IDEST Torque

Newsletter June 2023

Volume 23, Number 2

In This Issue

Contact Us

Website:
http://www.idest.co.uk

Chairman:
dave.crockford@idest.co.uk

Chief Engineer:
neil.minto@idest.co.uk

Webmaster:
alistair.reynolds@idest.co.uk

Administration Office:
admin@idest.co.uk

Volume 23, Issue No 2

Welcome to the second IDEST Torque of 2023. In this issue we give more details on why ISO 17025 is essential for calibrations; some guidance on valve / cylinder pressure matching; reveal IDEST's latest video and new training knowledge quizzes; clarify the requirements and limitations of inhouse training; alert the unauthorised use of the IDEST logo and quadrant label; explain the importance of the 'Risk Assessment' during PI/PIAT; and inform you that IDEST Oxygen Clean Labels are becoming tamperproof.

We also recall our recent face-to-face meeting – were you there?

Reports from our centres include a composite cylinder with serious external defects and a 300 Bar valve modified to accept a 232 Bar filling whip.

Finally, please help us to keep our costs down and meet your needs more efficiently by responding in a timely manner to our Inspectors emails!

Member meeting success

We held a face-to-face Scheme Committee and Member Meeting on Tuesday, 2nd May 2023 at Stoney Cove.

It was great to see a good turnout of IDEST members with an open exchange of information.

Everyone who attended felt it was a useful session and IDEST hope to hold more face-to-face member meetings in other locations around the country in the future.

We are grateful to Stoney Cove for their kind hospitality on this occasion.

Loss of the Titan submersible

IDEST condolences go out to those affected by the loss of the crew and passengers onboard the Titan Submersible.

A member of the IDEST team has first-hand experience of the design, operation, and maintenance of deep-sea submersibles. We understand the complexity and risks of working at the extremes of our physical realm. We hope that the lessons from this tragedy will be a lasting and positive legacy for those lost.

BS EN ISO 17025 vs. BS EN ISO 9001

We continue to see Centres presenting calibration certificates that do not meet the stated requirements of IDEST or UKAS. Many calibration companies have statements such as…

"XXXX are certificated to ISO 9001 and we provide a full calibration service in accordance with these standards. Specific UKAS accreditation is available on request."

In such cases you MUST request a full "UKAS accredited calibration" and the certificate must show the UKAS logo. Here is UKAS reasoning on this topic (which gives IDEST no latitude on the matter) …

"ISO 9001 certification is not an assurance of competence and technical capability of a laboratory and therefore this is not sufficient evidence of demonstration of competence of the laboratory or assurance of traceability to national / international standards of calibrated equipment.

Measurement equipment having a significant influence on the results of the inspection must be calibrated before being put into service, and thereafter calibrated according to an established programme.

The overall programme of calibration of equipment shall be designed and operated so as to ensure that, wherever applicable, measurements made by the inspection body are traceable to national or international standards of measurement.

According to ILAC the preferred routes for conformity assessment bodies who seek external services for calibration of their equipment are defined in subsections 1) and 2) ILAC P10 section 2."

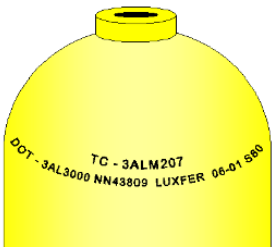
The ILAC P10 policy is that the measuring equipment shall be calibrated by:

- A National Metrology Institute (NMI) whose service is suitable for the intended use and is covered by the International Committee for Weight and Measures Mutual Recognition Arrangement (CIPM MRA), or
- An accredited calibration laboratory whose service is suitable for the intended use; and the Accreditation Body is covered by Regional Arrangements recognised by ILAC.

Make things simple by using our list of recognised UKAS calibration laboratories, and making it clear on your purchase order that you require a specific UKAS accredited calibration.

DOT Cylinder Guidance

We have some guidance to share regarding DOT/ICC Cylinders.

