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Volume 23, Issue No 3

Welcome to the third IDEST Torque of 2023. In this issue learn about the latest update to ISO 11623; UKAS recent audit of IDEST; changes to eyesight acuity requirements; how to correctly mark re-test of composite cylinders; the status of Pi (π) and Rho (ρ) marked cylinders; the possibility of bringing back the red quadrant label; and we also proudly welcome a new Inspector to our team.

Reports from the field include an M25x2 parallel thread wrapped with PTFE tape; increasing findings of rust and water in cylinders; proliferation of questionable oxygen cleaning; IDEST being name called; and emergence of small cylinders with unverifiable manufacturing standards.

We are transitioning our administrative support to a new provider. In the interim there will be a temporary arrangement in place, please see further details at the end of this edition.

Finally, to help keep costs down for our members who operate in a flexible and timely manner we are cracking down on Centres that are too awkward to deal with.

BS EN ISO 11623 updated

The standard for periodic inspection and testing of composite cylinders has been updated, the current version is now BS EN ISO 11623:2023 (*Gas cylinders. Composite cylinders and tubes. Periodic inspection and testing*). The previous 2015 version is 'withdrawn'.

The main changes are as follows:

- revision of the Scope to include cylinders and tubes with a water capacity up to 3,000 litres;
- modification of Table 1 to separate abrasion damage based on water capacity of the cylinder;
- clarification that a transparent sleeve may be left in place during inspection (7.1.3);
- clarification on the use of tare during inspection.

All centres undertaking PI or PIAT of composite cylinders should take steps to update their standards library to the current version. Copies may be purchased through IDEST at half price, please contact [Alison](#) for more information.



UKAS audit IDEST

UKAS audited IDEST at the beginning of September against ISO/IEC17024:2012 for the certification of technicians performing inspection and testing of cylinders for breathing appliances. There were ten findings and one recommendation to address. All UKAS findings require robust corrective actions but fortunately within 16 days of the audit all but one were completed. The outstanding finding was resolved shortly after with a prompt reply and corrective action from our newest centre.



The UKAS audit report contained some outstanding feedback about IDEST which gives us great confidence in our strength to help the diving industry with best practice and personnel certification. Here are a few from the report:

- [IDEST] demonstrated a high level of competence and a commitment to operate professionally and efficiently.
- There was a positive attitude to meet the requirements of ISO/IEC17024:2012, that pervades the organisation.
- There is a sound ethos and commitment within [IDEST] and a positive, constructive response was always made to any findings or recommendations that were raised during this assessment.
- Under the technical leadership of Mr Minto there is confidence that [IDEST] continues to deliver its certification of technicians through its authorised inspectors in a competent manner.

UKAS set a very high standard for their accreditations. Hopefully this gives us credibility as we appear to be rapidly becoming the de facto 'governing body' of scuba cylinder testing.

UKAS directive on eyesight acuity

During the last UKAS audit of IDEST the subject of eyesight acuity (eye tests) was raised. Standard BS EN ISO 18119:2018+A1:2021 section 6, (List of procedures for periodic inspections and tests) is clear:

"The eyesight acuity of operators is critical and should be checked by an optician on a yearly basis".



IDEST have previously been accepting eyesight acuity evaluation performed by an optician on a 2-yearly basis as this appears in line with UK accepted practice in other industries.

The required standard, with any necessary corrective lenses, is 6/6 on the Snellen scale.

However, UKAS have directed that we must apply the wording of the Standard. Going forward evidence of eyesight acuity must be dated within the last 12 months. We will also be amending the annual IDEST Application Form (D005) to include an affirmation by the centre that all technicians meet the eyesight acuity criteria.

Composite Cylinder re-test marking

We have noted a few instances of Centres fitting IDEST quadrant labels to composite cylinders. This is not correct practice as the quadrant label does not fulfil the requirements of the Standard.

BS EN ISO 11623:2023 provides the following guidance:

12.5 Retest marking

After satisfactory completion of the periodic inspection and test, each cylinder shall be permanently marked by stamping or affixing a label in accordance with the relevant national regulation or relevant standard, e.g. ISO 13769. The marking should include:

- a) the character(s) identifying the country that authorizes the body performing the periodic inspection and testing as indicated by the distinguishing signs of motor vehicles in international traffic specified in the UN Model Regulations;*
- b) the mark or symbol of the authorized testing facility;*
- c) the present test date (as either YY/MM or YYYY/MM).*

The mark may be engraved on a ring made of a material compatible with the gas service and affixed to the cylinder when the valve is installed. The ring can only be removed by disconnecting the valve from the cylinder.

