

# LIFT EXAMINATION IN THE UNITED KINGDOM

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## ABSTRACT

This paper will look at the broad issue of lift examination in the United Kingdom, who carries it out and why, and the client's perception of what the Inspection Report will tell him. A comparison will also be made between the United Kingdom system and that in operation in other countries.

## 1 INTRODUCTION

Examination of lifts is perhaps one of the most important functions carried out within our industry, with the ultimate aim to provide the end users with a continuing safe means of transportation.

These examinations are carried out for a variety of reasons and by several different groups within our industry as follows:-

- (a) Consultants will examine and provide a report as a basis for formulating major works schemes, advising on the effectiveness of the maintenance programme and to ensure user safety and reliability of equipment.
- (b) Lift Contractors will examine and provide a report as a basis for formulating major works schemes on serviceability, to ensure user safety, to satisfy a statutory (legal) requirement, reliability of equipment, and as a measurement of performance.

- (c) Insurance/Inspection companies will examine and provide a report on serviceability, to ensure user safety, to satisfy a statutory (legal) requirement, and as a condition of insurance cover.

As can be seen from the foregoing, it would appear that the groups carry out the examination for the same reasons, but what can be different is the motive behind carrying out these examinations?

In the remainder of this paper, I am going to concentrate on the examination carried out by the Insurance/Inspection companies.

## 2 HISTORY OF INSPECTION IN THE UNITED KINGDOM

During the last century, there were a number of incidents of boiler explosions which led to the formation of the "Manchester Steam Users Association". Between 1834 and 1900, various Engineering Insurance companies were formed, and carried out independent examinations of boilers. In 1901 the Factory and Workshop Act introduced the term, "Competent Person" to describe the status of the person carrying out critical in-service examination work. Through all of these activities, there was a dramatic reduction in the incidences of boiler explosions.

During the 20th Century, there has been various pieces of legislation introduced which make it a statutory (legal) requirement to examine lifts situated in certain types of premises:-

- (a) The Offices, Shops and Railway Premises (Hoists and Lifts) Regulations 1968.
- (b) The Factories Act 1961.

The requirement is for a thorough examination to be carried out by a competent person at least once in every period of six months, and a report of such examination prepared in accordance with The Lifting Plant and Equipment (Record of Test and Examination etc) Regulations 1992. The arranging of this thorough examination is the lift owner(s) responsibility and failure to observe this statutory requirement could result in the owner of the lift being prosecuted under Section 37 of the Health and Safety at Work Act 1974.

Good practice would suggest that the person carrying out this thorough examination should be independent and impartial, and it has therefore been the practice to instruct one of the major Engineering Insurance companies to carry out this thorough examination. If the person carrying out the thorough examination finds a defect which, in his opinion, affects the continued safe operation of the lift, then he has a duty to inform the "Enforcing Authority"

who can then issue an “Improvement Notice” or in serious circumstances a “Prohibition Notice”. It should be emphasised that the person carrying out the thorough examination has no legal powers to switch a lift off but is required to pass on the information to the enforcing authority.

### 3 CURRENT SITUATION IN THE UNITED KINGDOM

All of the legislation already mentioned is still current at this moment in time, and therefore, there has been no change in the method or frequency of carrying out thorough examinations.

#### (a) What is a Thorough Examination?

This is a detailed examination by a Competent Person, supplemented by any dismantling as considered necessary by the Competent Person, and should consider the following parts of the lift as appropriate:-

- (i) Enclosure of Liftway.
- (ii) Landing and Cage Gates.
- (iii) Interlocks on Landing and Cage Gates.
- (iv) Other gate fastenings.
- (v) Cage or platform and fittings, cage guides, buffers, interior of the liftway.
- (vi) Over-running devices.
- (vii) Suspension ropes or chains, and their attachments.
- (viii) Safety Gear, i.e. arrangements for preventing the fall of platform or cage.
- (ix) Brakes.
- (x) Worm or Spur Gearing.
- (xi) Other Electrical Equipment.
- (xii) Other parts.

The report should, in addition, detail any parts which were inaccessible at the time of the examination.

Additional guidance to help the competent person has been provided by the Health and Safety Executive in the form of Guidance Note PM7, which had indicated that certain important components were not receiving adequate attention. This document is not mandatory but nevertheless gives very sound guidance on the areas to be looked at and emphasises that the purpose of the examination is to determine whether the condition of the lift is such that it is safe for continued use.

