Statutory requirements for the management of pressure systems, lifting equipment & power presses

Foreword

Legislation places a statutory duty upon the University with regard to the management of pressure systems, lifting equipment and power presses. This document provides guidance on the University of Nottingham's requirements for the management and statutory inspection requirements associated with these assets.

Pressure systems

The Pressure Safety Systems Regulations 2000 require that all pressure vessels and associated pipe work must be assessed initially to determine the appropriate regime of regular inspection and testing, this is called the "written scheme of examination". Thereafter arrangements must be made for this inspection and testing to be undertaken at the correct intervals. The University has engaged Allianz as the competent person to undertake these activities.

Inspection frequencies may be variable between different types of pressure system asset and will be determined by the Allianz inspection engineer.

The details of all systems, including for example autoclaves and air receivers, must be notified at the time of installation or purchase to the Responsible Person, who will arrange for them to be added to the insurer's database, to be assessed, insured and regularly inspected. The procedure for this can be found on the Commercial Services Website (follow the links to Insurance; Engineering and Statutory Inspections; Standard Inspections for Pressure Vessels and Lifting Equipment
https://workspace.nottingham.ac.uk/display/CommServ/Statutory+Inspections

The safe working limits of the system must be clearly marked on it. As a minimum this should include the maximum pressure for safe working. Larger, complex systems may also require marking with temperature, time, volume, flow rate, heat input or coolant flow limits as appropriate. The operating instructions should contain all the information needed for safe operation of the system including start-up, shutdown, standby and emergency situations. The Allianz Engineer will also label the system with an asset number, test date and next test date.

In addition to any thorough examinations in accordance with the written scheme, the system should be subject to routine maintenance and inspection checks. These checks should include looking for signs of corrosion, leakage and external damage. Particular attention should be paid to the seals at doors and lids. Systems should be regularly cleaned out or drained of condensate, to ensure the removal of corrosive residues.

Lifting equipment

A summary of the requirements of the Lifting Operations and Lifting Equipment Regulations 1998 is given in University guidance:
http://www.nottingham.ac.uk/safety/documents/loler.pdf. Equipment such as lifts,

cranes, chairs, ropes and slings must not be loaded beyond the safe working loads specified for each one. Safe loads must be clearly marked on each piece of equipment and the appliances should be tested periodically, as advised by the insurance inspector.

Lift trucks must be operated by authorised persons only. The standard to which operators should be trained and authorised as specified in the Approved Code of Practice.

Inspection frequencies for lifting machinery such as overhead cranes, chain blocks, lift trucks etc. is 12 months unless it is used for 'man riding' when the frequency is 6 months. For lifting tackle such as chains, 'D' shackles, slings etc. - 6 monthly inspection intervals.

All new items of lifting equipment must be notified at the time of installation or purchase to the responsible person who will arrange for them to be regularly inspected in line with the Lifting Operations and Lifting Equipment Regulations 1998.

Harnesses and lanyards

There is no defined legal usable life for harnesses and lanyards; however, the HSE support the consensus reached by industry bodies with regard to the maximum recommended service life of such equipment. This takes into account the effect on the materials of construction due to Ultra violate radiation, chemical and dirt ingress into the fibres likely to cause degradation. Therefore, the 'in service life' of harnesses and lanyards is considered to be five years with a 'total asset life from manufacture' of ten years.

Where the University is unable to provide an accurate date of manufacture or the date when an asset was put into service, Allianz inspecting engineers will make an experience based judgement, recommending replacement to the asset owner when appropriate. This recommendation to replace an asset will be made through the normal inspection reporting procedures.

Power presses

The requirements in part IV of PUWER 98 apply to power presses that are wholly or partly used to work metal. They do not apply when a press is used to work non-metals, hot metals or metal powders. For other 'presses' that present similar risks but do not fall within the strict definition of a power press, for example hydraulic presses, regulation 6 of PUWER may apply where both an initial and periodic inspection of the machine may be required.

