

Chemical manufacturing company fined after employee scalded with boiling water

Calachem Limited, a chemical manufacturing company, has been fined after an employee was scalded with boiling water during a cleaning operation.

Falkirk Sheriff Court heard that on 4 March 2016, work was undertaken to clean down part of a production plant in Grangemouth, Scotland. The cleaning process involved filling a chemical powder charging chute leading down to a reaction vessel with water that was brought to the boil by immersing a steam hose in it.

The water in the chute was boiled overnight and the following day the employee continued with the clean down process. When he tried to empty the boiling water from the charge chute, he opened a valve expecting the water to drain down into the vessel below. However, the vessel below the chute had been pressurised with nitrogen gas and when the valve was opened the pressure in the vessel was released, the scalding water erupted back up and out of the chute severely scalding the employee.

An investigation by the Health and Safety Executive (HSE) found that a relatively safe cleaning process of washing down the charge chute with cold water into the vessel below had evolved and changed over time. The process had developed into the practice of overnight boiling of water in the charge chute, while simultaneously pressurising the reaction vessel below as part of a recirculating cleaning cycle. The incremental changes to the cleaning process were not subject to a review of the company's risk assessment and the danger of pressurising a vessel below a chute of boiling water was not recognised, consequently no control measures were put in place to remove this danger.

The practice of filling the powder charge chute with boiling water has ceased since the incident. The processes to clean down the plant have been risk assessed to introduce new safer worker procedures.

Calachem Limited of Peters Square, Manchester pleaded guilty to breaching Section 2 of the Health and Safety at Work etc Act 1974. They were fined £560,000.

Speaking after the hearing, HSE inspector Gerard McCulloch said: "Those in control of working processes have a responsibility to assess the associated risks. If changes are made, which increase the level of risk, those in control of the workplace have a duty to reduce the risk back down to as low a level as reasonably practicable.

"If the decision to boil water in the chute instead of hosing it down with a cold water had been the subject of a risk assessment, the danger from the

pressurised vessel below would have been identified prior to the incident. This would have prevented the employee severe injury and permanent disfigurement.”

Notes to Editors:

1. The Health and Safety Executive (HSE) is Britain’s national regulator for workplace health and safety. We prevent work-related death, injury and ill health through regulatory actions that range from influencing behaviours across whole industry sectors through to targeted interventions on individual businesses. These activities are supported by globally recognised scientific expertise. www.hse.gov.uk
2. More about the legislation referred to in this case can be found at: www.legislation.gov.uk/
3. HSE news releases are available at <http://press.hse.gov.uk>

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