



# IDEST Torque

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## Volume 22, Issue No1

This is a bumper issue of eight pages to start you off in 2022. We have issued this in December because it contains a lot of new and very important information.

We introduce you to our new Chairman and his ideas for the future as well as to our new admin person.

We include the major changes we have made within the organisation and provide you with a 'heads-up' on some important changes to the inspection and testing of cylinders.

Please read through this a couple of times over the Christmas break and ensure you fully appreciate what is ahead for you and IDEST.

## Introducing our new Chairman

Dave Crockford took on the role of Chairman from Neil Minto, our interim chairman on 1st December. Dave comes from a civil engineering background supported with massive experience in technical diving. Here is an insight into Dave's background and his plans for IDEST.



Dave comes from a background of building and civil engineering but has had a diving interest since his first dives in Cyprus in 1961-64. That continued diving interest prompted him to move from Plymouth University Architects Dept to the university's very active diving section in the late 1970s, where he took on the role of the diving equipment technician and diving instructor based at Fort Bovisand. At this point he had also steadily worked his way up through BSAC to become a National Instructor and BSAC Council member. Mike Todd was his First Class Diver examiner and this was where his first involvement with IDEST was nurtured, right at the start of Mike's development of the idea. Mike was also his mentor when he took additional modules for his degree top-up from Civils to Mechanical and Material Engineering with Open University. He helped SITA with the first mixed gas filling procedure with the help of Mike Harwood from HSE and Mike Todd with O2 cleaning documents.

His interest in technical diving had been initiated by the embryonic re-breather testing to 200m+ that he undertook at DDRC for Carmellan Research. This interest linked him with Bret Gillam and Rob Palmer and soon he ended up running Technical Diving International for Bret in Europe but again, when Bret left, things changed so he joined Professional Scuba Association managing UK and Scandinavia for them.

The last month with IDEST has been quite an eye opener and those that know him will know he does not pull punches with anything he embarks on. To this end he has already put a 3-year strategy plan in place for IDEST; more information to come in 2022.

Dave plans to enlist the help of a university computer department with a major project he has planned, by making it a student's final year project for their degree. This project, referred to as '**A Cylinder Passport**' can be thought of as the IDEST version of an MOT certificate process currently employed by the Department for Transport. IDEST will be asking for your input at every step of the way to design something that works for us all.

Another change to impact all of you soon is that we are currently setting up with a professional administration centre to take care of your day-to-day needs, invoicing and sales from IDEST.

Immediate direction to the person who could deal with your technical enquiry should also assist with those nagging issues or complaints that crop up. Look out for Lizzi Russell of Integral Admin Ltd., who is taking over from Alistair from 1st January 2022 onwards.

It is a step IDEST needs to take as the business of diving inspection and audit by UKAS will become more demanding and complex for the IDEST inspectors. December is our transition month so please bear with us.

We wish Dave all the best in his new role as IDEST Chairman

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## **Lizzi Russell - Admin Manager**

This is Lizzi Russell and she has joined the IDEST Team to look after the administration side of the organisation. Lizzi will be taking over from Alistair at the beginning of the New Year but is currently getting to know what is going on by liaising with him through December.



Lizzi can be contacted on the email address shown in the left-hand column or by mobile 07486 053959. The details are also available on the IDEST website on the Committee page.

All invoicing and orders will be dealt with by Lizzi, so ensure you make a note of the new contact details from 1st January. Sending orders to Alistair after this date may cause a delay in getting what you ordered.

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## **Larger labels available**

Our printer has provided us with the possibility of providing a larger cylinder label, larger than the current label that is 225 mm x 41 mm.

These LARGER labels are 300 mm x 100 mm and will cost £1.89 each for up to 99 labels. For orders of 100+ they will cost £1.29 each + P&P and VAT

These labels can be personalised at no extra cost

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## Placing labels orders and pro-forma invoices

When placing an order for labels, IDEST issues a pro-forma invoice for you. This invoice must be paid before the purchase order can be sent to the printers.

The past few months' experience as the admin person, has shown that centres can delay several days or weeks in paying. This means that the printing is also delayed, when centres are down to their last few labels.

So, ensure that you order in ample time and that there is no delay in paying the invoice. The printer is turning the orders around in record time these days so that should not be a reason to be out of labels.

If your accounts department require a 'proper' invoice, that can be issued once the order has been paid.

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## Annual Renewals

It came to our notice that not all the annual renewals for 2021 had been issued. This has been addressed with invoices and requests going out to over a hundred centres. The responses were varied, with some centres not responding at all.

However, most centres have responded and paid their annual registration fee. Those that did not respond by the end of November have been removed from the IDEST website and the IDEST list of approved test centres.

The annual renewals for 2022 are being sent out two months ahead of their due date, giving centres ample time to respond and return the required documentation.

Paying your annual registration fee helps towards IDEST providing you with the services that you require and the infrastructure to run the organisation. We thank you for your support.

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## UKAS and ILAC calibration laboratories

Whilst sitting at my computer checking another batch of Calibration certificates for Annual Renewals and Triennial Inspections, I realised that it was time to remind you all that it is a condition of the IDEST certification scheme that all calibration checks are carried out by a Calibration Laboratory (Cal Lab) accredited by UKAS. This has been a requirement of the scheme now for several years.

