



INSPECTORATE FOR DIVING EQUIPMENT SERVICING & TESTING

Accredited ISO/IEC 17024:2012

ISO DIS 18119 UPDATE

Dear IDEST Test Centres & Technicians,

As many of you will know the current Cylinder Testing Standards BS EN 1802:2002 and BS EN 1968:2002 are in the process of being replaced with a new standard ISO 18119.

As this is an International Standard and not just a BS or EN, the adoption of the ISO standard is automatically undertaken by the countries who signed up to the Vienna Agreement in 1991 and this includes the UK.

Not knowing exactly what is going to happen with the proposed ISO 18119 is causing some concern and frustration in the diving world. This update from IDEST is to help clarify the situation for our Test Centres and Technicians.

Because the wording of the final ISO Standard has not been finalised, i.e. all the fine details/small print, it is difficult to say what it will eventually require. It is known that the standard was pushed through, in principle, last December and agreed by most European and other standards organisations (BSI voted against). We realise that the ISO DIS 18119 encompasses all gas cylinders (except composite) and that diving cylinders are a miniscule number in the whole.

The proposed ISO 18119 calls for annual visual inspections and a hydrostatic test every five years for Self-contained breathing air, O₂, etc and Gases for underwater breathing apparatus. It is not clear what the visual inspection will consist of except that the valve is to be removed and an internal inspection of the cylinder is to be made. I've attached the Draft Standard that was sent out for comment in July 2015. As you can see it is nothing like as thorough as we currently work to.

Since 2007 IDEST has been collating Cylinder Failure statistics and our analysis shows that almost half of those failures are due to cylinder threads. If there is no mandatory thread gauging on that annual visual inspection this makes the whole process much less safe. Add to that, if anybody can do a visual themselves and put a sticker on, then it becomes untenable.

In October 2015, IDEST, SITA and the Training Agencies expressed concern over the ISO Draft standard and asked for evidence why the one year visual was necessary for diving cylinders. It was clear that those countries who were in favour, were those already on an annual visual and predominately using Aluminium cylinders, some of which required eddy current testing. It was then that the Diving Industry joined the BSI committee to add our concerns and expertise to the discussions. Up to then it was only the HSE with any extensive diving knowledge, who argued the visual down from 2.5 years to 2 years in 2014, then to 1 year in 2015 for breathing air and diving cylinders in the informative annex A.

In those subsequent meetings, BSI and HSE listened to us and particularly Gavin Antony, who recently retired from the MOD and QinetiQ and who spent much of his working life on Underwater Breathing Equipment and Cylinders for the Armed Forces and sits on several BSI committees. As there were no "Local regulations" that the UK could fall back on, Gavin Antony proposed that a risk assessment approach should be adopted and this was accepted by BSI and later at the ISO meeting in Pretoria, South Africa.



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The standard now recommends:

“Local regulations will specify the interval of periodic inspections and test. In the absence of any local regulation, as a guide an internal examination every year with a periodic inspection test at 5 yearly intervals should be carried out. However, if on completion of a risk assessment and the specific use of a cylinder indicates that there is a low risk of internal degradation then the interval for carrying out an internal examination can be increased to a maximum of 2.5 years”

However there were 130+ amendments put forward from a lot of countries. The vote meeting was in December 2016 followed by a meeting in Pretoria in February 2017. In Pretoria only 54 (or thereabouts) of these amendments were resolved. This left another 80+ which were settled in April 2017 in London.

In April I was asked to give a presentation to a meeting at the Department for Transport organised by the HSE. It was attended by the MOD, Police, VCA (Dangerous Goods Office), NFSD, IMCA, ADC, UKAS, SITA, BSAC and DfT; on how IDEST managed its UKAS accredited organisation under ISO/IEC 17024:2012. Our operation was well received by those attendees who understood the high quality of our Inspection and Testing regime and our duty of care to the public. It became apparent that only companies and/or technicians that are accredited by UKAS will be certified to inspect and test cylinders. Our IDEST Quarterly Cylinder Failure statistics have become crucial in the development of risk assessment and safety and will become mandatory in the future.

Currently, Gavin Antony is tasked by ISO/BSI to produce a “Risk Based Assessment of Cylinder Visual Examination Periodicity” for the whole of the Diving Industry: Commercial Offshore Diving, Commercial Inshore diving, Police Diving, Scientific Diving, MOD Diving/Emergency Services and Recreational Diving, whose intervals vary from 6 months to 2.5 years.

As soon as the Risk Assessment is available for consultation or approved we shall inform you.

In the meantime if you are presented with an **empty** bail out, pony or side slung cylinder, do check it, it may have water inside. If any cylinder feels heavier than it should, turn it upside down and purge it and, if water or spray comes out, check it. Inspect bases under cylinder boots for corrosion and, if a cylinder has anything rattling inside it, check it. Always purge charging hoses or cylinder valves before charging the cylinder. I know I’m teaching Grandmother to suck eggs – but if it makes us all safer that is a good thing is it not!

IDEST should continue to use Thread Gauging not only to avoid mismatching of cylinder/cylinder valves but also to remove failing cylinders from use which may not be picked up visually.

There is little more that we can tell you, until, BS EN ISO 18119:201?, is published, which we understand may be late 2017 or early in 2018.

Kind Regards,

Tony Marshall
IDEST Chairman
12th May 2017