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## Volume 22, Issue No 4

Things continue at pace here at IDEST with an intensive audit by UKAS and many inspections to complete ahead of the ISO 18119 deadline.

Regarding the ISO 18119 deadline please be clear, compliance is not optional. No ISO 18119 means no IDEST approval, so if you are not ready get moving fast!

Our new website members area is up and running, we ask you to sign up so you can access all the goodies therein.

A new version of ISO 22434 has been released by BSI, have you updated your library?

In this issue we also cover a tragic fatality due to thread mismatch, and a near miss with a valve breaking into two. Also, a report of a twinset valve fitted with incorrect parts. Timely reminders to brush up on your training and procedures.

Have you heard of the Diving Industry Committee? Read on to find out their pivotal role in UK cylinder testing.

Do you receive cylinders for testing from other businesses? If so, is your paperwork sufficient for times when a cylinder fails? Keep reading...

## No ISO 18119, no IDEST approval!

On 1st January 2023, the old standards BS EN 1968:2002 and BS EN 1802:2002 will be formally superseded by BS EN ISO 18119:2018+A1:2021.

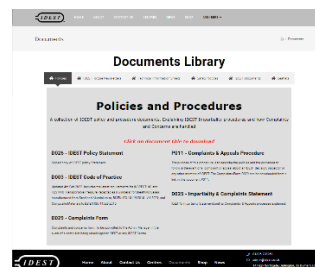
Any IDEST Inspection or Test Centre that is not working to the new Standard automatically loses IDEST approval, must stop testing, and must return their IDEST cylinder stamp and unused quadrant stickers.



## Technician registration on IDEST website

The new IDEST website, [www.idest.co.uk](http://www.idest.co.uk), has a 'Members' section, available to all IDEST-approved Centre technicians.

This section provides technicians with documents essential for their job of inspecting and testing diving and breathing



gas cylinders, as well as keeping them up to date with changes in the organisation and industry.

The Members section includes:

- Policies
- IDEST Torque Newsletters
- Technical Information Sheets
- Safety Notices
- IDEST Documents

The IDEST Documents section includes the following documents:

- D049 – UKAS Calibration Laboratories
- D074 – How to become and maintain IDEST certified technician status
- Notification Regarding BS EN ISO 18119
- Testing and Inspection of Diving Cylinders after 1st July 2009
- D067 – Application Form to use Tracker Sheets
- D005 Application for Inspection
- IDEST Statement regarding BS EN ISO 18119:2018
- 18119 Documents Pack 2022

To access these documents, it is necessary to register on the website. The registration form requests details of your name, centre, and a password of your choice.

This request is sent to the webmaster, who checks the details against the IDEST Centre database. If the details are in order, and you are a bona-fide approved IDEST technician, then approval will be granted, and access will be available to the 'Members' section.

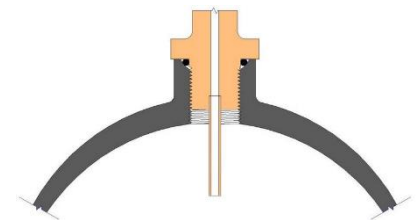
Of the many hundreds of approved technicians, there are currently sixty-five registered members, so many of you are missing out on accessing essential materials.

So, get registering, and keep up to date with changes that are taking place, IDEST news and developments within your industry.

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## **Mismatched threads cause the death of a Dutch Dive Instructor**

In October 2022 a tragedy occurred during a training session at a swimming pool in Amsterdam. A dive instructor was carrying a cylinder when the valve forcibly ejected. One of his students reported on social media he saw the man "launched into the air" by the force of the blast. He was resuscitated by staff at the site and taken to hospital but later died from his injuries.



The investigation found that the cylinder neck had a G 3/4 internal thread but had been fitted with a valve with an M25 x 2 external thread.

Please be vigilant for these dangerous thread combinations.

## Valve thread failure near miss!

An IDEST centre reported a near miss incident while filling a carbon fibre cylinder recently.

The top part of an M18 valve ejected during filling, narrowly missing the operator. Fortunately, the cylinder remained upright in place and the flight path of the valve was controlled by the filling hose.

Once shutdown and drained, it became clear that the valve thread had broken in two just below the neck of the cylinder.

It is likely the thread was weakened because of the cylinder being dropped or some other impact, and then finally gave way during filling.

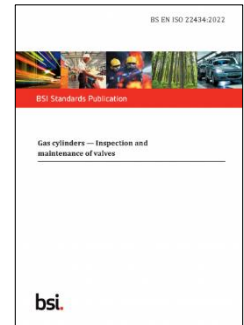


This is a salutary reminder of the importance of inspecting the cylinder and valve 'at time of filling' as per BS EN ISO 24431.

Also, please think about how your own filling arrangements would fare under similar circumstance – would your setup adequately restrain the cylinder and valve? Are your filling operators careful to never lean over a cylinder during filling?

## ISO 22434 updated 2022 version

Please be aware that the mandatory standard BS EN ISO 22434:2011 (*Transportable gas cylinders. Inspection and maintenance of cylinder valves*) has been withdrawn and replaced by BS EN ISO 22434:2022.