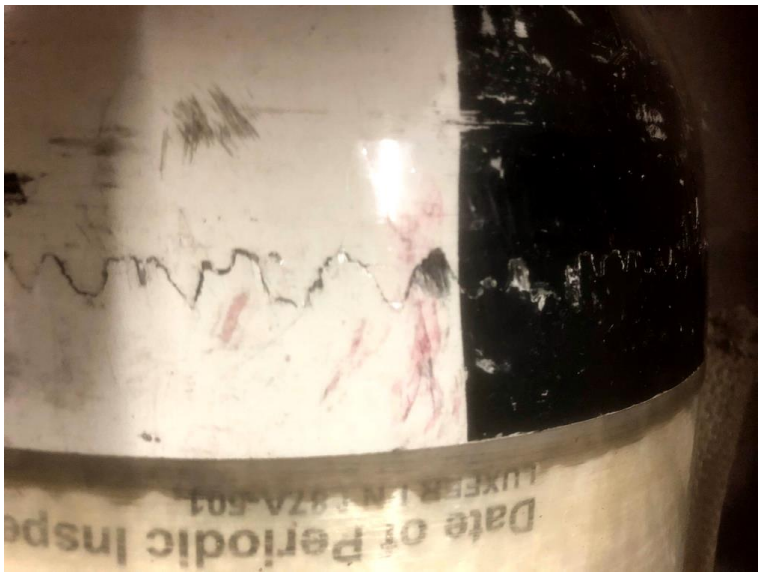


We are informed that it is ok to import full DOT cylinders, transport them, and use them. However, generally they may not be refilled or re-used here. Once empty they should be returned to where they came from.

IDEST Centres are not authorised to test or fill DOT cylinders. There are some D.O.T. approved test facilities in the UK and anyone seeking help with testing or filling of DOT cylinders should be directed towards such enterprises.

Composite Cylinders - Novel failures

Recently one of our Centres was presented with this composite cylinder showing a zigzag split in the outer casing:



High pressure composite cylinders are relatively new and their real-time ageing characteristics have yet to be fully understood. With many early composite cylinders nearing the end of their stated service lifespan we may start to see emerging trends.

Please email photographs and other details of any interesting failures you see to us at our Admin address.

300 Bar valve - modified!

This 300 bar Paintball/Airgun valve has been machined to accept 232bar fittings.

As an unauthorised modification away from manufacturer's specification it was quite rightly rejected for filling by Robin Hood Watersports (1H).

Valve / Cylinder Pressure Matching

Hopefully all Technicians are actively aware of the dangers of valve / cylinder THREAD mismatch and continuously vigilant for such life-threatening occurrences. If not see IDEST Technical Information Sheet T007.

But how about valve / cylinder PRESSURE mismatch; unusual cylinder stamping, or other unexpected situations?

Here are some examples …

- WP 300 Bar cylinder fitted with 232 Bar valves
- WP 232 Bar cylinder fitted with 300 Bar valves
- WP 207 Bar cylinders fitted with 232 Bar valves
- Cylinders with TP more than 1.5 times WP (e.g. stamped TP 450, WP 232)?

This is a complex topic where clear simple guidance is hard to come by. The HSE's view is that …

"*Pressure equipment supply Regulations require the pressure cylinder to be appropriately marked with details of the contained fluid and pressure. The design and manufacture of the vessel and related fittings, would equally be expected to be assembled together, to be suitable for their Original Equipment Manufacturers (OEM) intended purpose.*

Where there is specific evidence of someone knowingly overfilling, over-pressurising, or changing the intended use of the cylinder, then HSE would regard this as a product safety issue (change of use) and would be able to investigate if there is evidence of the supply chain relating to the person or organisation changing such use of the cylinder/ valve/ labelling.

[It is HSE] view that ***any mismatch between the maximum working pressure of a cylinder and its valve poses the risk of one or the other being over pressurised****."*

A clear and obvious example is a 300 Bar valve fitted to a 232 Bar cylinder, we consider this to be at high risk of overfilling, and such combinations must not be returned to service.

We continue to explore this matter within government and industry with the aim of achieving a clearer situation. In this regard we would value feedback from our Technicians and Centres on what you have seen and combinations you think are acceptable or unacceptable?

The overarching guidance remains that Technicians should only return safe cylinders to service; this includes evaluating whether the valve rating is appropriate.

IDEST Property! - Quadrant Labels

Our trademark cylinder logo and quadrant label design are intellectual property (IP) of IDEST.

Correct use of these is important as they symbolise to Centres, and especially filling operators, that the cylinder has been tested and/or inspected to certified standards. Accordingly, we police the use of our labels robustly.

We were notified of a recent case of a dive systems company using a facsimile quadrant label with potentially misleading claims regarding IDEST trained personnel. We are pleased to report that this case has been satisfactorily resolved with the company concerned utilising a nearby IDEST Centre to complete their required work. They may also consider becoming a certified centre themselves at some point in the future.

In addition, we have noted a few of our Centres who are using facsimile quadrant labels purchased from sources other than IDEST. This is not acceptable, and we remind you that our Code of Practice states that **only official IDEST labels may be used**. This is to ensure standardisation and ease of recognition by all filling stations, in addition to the safety of the latest tamperproof design.

Tamperproof Oxygen Clean Labels

We are sad to report suspect cases of divers peeling and moving oxygen clean stickers between cylinders.

This potential safety issue is of concern, so we have taken the decision to change our IDEST Oxygen Clean Labels onto a tamper-proof backing.

Existing label stocks can be used up, but future orders will be fulfilled with the new format.

