

August 2017

Eddy-current testing of SCUBA and SCBA cylinders

Manufacturer's requirement for eddy-current testing of Luxfer cylinders manufactured from aluminium alloy 6351.

Summary

Do not use Luxfer Gas Cylinders (Luxfer) aluminium alloy 6351 SCUBA and SCBA cylinders that have not been both visually inspected and eddy-current tested.

Filling and testing stations in New Zealand should not fill Luxfer SCUBA and SCBA cylinders made from aluminium alloy 6351 that have not been eddy-current tested.

Background

In 2004, Luxfer introduced a requirement to eddy-current test all Luxfer SCUBA and SCBA cylinders made from aluminium alloy 6351 in the following countries and periods:

- Australia: 1975 through 1990
- United States: 1972 through mid-1988
- England: 1967 through 1995.

Eddy-current testing

From AS 2337.1:2004 (Gas cylinder test stations Part 1: General requirements, inspection and tests – gas cylinders) section 7.1: 'Any additional tests required by either the manufacturer or the design specification shall also be carried out'.

Luxfer has issued a manufacturer's requirement for eddy-current testing on Luxfer SCUBA and SCBA cylinders manufactured from aluminium alloy 6351, and this is therefore required by the standard AS 2337.1:2004.

Actions for periodic testers

Actions for persons who undertake periodic testing on SCUBA and SCBA cylinders manufactured from aluminium alloy 6351:

- Eddy-current testing should occur in accordance with manufacturer's instructions.
- For cylinders that pass periodic testing, the cylinder test report must include whether testing has included eddy-current testing.
- Where cracks are evident during testing, the cylinder must be condemned.

What is eddy-current testing?

Eddy-current devices are tools to enhance visual inspections and improve the quality and accuracy of inspections.

Eddy-current testing does not eliminate the need for thorough visual inspection by a properly trained and qualified periodic tester.

Note: Design approvals for SCUBA and SCBA cylinders made from aluminium alloy 6351 have been withdrawn, effective from 31 October 2017. See our [alert](#) for more information.

Any questions, contact hsinfo@worksafe.govt.nz or 0800 376 234.