The main changes are as follows:

- the Scope has been revised;
- the Normative references have been updated;
- the Terms and definitions have been updated;
- subclauses 5.1, 5.2.2 and 5.3.2 have been modified;
- Clause 6 "Testing" has been moved to 5.4 and has been modified;
- marking requirements have been modified;
- the Bibliography has been updated.

Please update your Standard library accordingly and ensure all technicians familiarise themselves with the changes.

## Twinset valve mystery

One of our centres reported receiving a twinset for O<sub>2</sub> cleaning that had been tested at another IDEST centre only 3 months earlier.



Upon opening the valves, they found that all three had incorrect seats - one was modified or damaged, the others had seats from another valve brand.

IDEST investigated, based upon the test centre's worksheets. The worksheets had been completed correctly but lacked a record of whether a service kit was used in the valves or manifold, although the centre was adamant that they had.

Based upon the evidence available no formal conclusions as to cause could be made, however, several improvement opportunities were identified and embraced by the test centre.

The test centre agreed to amend their worksheets to track work done and parts used in a service more clearly. Including adding a section for the service kit bags to be stapled to the worksheet, which will greatly improve traceability of parts replaced and their manufacturers.

They are also considering whether to photograph each cylinder before and after test to provide a definitive record of the equipment should the need arise.

How can you improve record keeping and part traceability in your centre?

## IDEST attend the UK DIC

IDEST Chairman, Dave Crockford, attended the meeting of the Diving Industry Committee (DIC) in October 2022. The UK DIC is a stakeholder group set up to inform the industry of technical, safety and regulatory developments in UK diving.

The DIC members represent a wide variety of commercial, recreational, and governmental interests. Ready for some acronym bingo? - the latest meeting saw input from HSE, PADI, ADC, MOD, MCA, Standards, IMCA, Police, BSAC, SITA, IDEST, RMT, and SDSC.

IMPACT	High	Medium	High	High
	Medium	Low	Medium	High
	Low	Low	Low	Medium
		Low	Medium	High
		LIKELIHOOD		

The DIC also maintains the UK "Risk Based Assessment of Cylinder Internal Examination Periodicity", which is an essential part of cylinder inspection and test, which all IDEST centres must use.

The DIC agreed to update the Cylinder Risk Assessment to revision 4 and we will let you know as soon as this is released.

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## Business to Business (B2B) Testing

Dive shops that don't do their own testing frequently commission IDEST certified centres to undertake inspection and testing on their behalf.



Bearing in mind BS EN ISO 18119 clause 18, Rejection and rendering cylinder unserviceable – *"a rejected cylinder cannot be recovered, the owner shall be notified and the cylinder shall be condemned"*, it is essential to establish a robust chain of authority from the cylinder owner regarding disposition of any failed cylinder or valve.

IDEST treats cylinders and valves as a 'System' i.e., neither the cylinder, or valve, may be returned to the owner unless suitable remedial action is completed (e.g. repair or replacement to return the equipment to a full working condition)

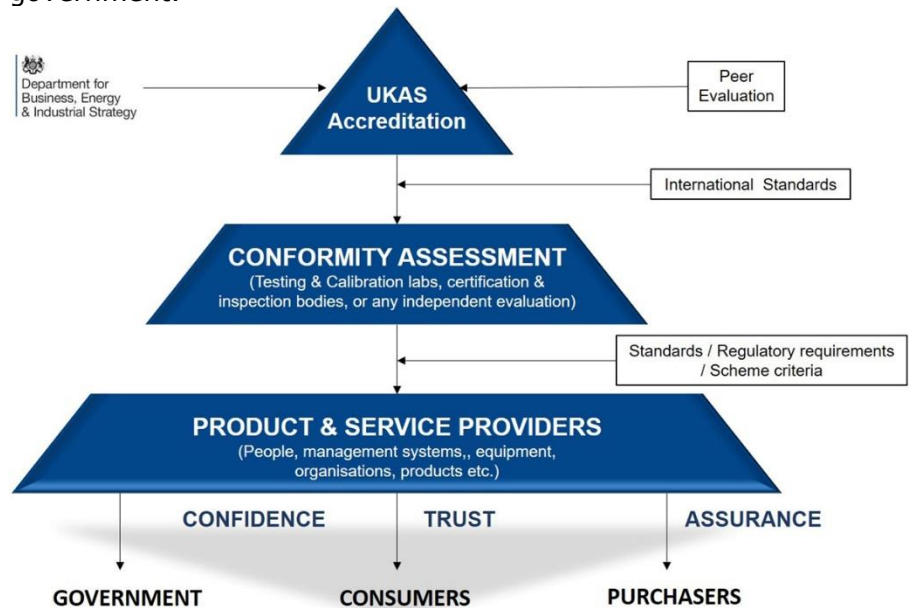
It is therefore mandatory for shops that send out cylinders for inspection and test, to hold a signed disclaimer from the owner of the cylinder.

The IDEST centre receiving the cylinder should insist upon receiving either a copy of the signed disclaimer, or a formal declaration from the sending shop that they hold a signed disclaimer.

