Best Practice of Lifting Operation and Equipments

Lifting Operation
1. Identifying current best practice with reference to the procurement of lifting operation planners/equipment.

2. Identifying current best practice for the management of lifting operations with reference to both the equipment supplier and user.

3. Listing the minimum requirements as per best practice for a lifting equipment installation/use method statement.

4. Listing responsibilities of lifting team regarding pre-use.

5. Identifying company specific policies regarding the management of lifting operations and equipment on site.
"lifting operation" is that which is concerned with use of lifting equipment in the lifting or lowering of a load.
Lifting Equipment is defined as any equipment whose principal purpose is to lift or lower loads, including attachments used for anchoring, fixing or supporting it. The Regulations cover a wide range of equipment including:

1. Cranes, fork-lift trucks, passenger lifts, jacks, axle stands, mobile elevating platforms, vehicle inspection platforms, patient lifting hoists, dumb waiters in hotels or restaurants, vehicle tail lifts, ropes and pulleys used to raise materials on building sites. etc.
2. All lifting accessories such as chains, ropes, slings, shackles, eyebolts, harnesses, etc.
All employers have statutory obligations in relation to the health and safety of their employees and premises. There are elements of the following legislation that affect the use of lifting equipment and carrying out lifting operations in the workplace.
1. The Lifting Operations and Lifting Equipment Regulations (LOLER). In general, the law requires that any lifting equipment for use at work is:

   a. Suitable, strong and stable enough for the particular use and marked to indicate safe working loads

   b. Positioned and installed to minimize any risks

   c. Used safely i.e. the work is planned, organized and performed by competent people
d. Marked with the safe working load, and if it is used for carrying people with the maximum number that can be carried

e. Subject to ongoing thorough examination, (usually detailed within a written Scheme of Examination drawn up by a competent person) and where appropriate inspection by competent people.
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Let's Look at Fact

2. Reg.3 of the Management of Health and Safety at Work Regulations 1992 (MHSWR)

3. Provision and Use of Work Equipment Regulations (PUWER)


5. Health & Safety codes of practices for construction projects Abu Dhabi

6. Minimum Acceptable Standards – HLG

7. Black Points – HLG

8. Safety Award System - HLG
In 2009, UAE reported 249 deaths on construction sites, 47.8% involving labores falling from heights.  

- 108 Abu Dhabi workers in 2009, out of which 47 died by falling from heights.  

- Workers between 25 and 34 years old are the most likely to be injured in a construction site accident.
The typical risks associated with the use of lifting equipment include:

1. Mechanical hazards associated with the lifting equipment itself, such as points of shear and entrapment.
2. Failures of the equipment (or of the lifting accessories, such as chains, slings, etc.) in use. These are hazards associated with the strength and stability of the lifting equipment and of the lifting accessories used with the lifting equipment.
3. Falling loads.
4. Failure to manage and control the lifting operation properly (leading to crush injuries, etc.).
5. Failure to manage the use and storage of lifting accessories (leading to deterioration of equipment and to increased tripping hazards); etc.
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How do we control the risks associated with lifting equipment and lifting operations

1. Selection of equipment.
2. Sitting of equipment.
4. Safe storage of lifting accessories.
5. Maintenance
6. Planning of lifting operations
7. Slinging
8. Training
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Program Implementation

A GOOD PROGRAM WILL HELP:

☑ Improve Quality.
☑ Improve Absenteeism.
☑ Reduce Injury and Illness Rates.
☑ Maintain a Healthier Work Force.
☑ Acceptance of High-Turnover Jobs.
☑ Workers Feel Good About Their Work.
☑ Reduce Workers’ Compensation Costs.
☑ Elevate SAFETY to a Higher Level of Awareness.
Considerations:

1. **Support the Crane Safety Program.**
2. **Ensure Your Support Is Visible.**
3. **Get Involved.**
4. **Attend the Same Training As Your Workers.**
5. **Insist on Periodic Follow-up & Program Review.**
6. **Implement Ways to Measure Effectiveness.**
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The Supervisor’s Role

