Health & Safety Update

June 2018

Failure of vision port on a lithium evaporator

A student suffered serious eye damage when a viewing port on a bespoke piece of research equipment failed during an experiment at another university.

The equipment involved was designed as a vacuum vessel, but it was modified to allow nitrogen to be introduced to keep out airborne dust when charging the vessel. However, this alteration allowed nitrogen to enter the chamber when sealed resulting in an internal pressure build-up causing the viewing port to fail violently.

Lessons to learn

- Need to ensure that research equipment is dealt with in the same way as other work equipment - Provision and Use of Work Equipment assessment.
- Must ensure the work equipment risk assessment is reviewed, especially when the operating parameters of such equipment might have changed
    - Give due consideration to the effect of modifications. A vacuum system may not be capable of holding positive pressure.
- The control measures identified by such risk assessments are properly implemented maintained and effectively communicated to all those could be affected by the activity.

The HSE have successfully prosecuted University College London (UCL), the incident took place in the London Centre for Nanotechnology, part of UCL. UCL pleaded guilty to a breach of the Health and Safety at Work Act 1974, Section 3(1) *(employers duties to persons not in their employment which includes students)* in 2017 and were fined £300,000 plus circa £17,500 costs, civil claims will add additional costs. UCL appealed against the size of the fine but this was rejected by the Court of Appeal. The fine was not excessive given UCL's income and the Charitable Status of UCL had already been taken into account when calculating the fine.