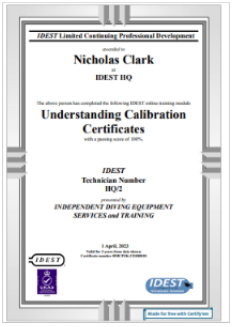
IDEST'S Latest Video

IDEST has created a short video that explains, in four simple steps, how to become an IDEST approved technician.

Entitled 'Welcome to IDEST,' it explains what needs to be done to become an IDEST approved technician, from gaining initial training, to being assessed in your workplace and gaining approval.

The video is on the home page of the IDEST website www.idest.co.uk. Further details can be obtained by downloading the information document D074, from the same page.

IDEST Training – Quiz yourself!


IDEST Limited Continuing Professional Development

Nicholas Clark

IDEST HQ

Understanding Calibration Certificates

IDEST

Technician Number

HQ/2

INDEPENDENT DIVING EQUIPMENT SERVICES and TRAINING

IDEST Ltd, the training arm of IDEST, provides several helpful YouTube Tutorials.

To make these even more useful each video is now accompanied by a short multiple-choice knowledge quiz.

If you complete the quiz and achieve the pass mark, then you will be sent by email a certificate for your records. This is a great way to evidence during inspections the Continuing Professional Development (CPD) of Technicians.

Inhouse Training

The best method for a technician to be trained is by undertaking a recognised course with an approved IDEST training centre. However, IDEST also recognises inhouse training, by suitably experienced Technicians, is also a valid approach.

IDEST testing centres wishing to train inhouse must have passed at least 3 triennial inspections (6 years of continuous IDEST membership).

Inhouse training must be recorded on the IDEST template forms as follows:

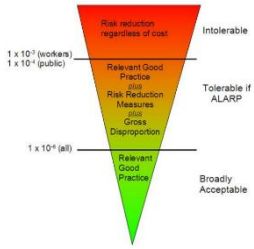
- D023 - IDEST in-house training log
- D056 - IDEST in-house training log Composite Cylinders

It is also strongly recommended that reference is made to the current version of IDEST Ltd student training manual.

It is important to note that, unlike training at a recognised training centre, in-house training is not transferrable to other centres - if the inhouse trainee moves to another business then their training must be repeated in the new Centre.

And finally, the training Technician remains accountable and must sign off all PI / PIAT carried out by the trainee technician until they are certified individually in their own right by IDEST at the next centre inspection.

Risk Assessment - Water ingress



BS EN ISO 18119:2018+A1:2021 Annex A, Table A.1 states "*Local regulations specify the interval of periodic inspection and testing. In the absence of any regulations,* ***an annual internal inspection should be carried*** *out with a periodic inspection carried out every five years. However, if a risk assessment and the specific use of a cylinder indicate that there is a low risk of internal degradation, then the interval for carrying out an internal examination may be increased to a maximum of 2,5 years.*"

In the United Kingdom we operate a 2.5-year regimen for internal inspections based upon the UK Diving Industry Committee (DIC) Risk Based Assessment of Cylinder Internal Examination Periodicity. The approach is endorsed by several national bodies, including:

- International Marine Contractors Association (IMCA)
- Association of Diving Contractors (ADC)
- Scientific Diving Supervisory Committee (SDSC)
- Ministry of Defence (MoD)

This requires the Technician to make a conscious decision regarding the suitability of a 2.5-year inspection interval for every cylinder subject to PI/PIAT.

To achieve this, key information regarding the use of the cylinder is required from the user. Hence the important questions on the cylinder booking in form:

- Sector/Cylinder Use:
  - Recreational ☐ Offshore ☐ Inshore ☐ Media ☐ Scientific ☐ Police ☐ MoD ☐
- Risk of Water Ingress
  - Y ☐ N ☐

The cylinder use is important as certain sectors require that "*Cylinders used for bail-out and suit/buoyancy control device (BCD) inflation that are at an increased risk of water ingress, are internally examined every 6 months*". Refer to the current DIC Risk Based Assessment or summary Cylinder Testing Periodicity Chart for further details and clarification.

In addition, the risk assessment states … "*any cylinder that has lost all gas pressure above ambient when under water, whereby water may have entered the cylinder, should be internally examined*". And this is where, regardless of sector, the second question comes in to play to gather the user's perspective on risk. Bear in mind, regardless of what the user states, the internal condition of the cylinder observed during PI/PIAT may also be indicative of 'risk' and steer you towards reducing the next inspection interval to 6 months.

Also consider that cylinders presented at your filling station empty should be treated with suspicion.

An Inspector rants!

One of the biggest frustrations of the IDEST Inspectors is the amount of time wasted waiting for responses from Centres and/or Technicians.

Most of us are here to give something back to an industry from which we've derived a great deal of pleasure. Please help us by responding quickly to enquiries and being flexible on dates.

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 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
None

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!

E&OE