Power presses, all their guards, the control systems and ancillary equipment (for example automatic feed systems) must be maintained so that they do not put people at risk. Maintenance work on power presses must be carried out safely, i.e. machinery is shut down and isolated, and is done by people who have the right skills and knowledge. Presses and their safety devices must be thoroughly examined by a competent person at the required intervals.

Each School/Department owning power presses must appoint a Responsible Person to co-ordinate maintenance and examination of such equipment. The competent person (Allianz Engineer) is someone the employer has selected to carry out the thorough

examination and test of the power press, its guard(s) or protection device(s). They are usually employed by specialist inspection organisations and need sufficient practical or theoretical knowledge and experience to detect defects or weaknesses and decide how far these will affect the safe operation of the press.

Inspection frequencies for the examination of a power press, along with their guards and protection devices, is at least once in every period of six months or, where the tools are fenced exclusively by means of fixed fencing, every 12 months. The periodic examination is intended to ensure that safe conditions are maintained and that any defect or deterioration is remedied in good time. The competent person can use the information gained during the initial thorough examination and test to focus on the things that are most likely to cause problems

Roles and responsibilities of Responsible Persons within Schools/Departments

(See Appendix 2 for summary of duties)
For the management of maintenance and inspection of lifting equipment, pressure systems and power presses, the Head of School/Department must appoint a Responsible Person (usually the SSO/DSO) for the coordination of this activity. Although these duties may of course be delegated to a competent nominated person within the school/department for day to day management, the responsibility to oversee this activity will remain with the SSO/DSO who will be the primary contact for their School/Department for University with regard to lifting equipment, pressure systems and power press communications.

Adding new items and removing old items of equipment to/from the Allianz Database

To ensure that the University and its responsible persons are able to monitor lifting, pressure and power press assets it is vital that they are correctly recorded on the Allianz database. The School/Departmental Responsible Person must arrange for new assets to be added and old redundant assets to be removed as required. This is done at https://www.eservices-allianzengineering.co.uk/eServices/interface/userProfile.asp. **This is the responsibility of the University, not Allianz.** The add/delete buttons within the database will prompt you for information such as location; plant number; serial number; plant type; next inspection date, however, it should be noted that these add/delete buttons do not directly change the database, they initiate an email to the inspecting engineer who will either delete the asset on receipt of the request or, make arrangements to attend site to inspect the asset and then make the relevant entry onto the database.

For new builds or new project work, the Responsible Persons must establish what new equipment is to be installed / removed.

It is also the responsibility of School/Departmental Responsible Persons to ensure that assets remain within test date by monitoring the inspection dates of these types of assets and then liaising with the relevant Allianz engineer to coordinate inspections as required. This should be done before assets go 'out of test date'. (See Appendix 1 for current Allianz engineers contact details)

Asset Marking/Tagging System

A system of asset marking is used to help with this monitoring.

- Pressure system and power presses will be fitted with adhesive labels showing the date of next inspection.
- Lifting tackle, such as chains, 'D' shackles, slings etc. will be fitted with a colour coded ty-wrap, a 'current colour' board will also be provided in the work area.
- Lifting machinery such as overhead cranes, chain blocks, lift trucks etc. will be fitted with a PVC disc showing date of next inspection.

Pressure Systems – Written Schemes of Examination

To comply with the Pressure Systems Regulations 2000, a Written Schemes of Examination' must be maintained throughout the lifetime of the plant or equipment. The University's 'Written Schemes' were reviewed in 2010/11 and all are held electronically on the Allianz database.

For complex assets and systems, it is the School/Department's responsibility to provide the inspection engineer the support of a service engineer to disassemble/reassemble the system to enable improved access. The latter will normally only be required for the less frequent, more intrusive thorough examinations. The School/Department also has responsibility to arrange for ongoing routine maintenance and repairs or improvements required by the inspecting engineer.

Access to Allianz Database

Responsible Persons and any other nominated persons will need to have access to the Allianz database which can be arranged by following the attached link https://www.eservices-allianzengineering.co.uk/eServices/ExternalRegister_1.asp. The University Insurance Officer will authorise all applications to access the database. Please note that once access is provided, the system must be accessed regularly otherwise your password will default following periods of inactivity.

