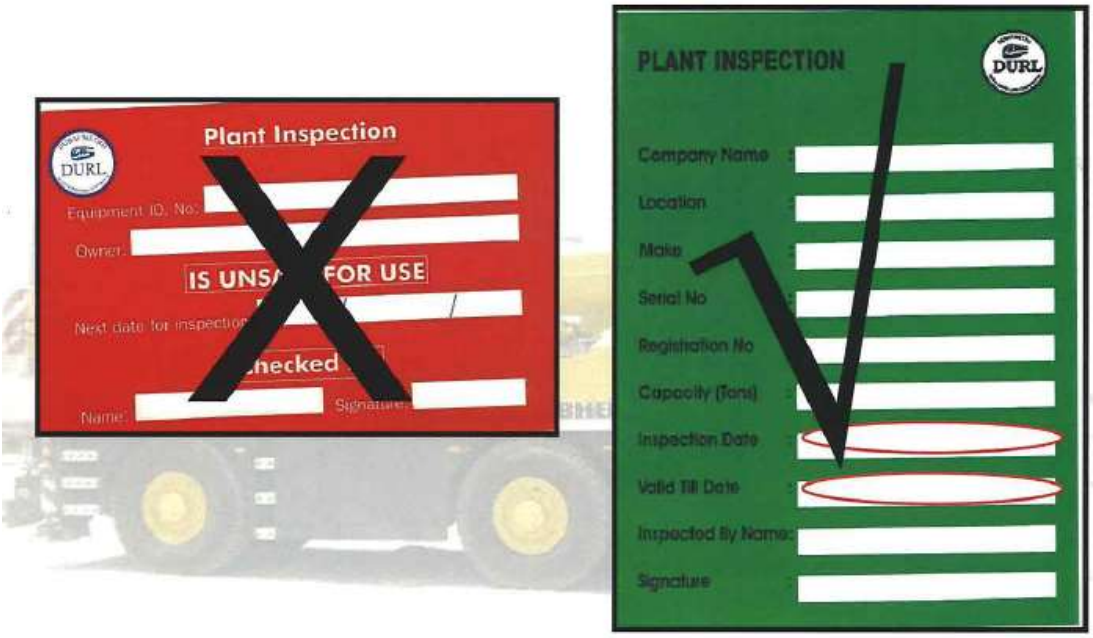
Final Result

I certify that the aforementioned lifting appliance together with its accessory gear was thoroughly inspected, examined and tested by an independent competent person in accordance with the national and international standards and it was satisfactory and fit to use under the above mentioned SWD (s).

For Mirdif Security & Safety Consultants
Engr. Mohamed Izzat Al Alami

G. The lifting machine should be approved by the company

DURL Plant Department Inspection & Approval Stickers



H. Lifting permit (signed by Construction Manager, site manager etc.)

DUBAI RAPID LINK CONSORTIUM
CIVIL/ ARRANGEMENT/ E&M SECTION

CRANE TYPE	M.crane
MODEL NO	LTM-1030/2
CAPACITY	35 Ton
MAX SWL -	9 Ton
RADIUS -	7m (29m boom length)
(REFER TO LOAD CHART)	

15A- LIFTING PERMIT

Contractor / Dept	DURL
Location of Work	PMDS (UGS) Green Line
Description of works	loading, unloading and shifting of Materials
Date & Time	30-10-08

This permit is valid only for the work mentioned above and per work shift. The conditions of issue must be complied with throughout the duration of the work. This permit may be withdrawn at any time.

All the following check points are required to be verified (OK) by the Lifting Supervisor AND the Construction Manager (in case of subcontractor, by the same designated persons within his organisation) prior to setting the equipment to work.

