

April 1999

# Presentation on "Lifting Operations and Lifting Equipment Regulations 1998" - by Tim Watson, Engineering Director, Laing Construction Plant Division.

Tim's talk focused on the Effects, Benefits and Costs of the new regulations and he started with an outline of their salient points:-

- They came into force on 5th December 1998.
- They are the UK implementation of lifting provisions of the EC Amendment to Use of Work Equipment Directive.
- They are goal setting - not prescriptive.
- They cover all workplace situations.
- They cover employers and self employed persons.
- They replace or amend existing regulations.

The main Regulations they replaced or Amended are:-

- Construction (Lifting Operations) Regs. 1961.
- Offices, Shops and Railway Premises (Hoists and Lifts) Regs. 1968.
- Factories Act 1961 (Sects. 22,23 & 25 to 27).
- Docks Regulations 1988 (Regs. 13 to 17).
- Offshore Installations (Operational Safety, Health and Welfare) Regs. 1983.

Tim then described briefly the main provisions:-

- Regs.1 to 3 Administrative (Citation, Interpretation & Application).
- Reg. 4 - Strength & Stability.
- Reg. 5 - Lifting Persons.
- Reg. 6 - Positioning & Installation.
- Reg. 7 - Marking of Lifting Equipment.
- Reg. 8 - Organisation of Lifting.
- Reg. 9 - Thorough Examination & Inspection.
- Reg. 10 - Reports & Defects.
- Reg. 11 - Keeping of Information.(2 years for Attachments and the whole lifetime of lifting equipment)
- Regs.12 to 17 Administrative (Exemptions, Amendments, Repeals & Revocations)

Tim reminded us that there were links with the PUWER 2 Regulations and that those requirements took precedence *after* LOLER obligations, as follows :-

- Suitability of Equipment (Reg. 4).
- Inspection (Reg. 6)
  
- Information and instructions (Reg. 8).
- Training (Reg. 9).
- Guarding (Reg.11), eg., hot exhausts, rotating PTO shafts..
- Controls (Regs. 14 to 18).
- Stability (Reg. 20).
- Mobility (Regs. 25 to 31).

There were many sources of guidance to flesh out the interpretation and meaning of the regulations:-

- .Approved Code of Practice (L113).
- Generic Guidance.
- Sector Specific Guidance:
  - Agriculture (Info Sheet No 28).
  - Arboriculture (Info Sheet No 29).
  - Forestry (Info Sheet No 30).
  - Construction (due for publication autumn 1999).
  - Docks.

The CONIAC guidance looked very useful for the Construction industry, as also did the Engineering and Healthcare guidance.

The major changes were in the following areas:-

- Increased scope:
  - Wider range of equipment
  - Additional industries.
- More emphasis on Planning - Link with Management of Health & Safety at Work Regulations.
- Examination, Testing & Inspection.

Examples of the greater coverage of equipment are:-

- .Mobile Elevating Work Platforms.
- Lorry Loaders.
- Tail Lifts on vehicles.
- Patient Hoists (Hospital or Nursing Home).
- Vehicle Recovery Equipment.
- ANYTHING THAT LIFTS eg., jacks on large cranes.

Increased Scope of LOLER in Industries is:-

Healthcare	Rope Access Industry
Agriculture	Air/Sea Rescue (including winches and the helicopter itself)
Road Transport	Firefighting
Vehicle Recovery	Aircraft Loading
Broadcasting & Theatres	

The new emphasis on Planning focuses on:-

- Proper Planning by a Competent Person
  - Adequate knowledge and experience
  - Risk assessment. (Generic Risk assessment is acceptable for 'standard' situations).
  - Suitable equipment.
- Appropriate Supervision:
  - Adequate knowledge and experience are essential. (It is emphasised that a 'second' person is needed where near power lines or other services.)
- Carrying out operations in a Safe Manner, with attention to:-
  - Visibility.
  - Environment.

Thorough Examination is most important at every stage during the life of equipment and is required:-

- Before being put into use for the first time unless:
  - an EC declaration was made less than 12 months before.
  - physical evidence accompanies the equipment.
- After installation where safety depends on installation conditions. (eg., where corrosion or metal fatigue can occur)
- In Use.

When equipment is in use, there is clear emphasis on the need for regular, effective inspections:-

- for Lifting Accessories and Equipment for lifting Persons - **Every 6 Months.**
- for Other Equipment - **Every 12 months.**
- with an Examination Scheme.

- each time exceptional circumstances jeopardise safety - such as when an Accident/Near-Miss occurs, or when a component is replaced.