The database has various levels of access authorisations, minimum levels of which are set by the University, it is these levels of authorisation that determine what 'eNotifications' are sent to responsible persons. Please note that higher levels of access to the database to allow for downloading and reporting are available upon request.

Email Notifications (eNotifications) following inspections or attempted inspections

'Plant not available' (PNAs)

Allianz Engineers will notify Responsible Persons where there are items they have not been able to inspect, either because they cannot be accessed or the equipment is not ready for inspection. The School/Departmental Responsible person must coordinate a revisit by the relevant inspector when the equipment is ready and this must be within the inspection date as far as is practicable.

'New reports have arrived in InTerFACE'

These notifications alert responsible persons to relevant database updates which should be reviewed.

Defect Notifications

'A' category defects - (those that pose a serious hazard): email notification will be sent by the inspecting engineer to the Responsible Person(s) within 24 hours and will be backed up with a telephone call.

'B' category defects - (those defects that require action but not immediate) will be notified by email within three days to the Responsible Person.

For all A and B defects, the Responsible Person should record any remedial action (proposed or completed) on the Allianz database in the Notes section for the specific item.

In order to ensure that School/Department receives timely and relevant 'eNotifications' and 'Email notifications' any changes to who has been designated as the Responsible Person and local Nominated Persons should be notified by email to the Safety Office without delay so the Allianz database can be updated.

Summary

Please note that the approach described above reflects how the University intends to manage its lifting equipment, pressure systems and power presses to ensure that these assets continue to receive the timely inspection and repair required by law. This approach has been fully agreed with Allianz the University's inspection engineers. **It is the responsibility of University Schools and Departments, not Allianz, to ensure inspections are carried out in line with the written scheme/inspection frequency.**

Appendix 1

Allianz Engineers details (updated September 2011)

University Park, Medical School, City Hospital, Kings Meadow

Lifting Equipment

Bob Elkins +44 (0) 115 9294849 / 07870 231303 or by email at robert.elkins@allianz.co.uk

Pressure Systems

Charlie Haw 07870 231 346 or by email at charles.haw@allianz.co.uk

Power Presses

Andy Harrison +44 (0) 1428 722407 / 07870 231305 or by email at andy.harrison@allianz.co.uk

Sutton Bonington

Lifting Equipment

Tony Eden +44 (0) 1623 490381 / 07870 231305 or by email at anthony.eden@allianz.co.uk

Pressure Systems

Pressure Systems

Charlie Haw 07870 231 346 or by email at charles.haw@allianz.co.uk

Power Presses

Andrew Jones +44 (0) 01827250351 / 07870 231 011 or by email at andrew.jones@allianz.co.uk

Appendix 2

Summary of duties of School/Departmental Responsible Persons:

- Each School/Department must appoint a Responsible Person where there are pressure systems, lifting equipment and/or power presses that require maintenance and statutory inspection.
- To monitor that all relevant pressure systems, lifting equipment and power presses on their School/Departmental asset register are entered on the Allianz database.
- To add / delete new / redundant items of equipment from Allianz database.
- To delete any item of equipment that has been disposed of or has been completely removed from service (must be isolated from power and not be capable of inadvertent use) from the Allianz database.
- To monitor and review that all items of equipment are being inspected in line with the requirements and to identify equipment or general problems where items are not being inspected within the inspection dates. Items should not be repeatedly missed without some explanation added to the notes section for that item.
- To receive and act upon email notifications from Allianz , specifically coordinating action for 'A' and 'B' defects and liaising with Allianz engineer to deal with PNA's (Plant Not Available).
- Arrange for timely preparation of pressure systems for examinations to take place within the correct period.
- Arrange the routine maintenance of pressure systems, lifting equipment and power presses.

If you have any queries regarding the process, please email bb-safety-office@exmail.nottingham.ac.uk.

Further guidance on statutory inspection can be found on the Allianz web-site http://www.allianzengineering.co.uk/