SCHEDULE 1

Regulations 4(2) and 5(1)

Safety Requirements

Requirements for any acetylene equipment or acetylene manifold

1. Any acetylene equipment or acetylene manifold may only be used if designed, manufactured and operated to prevent, so far as is reasonably practicable—

(a) the uncontrolled combustion of acetylene gas;

(b) the decomposition of acetylene gas; and

(c) the formation of acetylene–derived compounds that pose a risk or are liable to initiate decomposition of acetylene gas.

2. Any acetylene equipment or acetylene manifold may only be used if designed and manufactured to—

(a) withstand the thermal and mechanical stresses of any decomposition of the acetylene gas that it contains; or

(b) dissipate or direct the thermal and mechanical stresses of any decomposition of the acetylene gas that it contains.

Further requirements for an acetylene manifold

3. An acetylene manifold may only be used if it is—

(a) designed to prevent the mixture of air, or oxygen, with acetylene gas within the acetylene manifold;

(b) fitted with rigid pipework with an internal diameter equal to or less than 25mm;

(c) fitted with a flexible hose where rigid pipework is not practicable and the flexible hose—

(i) is kept at the minimum practicable length; and

(ii) has an internal diameter equal to or less than 25mm; and

(d) not subjected to pressure greater than that within any attached cylinder.

Requirements of a system of connected acetylene equipment

4. A system of connected acetylene equipment may only be used if it is fitted—

(a) with a pressure regulation device that is—

(i) designed and constructed for use with compressed acetylene gas; and

(ii) positioned as close as is reasonably practicable to the acetylene manifold or, where no acetylene manifold is used, to the cylinder;

(b) within one metre of the pressure regulation device, with a flame arrestor; and

(c) with a non-return device, effective against the return of gas towards the cylinder, and a quick-acting shut-off device, and both devices are positioned as close as is reasonably practicable to the acetylene manifold or, where no acetylene manifold is used, to the cylinder.

5. A system of connected acetylene equipment may only be used if the internal diameter of the pipework does not exceed the maximum diameter specified in the Table for the respective pressure of the compressed acetylene gas in use.

Requirements for a flame arrestor

6. A flame arrestor that is put into service after the relevant date may only be used if, at the time it is put into service, it complies with the requirements of BSEN 730-1:2002 or any other relevant international standard recognised for use in any EEA State at the relevant date.

Requirement for an isolation valve

7. A manually operated isolation valve must be fitted as close as is reasonably practicable upstream of each acetylene burner or acetylene-consuming equipment.

Cylinder colouring

8. A cylinder must be painted, on both its body and shoulder, in the colour matching number 3007 of the Classic RAL system(**1**).

Interpretation

9. In this Schedule—

"acetylene burner" means any equipment, including devices and valves, designed for use with ignited acetylene gas;

"acetylene-consuming equipment" means any equipment designed to convert acetylene gas into another chemical form;

"flame arrestor" means a device designed and constructed to arrest the progression of any flame resulting from the decomposition or uncontrolled combustion of acetylene gas;

"system of connected acetylene equipment" means any connected equipment, whether permanently or temporarily connected, which is intended for use with compressed acetylene gas, or which is used with compressed acetylene gas, including acetylene equipment, a cylinder, an acetylene manifold and other accessories; and

"quick-acting shut-off device" means a safety device effective against the continued release of—

(a) acetylene gas; and

(b) products of decomposition caused by—

(i) the decomposition of acetylene gas; or

(ii) any uncontrolled combustion of acetylene gas.

Table

Pipework maximum internal diameter (mm)	*Maximum pressure of contained compressed acetylene gas (bar(g))*
23	1.5
25	1.3
35	1.0
42	0.8

(**1**) The Classic RAL system is used to define colour standards and is available, without charge, from the website: www.ralcolours.com.