The Examination Scheme is obviously crucial to safety and has certain essential elements:-

- must be drawn up by a competent person.
- must identify parts of the lifting equipment to be examined.
- should specify the examination intervals.
- should take into account the equipment's:
  - Condition.
  - Environment in which it is used
  - Number of operations and types of load lifted, ie. Infrequent use, as opposed to regular daily use.
- schemes must be reproducible in written form - this allows for electronic storage, as long as it can be printed out on paper.

As far as Testing is concerned, the Competent Person must take decisions on frequencies, based on:-

- .Manufacturers Recommendations.
- HSE Guidance - basically, as before PUWER 2
- British Standards - BS 7121 part 2.
- Industry Guidance (ALEM for Lorry Loaders and CPA for cranes).
- Risk Assessment.
- Experience.

Tim went on to outline the benefits of testing requirements under LOLER as being:-

- Risk based - only test when required.
- Large Cranes - only test certain configurations. Small cranes are used on a large variety of jobs, whereas 550 tonne cranes, say, would be used on jobs where detailed planning was required.
- Can avoid damage through overloading on conventional testing
- Difficulty of testing special equipment, but an overload test can be avoided if a risk assessment is done with sufficient engineering time and effort.

Inspections are another essential feature of safe plant management, in between testing, and gives a picture of what is happening to the equipment over a period of time. The requirements are:-

- Required by Reg. 9 of LOLER.
- Also required by Reg. 6 of PUWER.

- Inspections needed if Risk Assessment identifies a significant risk to the operator or other workers from the use of lifting equipment.
- Frequency and extent of inspections should be determined by risk.
- Person carrying out inspection should be competent to do so.
- Inspections should be recorded.

As far as the cost impact of LOLER, Tim gave this opinion:-

- Little increase for those industries covered by existing regulations (Construction, Factories etc.)
- a Significant for those industries having to have lifting equipment examined for the first time ( Healthcare, Agriculture etc.)
- An HSE estimate calculated between 26,000 & 163,000 additional items will require examination.

According to an HSE analysis, the costs to Industry would be:-

- Familiarisation f4.3m
- Inspection Costs

Examination Option	One Off Cost/ Benefits £m	Recurring Cost/ Benefits £m
A - Examination Scheme	<b>28.4 - 59.4</b>	<b>- 6.4 to 14.2</b>
B - Specified Period Scheme	<b>4.3</b>	<b>3.3 to 19.3</b>
C - Combination of A and B	<b>17.5 - 22.1</b>	<b>-5.7 to 16.6</b>

From their experience, Tim said, typical Examination Costs could be:-

Item	Time (hr.)	Internal Inspector (£)	External Inspector (£)
10mm Chain Sling	0.25	6	13.5
5 Small Scissorlift	1	24	54
Lorry Loader	1.5	36	81
EOT Crane	1	24	54
25tonne MobileCrane	4	96	216
Tower Crane	2.5	60	135
Construction Hoist	2	48	108

The positive benefits of LoLER which could be most easily identified were:-

- A reduction of accidents with more equipment subject to regular examination.
- A further reduction in accidents due to requirement for proper planning of lifting operations.
- A single regulatory framework.
- Possible reductions in the amount of testing carried out, particularly for large cranes.

## *Members' Questions*

**Mike Palfreyman** asked about the application of Generic Risk Assessments when cranes were used on such different types of jobs. Tim replied that frequently operations were carried out on the same weights, say, in a warehouse with only slight variations to routes or weights between loads. With construction loads there could be very different site conditions which would justify a specific approach based on a detailed work plan. An example of this was a roof truss, needing a 2-element lift.

**Ray Hesson** asked if the "Liverpool Hooks" were covered in the Guidance and Tim confirmed that this appeared in sector-specific guidance.

**Malcolm Wright** asked if there was any distinction between lifting equipment < 1 tonne and > 1 Tonne. Tim replied that this distinction had disappeared and that the old Automatic Safe Load Indicator (ASLI) had been replaced by "**Rated Capacity Indicators**" and "**Rated Capacity Limiters**" for use "**when there was a significant risk associated with the use of machinery**".

The member from **Keller Ground Engineering** asked if a test certificate was required to be on site for every shackle. Tim indicated that there was some uncertainty about this in verbal advice from HSE. The Secretary added that, as a result of a similar question at the last meeting, he had researched the ACOP, which could be interpreted to indicate that site copies were not necessary. Full notes were in last month's Newsletter.

As there were no further questions, John Humpherson thanked Tim for his very interesting and valuable presentation and display at the front of the hall. He then asked the members to show their appreciation in the traditional way.