A VALID 12 MONTHLY THIRD PARTY CERTIFICATE FROM DM APPROVED BODY/ 6 MONTHLY IN CASE OF MAN LIFTING	✓	ENSURED DISTANCE/GAP BETWEEN CRANE SLEWING ARC AND ANY FIXED STRUCTURE IS ATLEAST 600 mm?	✓
OPERATOR COMPETENCY CERTIFICATE FOR THE APPLICABLE CRANE	✓	CRANE HOOK FITTED WITH SAFETY CATCH	✓
OPERATOR CRANE SAFETY INDUCTED BY DURL	✓	ARE TAG LINES FITTED TO THE LOAD (IF NECESSARY)	✓
VALID 6 MONTHLY THIRD PARTY CERTIFICATE AVAILABLE FOR THE LIFTING GEARS (CHAINS, SLINGS, SHACKLES, ROPES, ETC)	✓	OVERHEAD OBSTRUCTIONS	YES/NO
VALID THIRD PARTY CERTIFICATE AVAILABLE FOR THE LIFTING APPLIANCES (IF USED)	✓	ACCESS FOR CRANE IS IN GOOD CONDITION	✓
VALID CRANE REGISTRATION DOCUMENT	✓	LOAD RADIUS INDICATOR IS IN WORKING CONDITION	✓
VALID LIFTING EQUIPMENT SUPERVISOR COMPETENCY CERTIFICATE FROM DM APPROVED AGENCY	✓	WARNING LIGHTS & HORN ARE IN GOOD CONDITION	✓
VALID BANKSMAN/RIGGER COMPETENCY CERTIFICATE FROM DM APPROVED AGENCY	✓	WARNING SIGN POSITIONED	✓
CRANE OPERATOR DAILY CHECK LIST	✓	LIFTING AREA CORDONED OFF (AS APPROPRIATE)	✓
CHECK GROUND CONDITION	✓	AUTOMATIC SAFE LOAD INDICATOR IS OPERATIONAL (IF FITTED, IS IT IN GOOD WORKING ORDER)	✓
NECESSARY PPE BEING WORN BY ALL THE LIFTING OPERATIVES	✓		

Should the person completing this permit have any doubts whatsoever on any of the above condition/ about certification of the equipment or any lifting gear, or the competency of the operator assistance must be sought from a more senior level to allow the works to commence.

Has the operator been instructed that he is not allowed to manoeuvre or operate the crane without explicit instructions from the crane management team, i.e., lifting supervisor or banks man?	Yes

LIFTING SUPERVISOR

This is to certify that all measures above have been verified, and that DURL procedures have been complied with.

Name: AVTAR SINGH Date / Time: 30-10-08/7.15 Designation: Site Supervisor

Signature: Avtar Singh.

CONSTRUCTION MANAGER/ RESPONSIBLE PERSON

This is to certify that a thorough assessment has been carried out and that the necessary documentation is in place for the works to be carried out in a controlled environment.

This permit is valid from 30-10-08 8:00AM To 20:00 PM

Name: [illegible] Mohan Date / Time: 30-10-08 8:00AM Designation: CE

Signature: [signature]

✓ - OK (COMPLYING), X - NOT OK (NON-COMPLYING) Rev1 310708 jp

I. Operator daily check list by operator (daily)

DUBAI RAPID LINK CONSORTIUM

DAILY CRANE INSPECTION RECORD FOR MONTH OF (OCTOBER 2024) DATE:

NAME OF OPERATOR: WINIT SAENNOK. MODEL / TYPE: M.C.36T SL. No: 03

Mark accordingly: √ In Good Condition | X Repairs/Replacement required | O Not Applicable

S/No.	Inspection	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	ENGINE																												
	Engine Oil Level		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Water Level		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Battery Level		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Drive Belt		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Clutch/Brake Fluid		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	ELECTRICAL																												
	Head/Rear Light		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Reverse Buzzer		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sigani Horn		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Switches		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	SAFETY DEVICE																												
	Load Indicator		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Angle Indicator		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Limit Switch		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Warning Buzzer		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Over Hoist Warning Device		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Over Load Warning		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Main Hook Safety Latch		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	Wire Rope																												
	Condition		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Socket and Clip		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	CLUTCH & BRAKES																												
	Clutch Function		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Pedal Play		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Break Function		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Parking Brake		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	OUTRIGGERS																												
	Function		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hydraulic Oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Control Levels		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	MISC. ITEMS																												
	Fire Extinguisher		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Access to Cabin		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Warning Lights (Winker)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	LIFTING PERSONNEL																												
	Lifting Supervisors		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Rigger		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Banksman		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Signature of Operator			winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit	winit
Signature of Lifting Supervisor			M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M

J. All lifting gear should be certified from Dubai municipality approved agency (1year)

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مرديف لاستشارات الأمن والسلامة
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E-mail:
Website:

Approved by Ministry of Labour, Civil Defence, Dubai Accreditation Centre, Dubai Municipality, JAFZA and Dubai

Certificate of Inspection, Testing & Examination of Lifting Gear (Chain Slings)

Company Name:	CHOICE GEN LAND TRANSPORT	Date of Inspection:	15.05.2008
Telephone No.:	050-483-9169	Validity Date:	14.11.2008
Fax No.:	050-369-6754	Certificate No.:	45919
P.O. Box:	Dubai, UAE.	Inspected by:	MOHD IZZAT
Conferred By:	Mechanical Engineer	Standard Ref.#:	BS 4942 PART: 1981

Lifting Appliance Details:

I.D. No.	Details	Quantity	Safe Working Load	Proof Load Test
AM-3199 AM-1933	16 mm Dia, 2 Leg Chain Sling BWL: 8MT C/W Master Link assembly Legs Ending in clevis self locking hook	02	11.3 Ton @ 90°	16 Ton at 0° per leg

Final Result:

I certify that, the chain sling was tested by an independent person in manner set for overleaf. That careful examination of the chain sling was found safe and adequate for use.

