Oxygen System Pipework, Valves and Relevant Fittings

When new

Examination/Test	Category of Competent Person
In accordance with manufacturer's specification and fit for purpose it will be used for	3 or 4
Internal pressure test to 1.5 times maximum working pressure of the system plus gas leak test at maximum working pressure of the system	3 or 4
Verify internal cleanliness to oxygen standards	2, 3 or 4

When in service

Examination/Test	Validity Period	Category of Competent Person
Visual examination	6 months	1, 2, 3 or 4
Gas leak test at maximum working pressure of the system	2 years	1, 2, 3 or 4

Reference:

- IMCA D 012 – *Stainless steel in oxygen systems*
- IMCA D 030 – *Surface supplied mixed gas diving operations*
- IMCA D 031 – *Cleaning for oxygen service: Setting up facilities and procedures*
- IMCA D 048 – *Surface supplied diving operations using nitrox*

Note:

- It may not be appropriate in some cases to conduct the initial testing of a complete panel or assembly at 1.5 times maximum system working pressure. In such circumstances a suitable test protocol should be agreed with the competent person to verify the integrity of the components making up the panel or assembly.
- If a valve, regulator, fitting or similar is changed out on a like-for-like basis then no overpressure test is required and a gas leak test at maximum working pressure is sufficient. Consideration will need to be given to whether internal cleanliness to oxygen standards has been maintained.
- If a piece of pipework is replaced or the system is modified then an overpressure test to 1.5 times maximum working pressure of the relevant part(s) of the system is required. This may be a bench test or may be carried out in situ. In all cases this will be followed by a gas leak test in situ at maximum working pressure of the system. Internal cleanliness to oxygen standards will need to be verified.