12.6 Reference to next periodic inspection and test date

The next periodic inspection and test date may be shown by an appropriate method such as by a plastic-coloured ring/disc fitted between the valve and the cylinder indicating the year (and the month, when required) of the next periodic inspection and/or tests.


BS EN ISO 13769 Table 1, section 22 adds the following:

Inspection stamp and date of periodic inspection: *Stamp or identification of authorized inspection body and year (last two or all four digits) and subsequently the month (two digits) of retest shall be stamp marked at the time of periodic inspection. The year and month shall be separated by a slash (i.e. "/").*

BS EN ISO 13769 section 4.2

For composite cylinders, permanent markings can be achieved by use of a printed label encapsulated either by placing it under the resin or by covering it with a permanent transparent coating on the shoulder or the side wall of the cylinder.

In short, please use a durable, permanent label, like the following (but with your Centre details). And cover it with a transparent coating.

	DATE OF TEST	YYYY/MM
	DATE OF NEXT TEST	YYYY/MM
CYLINDER TESTING & SERVICING LTD, ANY IND EST, ANYWHERE, UB40 2XX, UK TEL: 01262 222333		

As a final note, please be aware that damage or illegibility of the manufacturers label on a composite cylinder can be cause for rejecting the cylinder. If the serial number is no longer legible, the cylinder must be rejected. [Source: Luxfer Gas Cylinders].

Your next triennial inspection

IDEST Admin send out reminders of upcoming Inspections well in advance of the renewal date. However, some centres fail to respond in a timely manner and require wasteful chasing.



Also, the IDEST Inspectors waste an inordinate amount of time to-ing and fro-ing with some Centres trying to agree dates for Inspections.

Our Admin team and the Inspectors simply cannot afford this waste of time so please be aware of the following:

- Centres failing to provide their renewal documentation in a timely manner upon request will receive a suspension notice.
- Failure to accommodate reasonable Inspection dates will result in the Inspector unilaterally setting the date for the visit. If the visit fails the Inspector will take away the centre stamp and a suspension notice will be issued.

This is necessary to keep the costs down for the majority of Centres who are diligent with their paperwork and work flexibly with the Inspectors.

Please see more details in the attached notice.

Certificate renewal dates

Please be aware that Centre and Technician Certificates have a renewal date. It is important to ensure that Centre Inspections and Personnel Certifications are completed ahead of the renewal date.



Where suitable mitigating circumstances prevail, an extension may be granted at the sole discretion of IDEST. However, the subsequent renewal will apply from the **original renewal date**.

Any extensions granted do not change the renewal date, the new certificate expiry will be dated from the original certification. This ensures continuity of certifications.

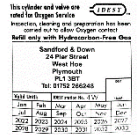
Red Quadrant Label

Following on from last month's article on Valve / Cylinder Pressure Matching we are considering whether to re-introduce the red quadrant label for 'oddities' e.g. mismatched 232 bar valve on a 300 bar cylinder. This could act as a caution to the filler that additional attention is required. What do you think, let us know?



Oxygen service

Some Centres have informed us that they are now refusing to fill enriched air and other breathing gas mixtures requiring pure oxygen addition during partial pressure blending unless they carry an IDEST O2 sticker.



The principal reason for this stance is the proliferation of oxygen clean stickers that do not appear to be issued by recognisable dive centre or other bona fide party.

It is gratifying that the IDEST sticker is seen as valued assurance of quality, but the official IDEST position is that it is entirely up to the Centre and especially the cylinder filler to verify the "serviceable condition of individual cylinders before filling" (in accordance with their training, BS EN ISO 24431:2016 and other relevant guidance).

More internal rust?

Some Centres are reporting an increased incidence of cylinders with traces of internal corrosion, or clear signs of water in the cylinder.



It is hard to pinpoint the potential cause, it used to be from emptying the cylinder underwater, or transferring water while filling small SMB 'crack' bottles. But this seems unlikely to be driving any new trends. Perhaps it is the recent uptake of small paintball compressors with limited or no filtration, or a general reduction in compressor maintenance due to economic cost constraints.

Whatever the cause please remember that the filling of steel cylinders is to be conducted in accordance with BS EN ISO 24431:2016. Annex A requires cylinders presented for filling without a residual pressure to be internally examined. Any other suspicion may also mean an internal examination is prudent.

Also, remember that under the UK Diving Industry Committee risk-based assessment approach you are well within your remit to date the next inspection of a cylinder, cleaned of contamination and returned to service, for 6 or 12-months time, instead of 2½ years.

