

SECTION 3(16)

PRESSURE VESSELS

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Introduction

The Pressure Systems and Transportable Gas Containers Regulations 1989 came into force fully on 1 July 1994. These require the users and owners of pressure systems to demonstrate awareness of the operation pressures of their systems and show that the systems are actually safe. Each system must be accompanied by a written scheme of examination.

A written scheme of examination is a document containing information about the components comprising a pressure system (i.e.: those which operate at pressure and contain a relevant "fluid"). The Regulations cover such "fluids" as compressed or liquefied gas (including air above 0.5 bar pressure), pressurised hot water above 110.C and steam at any pressure.

Typical scheme contents would include: the item's identification number, parts requiring examination, nature of the examination, details of any necessary preparatory work, completion date of the initial examination maximum interval between tests, name of the competent person certifying the written scheme and the certification date.

The first step in drawing up a written scheme is to check the workplace for items of equipment which constitute a pressure system. The Regulations and the RSE's pressure system guidance leaflet should be examined to ascertain whether such a system is likely to require examination.

Items of plant forming a pressure system should be selected for inclusion if a failure could lead to a release of pressure which could cause injury. Amongst the items that are likely to be included are: compressed air receivers (where the product of the pressure, times the internal capacity of the receiver is greater than 250 bar litres), steam sterilising autoclaves, steam boilers, pressure cookers, portable steam cleaning units, vapour compression refrigeration systems (where the installed power exceeds 25kw), narrow gauge steam locomotives, breathing apparatus components and LPG storage systems.

The following pressurised systems are likely to be excluded: office tea urns, machine tool hydraulic systems, hand held tools, combustion engine cooling systems, compressed air systems (where the product of the pressure and the internal capacity is less than 250 bar litres), any pipeline in which the pressure does not exceed 2 bar above atmospheric, portable fire extinguishers (with a working pressure of less than 25 bar at 60.C and a total mass of less than 23kg), portable LFG cylinders, vehicle tyres and portable gas welding sets.

Owners or users of such systems likely to require a written scheme should contact one or more competent persons. HSE guidance on selecting such people is available but the Councils Insurers (Zurich Municipal) can also provide such a service. The competent person must be able to: define the scope of the scheme, define the nature and frequency of the examination, and draw up and certify the scheme itself. Owners and users of pressure systems covered by a written scheme of examination have a legal responsibility to ensure their systems are examined by a competent person in accordance with the scheme.

New plant will generally require examination before commencing operation. The first examination for existing plant should take place on the date specified on the written scheme itself. Equipment which has been covered under the Factories Act 1961 does not need to have a written scheme in place until its present cover expires.

Further Guidance

- Pressure Systems and Transportable Gas Containers Regulations Guide - ED5193
- Transportable gas containers: verification body - ED3993

- Transportable gas containers: BS - ED2590
- Approved Code of Practice 38 - Transportable Gas Containers - ED1390
- Safe pressure systems IND(S)27(L) = HSE - ED1390