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Minimum Specification for Surface Compression Chambers for use inland/inshore in the UK in the context of the 1998 Diving at Work Regulations and the accompanying Inland/Inshore ACoP

This specification applies to surface compression chambers first taken into use by a diving contractor after 1 April 1998. Such surface compression chambers shall be suitable for purpose and in particular shall:

1. have at least two compartments with doors, each of which acts as a pressure seal which can be opened from either side when the pressure is equalised;

2. have a minimum internal diameter of 1.37m (54in) and be designed and tested in accordance with AODC 056. However, chambers manufactured before 1 April 1998 which have a minimum internal diameter of 1.21m (48in) may continue to be used so long as they comply in all other respects with this specification.

3. be provided with a 'means' by which food and medical supplies etc may be passed into one of the compartments while its occupants remain under pressure. If this 'means' is a medical lock then it should be fitted with an interlock, or interlocks, to prevent either (i) opening when the lock is under pressure, or (ii) pressurisation if the lock is not fully secured. Whatever 'means' is used it should be fitted with a gauge to show internal pressure.

   If a medical lock is not fitted then the diving contractor must recognise that large quantities of air will be required if the outer compartment is used in place of the medical lock, and will need to make appropriate provision.

4. be equipped with such valves, gauges and other fittings as are necessary to control and indicate the internal pressures of each of the two compartments and medical lock (if fitted), from outside the chamber. Such fittings should be made of suitable materials and so designed as to minimise the noise inside the chamber during changes of pressure

5. be fitted out so that all through pressure hull penetrators should be valved on both sides of the hull, with the exception of those for communications, electrical wiring and specialist lighting. All penetrators which are not being used should be internally blanked with a suitable type-approved tapered or shouldered plug

6. be capable of being pressurised in both compartments to a minimum of 5 bar (g) with a test pressure of 7.5 bar (g), or as required by the competent person supervising the test, and be fitted with appropriate safety valves

7. be provided with equipment for supplying and maintaining appropriate breathing mixtures to the occupants and a back-up air supply with enough stored air to pressurise the main compartment of the chamber to a pressure equivalent to 50m plus 10%, at least three times.

8. be fitted so that high pressure stored oxygen is reduced to working pressure by a regulator fitted to the gas cylinder or quad and supplied through O_2 clean piping to the chamber

9. be fitted with an oxygen analyser to monitor externally the atmosphere in both compartments

10. be equipped with oxygen bibs and an overboard dump breathing system

11. be equipped in both compartments with a two-way oral communication system, with rechargeable battery facility and a back-up voice-activated internal telephone in the main compartment

12. be fitted as and when necessary with equipment for heating (and its monitoring) and lighting the inside of the chamber to suit operational conditions

13. be fitted with appropriate internal deck plates and bunks for two persons in one of the compartments. The bunks should be provided with appropriate fireproof bedding

14. be provided with suitable facilities for the persons who are to use it, taking into account site and other conditions and the anticipated period during which it will be used

15. be fitted if appropriate with sanitary facilities, e.g. a portaloo

16. be so designed as to minimise the risk of fire

17. be supplied with a fire extinguisher, safely secured, in the main compartment

18. be fitted with a least two viewports, of a minimum of 13cm (5in) diameter in the main compartment to enable a clear view of the interior of the compartment and at least one viewport in the entry compartment. All viewports should be externally protected

19. be fitted with appropriate externally-mounted lights, e.g. over the control panel.