LIFTING OPERATIONS

On the Lee Tunnel project, some significant near misses involving cranes have occurred this year.

Experience has shown that lifting operations can be hazardous work activities if not properly planned. Safe lifting operations will depend upon:
- The availability of suitable lifting equipment, that is properly maintained, checked and certified.
- The provision of adequate information, instruction, training or supervision for everyone involved
- Thorough pre-planning of each lifting operation. A lifting plan must be in place before any lifting operation.
- Compliance with safe systems of work as detailed in risk assessment and method statement (lifting plan)

How about lifting?

- Lifting Equipment

- Lifting Accessories

Wire rope sling  Leverhoists  Shakles  Lifting points  Eyebolt

One and two leg Chain Slings  Webbing sling  Hooks

for more info contact H&S team
What to do?

Before Lifting

- Any lifting operation identified in your method statement must be risk assessed.
- Ensure that a lifting plan is produced by a competent crane (LA) Appointed Person.
- The lifting plan must be implemented by a Crane Supervisor who is appointed to supervise the operation.
- Ensure that the crane operator and slinger/signaller are fully briefed on the lifting plan.
  Both of them must have current CPCS competency cards in their possession.
- Check the lifting equipment and the lifting accessories.
- Consider the environment and the weather conditions.
- A Crane Coordinator shall be appointed whenever there are more than two cranes operating in the same area and there is a risk of collision of the loads or crane jibs.
  Their duty will be to coordinate the lifting operations to ensure there is no collision. The crane coordinator must hold the crane supervisors competency certificate as a minimum.

Examination

Prior to commencement of work the Site Manager/Deputy shall:

- Ensure that a current Declaration of Conformity or a test & thorough examination certificates exist for each item of lifting equipment.
  Ensure that marking and capacity on the chain correspond to the information given on the inspection certificate or certificate of conformity;

- Ensure that a thorough examination has been carried out in accordance to the following table.

- Ensure that all lifting accessories are marked with the Safe Working Load.
- Ensure that the weights of loads to be lifted are known in advance.
- Ensure that a visual inspection and detect any broken or damaged parts.
MONTHLY SAFETY FOCUS JULY 2013

LIFTING OPERATIONS

**FREQUENCY**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting Equipment</td>
<td>6 months (used for people)</td>
</tr>
<tr>
<td></td>
<td>12 months otherwise</td>
</tr>
<tr>
<td>Lifting Accessories</td>
<td>6 months</td>
</tr>
</tbody>
</table>

**MVB System Colour Coding of Lifting Accessories:**

- Keep the record of the thorough examination

**Check the working environment...**

**And the weather**

Crane manufacturer’s operating instructions will specify a **maximum wind speed** for safe operations. These will be **specified in the lifting plan.**

for more info contact **H&S team**
Lifting

- Follow the Lifting Plan.
- Follow the rules.
- All loads must be slung by a competent slinger / signaler that remains in contact with the operator to direct the load at all times (visually or using radio).
- Ensure that the crash radio is working and is turned up sufficiently.
- All crane operators must have an in-date suitable competence card and follow the instruction of the slinger / signaler.

Note: Ensure that the slinger / signaler is known by the operator undertaking the lifting operation.

Use a tag line / guide rope to guide the load
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LIFTING OPERATIONS

Examples of how to calculate sling leg loads

1. Total load is 1,000 lbs. divided by two legs = 500 lbs. load per leg if vertical lift.
2. Horizontal sling angle is 60 degrees.
3. Multiply 500 lbs. by 1.154 load factor (from table) = 577 lbs. actual load per leg.

1. Total load is 1,000 lbs. divided by two legs = 500 lbs. load per leg if vertical lift.
2. Horizontal sling angle is 45 degrees.
3. Multiply 500 lbs. by 1.414 load factor (from table) = 707 lbs. actual load per leg.

1. Total load is 1,000 lbs. divided by two legs = 500 lbs. load per leg if vertical lift.
2. Horizontal sling angle is 30 degrees.
3. Multiply 500 lbs. by 2 load factor (from table) = 1,000 lbs. actual load per leg.

Note: 1000 LBS = 453.592 kg

After Lifting

Where possible chain slings should be stored in clean and dry conditions and protected from corrosion.

for more info contact H&S team