☑ Considerations:

1. Treat All “Near-Misses” As an Accident.
2. Never Ridicule Any Injury or Near Miss.
3. Get Involved in Crane Safety.
4. Complete the Paperwork (Work Orders, Policy Changes, Etc.) To Affect Repairs or Improvements.
5. Get Your Workers Involved.
7. Attend the Same Training As Your Workers.
8. Follow-up on the Actions You Took.
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The Employee’s Role

☑️ Considerations:

2. *Contribute* to Make Corrective Actions.
3. Always Provide Complete and Accurate Information.
4. Report All Crane Safety Problems or Deficiencies.
5. *Follow-up* With Any Additional Information.
Safety Committees Should:

- Hold Regular Accident Review Meetings.
- Document Meetings.
- Encourage Employee Involvement.
- Bring Employee Complaints, Suggestions, or Concerns to the Attention of Management.
- Provide Feedback Without Fear of Reprisal.
- Analyze Statistical Data Concerning Accidents, and Make Recommendations for Corrective Action.
- Follow-up Is Critical.
Safe system of work

The basic requirements of BS7121 are:

1. Planning of the operation
2. Selection of the crane and suitable lifting equipment
3. Preparation of the site
4. Examination of the crane and equipment
5. Provision of properly trained and competent operatives and supervision
6. Examination of test and other documentation
7. Prevention of unauthorized movement or use
8. Safety of persons not involved in the lifting operations
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Tips for Using Contractors

- Remember, **You** Control Your Facility or Area!
- **Review** Their Procedures **With Them** Before Starting the Job!
- Determine Their Safety Performance Record!
- Determine Who Is in Charge of Their People!
- Determine How They Will Affect Your Employees!
Lifting Operation Flowchart

Figure 1 - Lifting operations flowchart
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Find the Hazard
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Good Practice

- Ensure shackle size is correct for the size of sling being used.

- Check that the sling set is correctly fitted, e.g. no twists in the leas.

- Examine for wear, corrosion, abrasion and mechanical damage which may render the sling(s) unsafe.

- Screw pin anchor shackle for short term use.

- Ensure the SWL of the shackle is correct for the load.

- Check that the appropriate securing arrangements are installed (split pins, wire mousing, etc). The preferred style of shackle is the bow or anchor type fitted with a safety pin that is, bolt, nut and split pin.
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Good Practice

- Ensure fiber web sling is marked/tagged with SWL and rated for the lift.
- Free of acid or caustic burns on the surface.
- Free of any melting or charring on any part of the surface.
- Free of snags, punctures, tears or cuts.
- Free of broken or worn stitches.
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Good Practice

Always check lifting sets and fixed lifting points for damage & current color code.

Check unit is in test and that sufficient validity remains for proposed use.

Ensure SWL is clearly marked.

Ensure that no equipment is loaded above the height of an open basket. This is to prevent snagging, damage to contents and potential dropped objects.

Check unit for excessive corrosion and/or deformation especially the base area.

If container has a solid bottom check drain holes.

Check tag line.
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FOULING OF LATCH

CORRECT!
SLING IN BASE OF HOOK

INCORRECT!
SLING FOULED ON LATCH

STOP

HLC
HABTOOR LEIGHTON GROUP
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Firefighters make dramatic tower crane rescue

February 16, 2009

Emergency workers in Abu Dhabi made a daring rescue yesterday to save the operator of a tower crane, forced out of his cabin to avoid a fire thought to be caused by an electrical problem.

The crane operator climbed along the jib to avoid the fire below.
The crane was left on a barge near the edge of a river over a week-end. Rain upstream caused the river to rise and wash the sand from under one end of the barge. Out of four barges left on the bank, two went into the river, one was lost and never found. An expensive lesson for the contractor.
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Questions?

If the student hasn’t learned, the instructor hasn’t taught!