(b) **Who carries out a Thorough Examination?**

As discussed previously, it is the Competent Person who carries out the Thorough Examination, but who or what is a “Competent Person”? For the first time this has been defined within the Pressure Systems and Transportable Gas Containers Regulations 1989 but as far as lifts are concerned, there has been no actual definition contained within any of the Regulations, but traditionally, a Competent Person was considered to be someone who has:-

**“practical and theoretical knowledge, and actual experience of the type of machinery being examined”.**

This is not very precise, and indeed leaves it open as to who can carry out the thorough examination, but the reality in the United Kingdom is that the vast majority of Lift Thorough Examinations are carried out by competent persons employed by Engineering Insurance companies or Independent Engineering Inspection companies, the largest trade organisation for these companies being the Safety Assessment Federation.

As stated earlier, the competent person definition is open, and indeed thorough examinations are occasionally carried out by the company who also maintains the lift, but from what has been said earlier, this is not very satisfactory as the end user has now lost the element of independence which is very important in ensuring continued safe use.

(c) **What does the report tell the owner?**

The reporting style is by exception, i.e. it highlights any problems found, and the defects will be categorised, depending upon their seriousness:-

- (i) Defects affecting safety and requiring immediate attention. This in effect means that the lift should not be used until this defect has been corrected, and indeed a copy of the report will be sent to the enforcing authority.
- (ii) Defects affecting safety, but with a specified time limit for correction of the defect. This means that the lift cannot be used after this time limit unless the defect is corrected, and again a copy of the report will be sent to the enforcing authority.
- (iii) Other defects which, although not affecting safety, do need to receive attention during the regular maintenance visits.

- (iv) Other observations may be made which are not defects, but need to be brought to the owner's attention, e.g. lack of warning notices, PM7 examinations etc.

The report is made on the condition of the lift as found on that particular day only. It is NOT a full condition survey, and cannot replace the need for ongoing preventive maintenance on the lift installation.

#### 4 OUTSIDE THE UNITED KINGDOM

Other countries each have their own system for carrying out periodic examinations of Lifts and vary in a number of ways, dependent on the Regulations (if any) which are in place but generally follow the principle that the object is to ensure continued safe use of the Lift. The greatest area of difference appears to be in the frequency at which these periodic examinations should take place.

##### (a) **SPAIN**

In his paper on Lift Safety in Spain, (Elevation Technology 5), J Jimenez states that "the frequency of the periodic inspections is two years for buildings of public gatherings, and four years for the remaining ones", but then goes on to quote that "40% of lifts installed in the Spanish capital city had not been the object of periodic inspections ....."

##### (b) **HONG KONG**

A periodic examination of lifts must take place within twelve months of the last one.

##### (c) **NETHERLANDS**

The Regulations stipulate that a lift must be inspected before going into operation for the first time, one year after commissioning, and subsequently every 1½ years (A J Lenskens , Elevator Technology 4).

Why this great disparity? Do we have evidence to show the optimum time between periodic examinations?

## 5 CONCLUSION

Within Europe, there is generally a move towards the Risk Assessment approach to carrying out examinations of engineering plant, and it would seem eminently sensible to follow this approach in adjusting the frequency between periodic examinations.

Within the United Kingdom at present, the Regulations require the competent person to state the date for the next examination of a lift, but this cannot be more than six months from the previous one (but it can be less).

The Lifting Plant and Equipment (Record of Test and Examination etc) Regulations 1992 within the United Kingdom are currently under review, and there is a possibility that owners will be given the option, leaving the frequency of examinations as they are at present, or having a Written Scheme of Examination provided by a competent person, which may adjust the frequency of examination.

Within British Columbia, there already exists a Risk Assessment approach to the examinations of Lifts, and indeed the frequency can be up to as much as two years.

There is knowledge to be gained from all countries on their approach to periodic examinations such that lift safety is enhanced.

## REFERENCES

- (1) J Jimenez, Elevator Technology 5, 1993, "Lift Safety in Spain".
- (2) A J Lenskens, Elevator Technology 4, 1992, "Lift Safety in the Netherlands.

## BIOGRAPHICAL NOTES AND ACKNOWLEDGEMENTS

The author would like to thank Rob Harvey of Kone Lifts for his assistance.

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