

## PSSR REGULATIONS

### INTRODUCTION

The key piece of legislation concerning pressure equipment is PSSR - The Pressure Systems Safety Regulations 2000. The aim of these Regulations is to prevent serious injury from the hazard of stored energy as a result of the failure of a pressure system or one of its component parts.

The Regulations apply to owners and users of systems containing 'relevant fluids', (which include steam at any pressure, any fluid or mixture of fluids which is at a pressure >0.5 bar above atmospheric, a gas dissolved under pressure in a solvent (e.g. acetylene).

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;
- pipework and hoses;
- pressure gauges and level indicators; and
- air conditioning plant.

### Regulation 8 (Written Scheme of Examination)

Under the Pressure Systems Safety Regulations 2000, a written scheme of examination is required for most pressure systems. The written scheme should be drawn up (or certified as suitable) by a competent person. It is the duty of the user of an installed system and the owner of a mobile system to ensure that the scheme has been drawn up.

The written scheme will identify which parts are to be examined, what is required and how often it is required.

Pressure systems that fall within Regulation 8 must then comply with Regulation 9.

### Regulation 9 (Examination in Accordance With the Written Scheme)

The examination itself has to be performed in two separate parts; firstly with the vessel and its fittings stripped down (thorough examination); secondly, after it has been returned to operation a working examination is undertaken. The second part of the examination includes verifying the protective devices are functioning correctly and it should be performed as soon as reasonably practicable after the thorough examination.

### Regulations 8 and 9 apply to;

- pressure vessels and receivers that contain steam at any pressure;
- pressure vessels and receivers with a capacity of 250 bar / litres and above. To establish the bar / litres of a pressure vessel, multiply the vessel operating pressure (in bar units) by the vessel capacity (in Litres) i.e. 10 bar x 50 Litres = 500 bar / litres Capacity and therefore is above the 250 bar / litre threshold and requires an inspection with a written scheme of examination;

### Disclaimer

The information contained in this guide is of a general informational nature. We have used reasonable endeavours to ensure the accuracy and completeness of the contents but the information does not constitute professional advice and must not be relied upon as such.

To the extent permitted by law, we do not accept responsibility for any loss which may arise from reliance on the information contained in this guide.

- hot water boilers that operate above boiling point at atmospheric pressure (100c);
- refrigeration and air conditioning plants with compressor motors which exceed 25kW, or where the total installed power exceeds 25kW.

You must not allow your pressure system to be operated (or hired out) until you have a written scheme of examination and ensured that the system has been examined.

### Thorough Examination

#### (also known as Out of Service Examination, Cold Examination, Part 1)

This is a careful and critical scrutiny of a pressure system using suitable techniques, including testing where appropriate and requires the relevant parts of the system to be stripped down to a level necessary to determine the condition and fitness for continued use.

### Working Examination

#### (also known as In Service Examination, Hot Examination, Part 2)

An examination of the relevant parts of the system under pressure (usually under normal operating conditions) to determine the condition and fitness for continued use and to confirm that the protective devices, especially any safety valves, have been tested and set correctly.

Some systems, (for example fired equipment) may need to undergo both a thorough and working examination in accordance with the WSE. The requirements of the WSE have not been fulfilled until the thorough and the working examinations have both been carried out. It may not be practicable to carry out the working examination immediately following the thorough examination. In these circumstances the working examination should be carried out when the system is first returned to service or as soon as reasonably practicable thereafter.

The importance of working examinations and verification of correct operation of protective devices should not be overlooked.

### GUIDE TO INSPECTION FREQUENCY

The following is a guide to how often various items of equipment that fall within regulation 8 and 9 normally require to be inspected; however, the actual periodicity of inspections is as stated in the Written Scheme of Examination as the Competent Person may vary these periodicity's at their discretion. In-addition, due to the complexity of the operation of these items it is considered best practice for the inspection to coincide with the planned service and maintenance regime. Whilst every effort has been made to ensure that the information is accurate and up to date, please note that the chart is only a simple guide. We do not accept any responsibility for any omissions or errors.

ITEM	THOROUGH (Months)	NOTES
Compressed Air Pressure Plant >250 bar/ltr	26	Normally inspected at 24 month frequency
Hot Water Boiler (operating at 100°C and over)	14	Normally inspected at 12 month frequency
Steam Boilers and Steam Ovens	14	Normally inspected at 12 month frequency
Steam Pressure Vessels	26	Normally inspected at 24 month frequency
Refrigeration & Air Conditioning Plant >25 kW	26 - 48	Dependent on type
Other Pressure Systems	12 - 120	Dependent on vessel type, contents and application