Notes

- The certificate Validity ceases in the event that any repair or alteration on the equipment, in which case it must be retested.
- The inspection and testing result and the safe use for equipment which written backside of this certificate is a part of this certificate. And you are kindly requested to read and implement such as instructions carefully.
- This certificate had been issued without prejudice to any party.
- Neither Mirdif Security & Safety Consultants nor the technical inspector shall in any circumstances be responsible or liable to any person and omission default or negligence whatsoever.

For Mirdif Security & Safety Consultants
Eng: Mohamed Izzat Al Alam

IB 505

ISO 9001:2000

IQNet

10. TRAINING

Health and safety training is a great source of elevating awareness in employees about safe work practices. Furthermore, it also helps them foster a safer environment and reduce the risk of accidents and injuries. Education and training provide employers, managers, supervisors, and workers with: Knowledge and skills needed to do their work safely and avoid creating hazards that could place themselves or others at risk. Awareness and understanding of workplace hazards and how to identify, report, and control them.

By equipping workers with the knowledge and skills to identify hazards, follow safety protocols, and respond effectively to emergencies, training significantly reduces the risk of accidents and injuries.Training prepares you to deploy a consistent Agile methodology across the organization. Conflicting or out-of-line Agile methods will no longer be an issue for your teams since you will be able to direct them to a standardized protocol that will improve product quality and design

11. WORKING LOCATION

If you do not create a safe working environment for your employees, you run the danger of putting your employee and company at risk. If a worker is injured on the worksite because of your failure to ensure workplace safety, you risk losing your credibility, clients, and investors.Studies have shown that when we feel safe and secure, our bodies produce less cortisol (the stress hormone), enabling us to better process and manage our emotions. Moreover, safe spaces foster authenticity, which is linked to higher self-esteem and better mental health.

Safety and health programs help businesses: Prevent workplace injuries and illnesses. Improve compliance with laws and regulations. Reduce costs, including significant reductions in workers' compensation premiums.

12. LIFTING PROCEDURE

1. Out rigger fully opened
2. Suitable size of outrigger padding should be used
3. Should not park on soft soil
4. Should not park near excavation
5. Lifting area should be cordon off
6. Signalmen should be deployed
7. Rigger should be deployed
8. No other people allowed for rigging even for unloading the steel bars
9. Nobody allowed below the load
10. No load is lifted on above the people
11. Safety latch or Hook latch should be confirmed
12. Safe Working Load (SWL) marked on the lifting gears
13. The operator should not leave the cabin (when the engine is running) Not to use damaged lifting gear

14. CONCLUSION

The researcher examined different factors which are important for the Crane Lifting Operations in the Construction Industry in the UAE. The rapid growth of the Construction Industry in the UAE has posed many challenges for organizations, employers, and regulatory authorities. Crane Lifting is the foundation or crucial part of the UAE economy. The frequency of accidents poses question about the Safety of Workers and this needs to be taken care of by the employer and by the legislation of the country. The increasing number of accidents in the Craen activity in Construction Industry raises questions about the Safety of Workers. Hence, researchers, practitioners, and construction companies need to understand the factors that lead to Safety of Workers. Most of the findings further strengthen the normal accident theory, which proposes that accidents can be foreseeable in advance, if working systems are well developed and synchronized.

Based upon the results of statistical analysis, the following answers correspond to the questions of this research study. The researcher developed two main questions:

The results of the independent sample t-test indicate that there is no statistically significant difference in the perceptions of males and females towards the safety of workers in the Crane Lifting operation Construction Industry in the UAE. "Safety of workers" does not show significant difference based upon different age groups, education groups, and marital status. The results also show that there is a significant difference in the perceptions of employees based upon the different groups of job titles and experience. The findings were empirically tested in the UAE, and it was found that the results of the study are like the results of the main study.

So far, in this chapter, the researcher has covered some crucial points, which spanned from conclusion to discussion to implications. Under this subheading, the researcher addresses recommendations for future research studies. The researcher has identified certain areas, which might be investigated by other researchers. Overall, the recommendations are provided to address methodological and conceptual limitations that were identified by the researcher at the time of this dissertation. The findings of the study revealed some interesting aspects, which took the researcher by surprise. The researcher recommends further examination to investigate the reasons for the above results in the current study.

15. PICTURES

Outrigger not open fully

Outrigger fully opened

Not good packing

Good and correct packing

Crane operating near to public walkway and road

Certified signalman