

Ductgrove Limited Design Workshops

Pressure systems:

If pressure equipment fails in use, it can seriously injure or kill people nearby and cause serious damage to property. Each year in Great Britain, there are about 150 dangerous occurrences involving such unintentional releases? Around six of these result in fatal or serious injury. (Ref: UK Health and Safety Executive 2011)

It is an Engineers or Designers duty to minimise the risks when working with systems or equipment which contain a liquid or gas under pressure. An employer or self-employed person, you have a duty to provide a safe workplace and safe work equipment. Designers, manufacturers, suppliers, installers, users and owners also have duties.

In the UK the two main regulations covering pressure equipment and pressure systems are:

- ▣ The Pressure Equipment Regulations 1999
- ▣ The Pressure Systems Safety Regulations 2000

Examples of pressure systems and equipment are:

- ▣ Boilers and steam heating systems
- ▣ Pressurised process plant and piping
- ▣ Compressed air systems (fixed and portable)
- ▣ Pressure cookers, autoclaves and retorts
- ▣ Heat exchangers and refrigeration plant
- ▣ Valves, steam traps and filters
- ▣ Pipe work, hoses, pressure gauges and level indicators.

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Pressure Systems (Continued)

The legislation governing Pressure equipment Owners Designers of plant and equipment must be adhered to by law in most countries codes and standards are in place to ensure this is done some key rules must be followed listed below is a guide which shows some of the main considerations to ensure pressures equipment is designed, installed and maintained safely.

- ❑ As an Owner / Designer / supplier you must Provide Safe and Suitable Equipment this is a legal requirement.
- ❑ It is the Designers / and or Owners responsibility to ensure SQEP (Suitably Qualified Experienced Person) personnel Design, Maintain and inspect pressure equipment.
- ❑ Plant and equipment risks can be reduced by designing to a suitable National or International code this will significantly reduce the risk of failure.
- ❑ Know / determine the operating conditions to ensure safe plant and equipment
- ❑ The designer must know the operations conditions and any possible excursions this is key to designing safe pressure equipment.
- ❑ Fit suitable protective devices and ensure they function properly.
- ❑ Carry out suitable maintenance & Make provision for appropriate training.
- ❑ Have the equipment examined at the required inspection period
- ❑ If you would like to know more contact one of our consultants on the main website.

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