IDEST have therefore created a new template "cylinder transfer" document for B2B movement of cylinders. If this would be useful, please request a copy from [Lizzi](#).

## UKAS Audit IDEST to ISO 17024

UKAS is the sole national accreditation body for the UK and operates under a Memorandum of Understanding with the Department for Business, Energy & Industrial Strategy, on behalf of the government.



ISO/IEC 17024 is the International Standard relating to the conformity assessment for bodies operating certification of persons. Certification Bodies, like IDEST, that are accredited to this standard have demonstrated an impartial and rigorous quality approach and their clients can have confidence in certified personnel.

This year IDEST has been undergoing an intensive 'forensic' audit by UKAS. This has been a considerable undertaking with multiple 3-day audits of IDEST documentation, policies, procedures, and personnel. The thoroughness of the UKAS auditors has been impressive - reading every line of every IDEST document!

Despite the intense scrutiny, the result was excellent, with UKAS making only 25 findings and 6 recommendations. Most of the findings were straightforward documentation issues that are easy to remedy, which is reassuring as only 1 month is granted to respond with evidence of corrective actions.

The cost of this endeavour is significant, more than all but the largest centres could sustain, and makes IDEST fees very good value indeed!



With all corrective action responses having been submitted to the UKAS audit team, we are hopeful that IDEST's conformity with ISO 17024 will be confirmed and our accreditation as a "body certifying persons against specific requirements" will be renewed for another 4 years – watch this space!

## Fire Suppression System Water Vessel Hydrostatic Test

Although outside IDESTs scope of activity one of our inspectors, Chris, was invited to attend a hydrostatic test of a large vessel recently. The vessel being tested was so large it had to be tested in place, so mobile equipment had to be brought in. Here is what he saw...

*Due to the size and weight of the vessel the test was carried out in situ at the hyperbaric facility, extensive preparation and pre-checks were carried out on the vessel before being pressurised, after that it was down to a few prayers and a lot of finger crossing!*

*The test was on a 300 kilogram, 500 litre water vessel used at the facility as part of their fire suppression system. The vessel has a working pressure of 36 bar and a test pressure of 51.5 bar and the 26 monthly test, carried out by Aeromaster, was part of the routine maintenance schedule.*



*With the vessel prepared, normal procedure was followed for the test. Using a manual pump, the pressure was increased to test pressure and held for 20 minutes.*



*After a successful test, the pressure was slowly released, and the vessel put back into service for another period of use.*

## **IDEST says au revoir to Gordon Lambert**

It is with mixed emotions IDEST says au revoir to Gordon Lambert. Based in the North East and with wide range of industrial experience covering Mechanical Engineering, Information Technology, Manufacturing, Quality and Health and Safety, Gordon has been front and centre of a great many good things that have happened at IDEST and will be sorely missed.



Most recently he was instrumental in setting up the new IDEST website. He also made significant inroads into our ISO 17020 gap analysis and undertook a large number of centre and personnel inspections in Ireland.

We thank Gordon for his hard work and wish him all the best for the future.

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## **IDEST welcomes Jack Ingle**

Jack Ingle has been a well-known figure in the diving industry for many years and through this association has gained a lot of support for his ventures around Malta and the South China Seas. There has always been respect for the laid back, friendly approach to diving instruction, especially the more technical areas.



As many will know, Jack recently retired from teaching diving to allow him to devote more time to a passion few people knew of. Back when Jack started work it was with the Metropolitan Police garages as a motor vehicle technician. He served his apprenticeship and gained the lifelong bug for restoring vintage vehicles, especially motorcycles.

It is with this in mind Jack was a natural choice to invite to the team and work towards becoming an Inspector for IDEST. Not one to relax on his laurels in retirement, Jack soon said yes when our chairman phoned and put the proposal to him.

Jack joins a growing team of new faces this year and looks forward to visiting the centres in his area in the southeast and around London.

If you are based in the North of UK and are planning to retire soon, then why not think about turning that technician experience around to becoming an assessor. We still have requirements for Ireland and North of England/Scotland to be filled.

Take a look at the team on [www.idest.co.uk](http://www.idest.co.uk), and if you have yet to sign up as a member to the website then take the opportunity to do so whilst visiting.

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## **Admin email address**

Please be aware that the correct email address for IDEST admin is [admin@idest.co.uk](mailto:admin@idest.co.uk). Lizzi's is in the process of changing her company email so soon any emails sent to '*integraladmin*' are unlikely to reach her. Please update your address books accordingly.



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## **IDEST Test Centre update**

We have had the following changes to the IDEST Test Centre listing since the last issue of Torque.

### **New centres**

*Civil Safety Training & Rescue [TBC]*

*AMIT Marine Services, Dubai [A8]*

### **Leaving centres**

*Aquaventures Ltd [4X]*

*NCL Scuba Services [9U] closed, April 2022*

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## **A final thought...**

We hope you've enjoyed reading this issue of Torque. Please let [Lizzi](#) have your feedback on this issue and suggestions for topics in upcoming editions. Thank you!