Mini Diving Equipment

There are reports of an upsurge in the marketing of 'counterfeit'^[1] Spare Air™ units for sale in the UK. These appear to be manufactured in China and are frequently private labelled for resellers so you may see them marketed under different names, such as SMACO, SCORKL, Karbones, DiDEEP, DEDEPU, Lung Tank and Scopel. Some are sold with hand pumps or even small electric compressors.



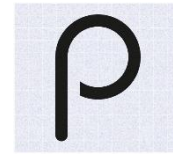
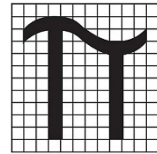
We have not been able to obtain copies of any valid certification or approvals for the cylinders (e.g. DOT, CE etc). As such we recommend that Centres do not fill or undertake PI or PIAT of these unless valid documentation becomes available.

The hand pumps require an impressive 400 pumps to fill a 0.5l cylinder, so maybe these are best regarded as exercise equipment.

[¹] Submersible Systems, Inc.]

Pi (π) and Rho (ρ) marked cylinders

We've been asked to confirm whether IDEST centres can inspect and test cylinders that carry the Pi (π) or Rho (ρ) mark?



Brexit initiated some potential changes to conformity assessment of transportable pressure equipment (TPE) within GB as follows:

TPE being placed on the GB market from 1st Jan 2023 to be conformity-assessed by either a GB-appointed body and affixed with a Rho (ρ) marking, or a notified body established in Northern Ireland, affixed with a Pi (π) marking plus the indication 'UK(NI)'. Recognition of EU Pi-marked TPE in GB was to end, although TPE already on the GB market before 1st Jan 2023 could remain in circulation.

However, the recent government rethink regarding moving away from European conformity has thrown a shadow of doubt over the whole matter.

We sought some clarification and have been informed by a VCA representative that IDEST Centres remain able to test Pi and Rho marked cylinders (provided the intended use is for diving). If this situation changes then we will issue further advice accordingly.

IDEST is the "worst thing"

We noticed a debate in an online dive forum recently regarding cylinder testing. One of the chief protagonists claimed that IDEST was "*the worst thing to happen to the diving industry*".



Amongst many of the untruths about IDEST making up test intervals and applying arbitrary standards was the claim that IDEST operates as a cartel dictating PI and PIAT prices.

Of course, IDEST does not set any prices for cylinder test or have any influence or control over this, it is wholly down to the Centre. For most Centres the cost of IDEST certification is likely only a few pounds per cylinder tested.

If you have an aggrieved customer complaining about price of cylinder testing do engage them positively to explain your business costs, and please refrain from scapegoating IDEST!

Bad ideas!?

This photo from Scuba Teknik Servis, Türkiye shows an M25x2 valve thread fitted with PTFE tape, presumably in an attempt to achieve a seal as the condition of the neck of the cylinder is so poor.



This sort of 'creative solution' is exactly the reason IDEST was formed. The adoption of Standards of workmanship and personnel competency certification is a significant contribution to safety of both divers and those working in the industry. We thank you for being part of our scheme and safety culture.

What have you seen, send us a photo?

IDEST welcomes Mike Wall

We are pleased to announce that Mike Wall has joined IDEST as an Inspector based in Thailand.

Mike had an impressive career in the maritime industry, starting as a marine engineer apprentice and rising to become a Chief Engineer. He holds multiple certifications and degrees related to shipping and maritime studies and is a highly respected professional known for his expertise and hands-on approach. He is actively involved in the industry, contributing to maritime publications, and conducting training seminars. He has authored numerous training modules, shipping-related books, and serves as Course Director for various distance learning courses. He will be a tremendous aid to IDEST in promoting best practice for cylinder inspection and test in Asia.



Missing Torque?

Have you missed any edition of Torque? Don't worry, all of the past issues can be downloaded from the members section of the **IDEST website**. Take a look!



IDEST Admin Contact Change

Please be aware that IDEST has entered a transition period regarding our administrative support. While we make new arrangements [Alison Crockford](#) has kindly stepped up to provide admin support in place of Lizzi Russell.



The admin email address remains the same but all other contact details have changed as follows:

Contact: Alison Crockford
Address: IDEST Administration Office, c/o The Bower,
Parsonage Road, Newton Ferrers, PLYMOUTH, PL8 1AT
Tel: 07534 148108
e-mail: admin@idest.co.uk

Until further notice, for all admin enquiries please contact [Alison](#).

IDEST Test Centre Update

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

New centres

None

Leaving centres

C&C Marine Services [5G], Peter Carrick has retired

A final thought...

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

E&OE