However, we are still getting a number of test centres sending in calibration certificates that do not come from UKAS accredited laboratories. A UKAS accredited Cal Lab will issue a certificate to show the laboratory meets the requirements of BS EN ISO 17025 and will always have the UKAS logo and Cal Lab number, usually on the top right-hand corner

We ask for UKAS accredited test certificates because we must legally have an audit trail back to International and National Standards at the National Physical Laboratories which in turn are traceable to international standards through the International Laboratory Accreditation Cooperation (ILAC)

ILAC started as a conference in 1977 with the aim of developing international co-operation, for facilitating trade, by promotion of the acceptance of accredited test and calibration results. In 1996, ILAC became a formal co-operation with a charter, to establish a network of mutual recognition agreements among accreditation bodies that would fulfil this aim.

The UK member organisation of ILAC is United Kingdom Accreditation Service (UKAS). Their accreditation is accepted worldwide. In our case they accredit calibration laboratories to BS EN ISO 17025. This is the standard to which a laboratory works to show it is checking tolerances correctly.

It confirms that they have the correct paperwork, procedures, relevant standards and, most of all, that their calibration checking equipment has been inspected, its calibration checked and was seen to be within its calibration tolerances. It also checks that the instruments checking the Calibration Laboratory instrumentation have certificates that can be audit traced back to the prime standard in the National Physical Laboratory (NPL).

Confusingly some UKAS labs have accreditation to BS EN ISO 9001. This is a Standard for Quality Assured Systems. It is NOT an accreditation for calibration laboratory operations. Certificates to this standard are not acceptable by IDEST and will invalidate your renewal.

However, not all the accredited laboratories can cover the whole range of items we require to be checked. Some do Thread gauges; some do Pressure gauges and some do Torque wrenches. There are some that do combinations of equipment, Pressure and Torque but no Thread gauges or Thread gauges and Pressure gauges but no Torque wrenches. Care must be taken when choosing a Cal Lab; it may only do certain pieces of equipment.

It would be a good idea to consult the "DOWNLOADS" section on our website. This gives access to a list of UKAS accredited Calibration Laboratories. There is a further section on our listing that shows what the individual laboratory is accredited to check. There are also links to the relevant laboratory's certificates. These show which equipment is acceptable for calibration checking. If you send them all off to an organisation that only do some, that firm will forward the ones they cannot check, on to another firm that will check them but you will be charged more "for the privilege" of them forwarding. They may also check them but not issue a UKAS calibration certificate. These are not acceptable.

There are non-accredited organisations that claim their calibration equipment is traceable to the NPL. In this case, we must complete an audit trail to check those organisation's calibration certificates, through all the various laboratories, right back to the actual NPL certificates.

As you will realise this is an onerous and costly exercise. This cost would have to be back charged and will increase the cost of an inspection considerably.

So, before sending your gauges out, check that your calibrator is on the list of UKAS Cal Labs and check what they are able to do. It may mean that you have to use several Cal Labs but in the long run it could be a cheaper and better option.

But be aware in future, if certificates are submitted that do not come from a UKAS Cal Lab (for non-UK test centres, certificates from an ILAC Accredited Cal Lab are acceptable) in support of your annual renewal or triennial inspections then your application will be refused.

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## 18119 Certification of IDEST Centres

### Introduction:

In 2018, the new cylinder testing standard, BS EN ISO 18119:2018, was published. This standard combines the testing of both seamless steel and seamless aluminium-alloy cylinders and tubes and is set to replace the previous standards BS EN 1968:2002 (Seamless Steel) and BS EN 1802:2002 (Seamless Aluminium) in 2023.

IDEST has been working closely with UKAS (United Kingdom Accreditation Service) to ensure the IDEST certification scheme continues to be accredited by UKAS and that IDEST centres can be certified to the new 18119 Standard going forward.

A detailed gap analysis was performed that confirmed great similarity between the new and old standards. There were, however, a few notable differences that need to be addressed.

This article points out those differences and what changes to procedures and documentation will be required by IDEST Testing Centres in order to gain certification to the new 18119 standard.

### 1. Interval between periodic inspection and test:

BS EN ISO 18119 offers guidance that, *“an internal examination every year with a periodic inspection test as 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”*.

Based on this guidance a meeting was called between all the UK Diving Industry Sectors as shown below (Fig 1.). Risk Assessment was discussed at length and the findings adopted.

All Technicians are required to have a full understanding of this assessment and to apply this to cylinders presented for testing. The cylinder usage shall be recorded on Test Centre Worksheets.

D032 Worksheet has been updated. Copies of the Risk Assessment have been forwarded to all IDEST test centres. This document will be needed in their standards section.

Table on Page 6 below

Diving Industry Sector	Sponsor	PIAT	PI	*Risk of Water Ingress
Commercial offshore	International Marine Contractors Association (IMCA)	4 Years	2 Years	6 Months
Commercial inshore	Association of Diving Contractors (ADC)	5 Years	2½ years	6 Months
Media	BBC	5 Years	2½ years	-
Scientific, archaeological and aquarium	Scientific Diving Supervisory Committee (SDSC)	5 Years	2½ years	6 Months
Defense	Ministry of Defense (MoD)	5 Years	2½ years	6 Months
Police	Association of Chief Police Officers (ACPO)	5 Years	2½ years	-
Recreational	British Sub Aqua Club (BSAC) and Scottish Sub-Aqua Club (SSAC) as National Governing Bodies for the sport	5 Years	2½ years	-

Fig 1.

\*Risk of Water Ingress:

Cylinders used for bail-out and suit/buoyancy control device (BCD) inflation that are at an increased risk of water ingress, should be internally examined every 6 months. Technicians should apply new 6 Month periodic inspection (PI) when deemed necessary, dependent on the cylinder usage and the relevant diving industry sector shown in Fig 1 above.

## 2 Eyesight check:

The triennial test using a Jaeger test card is no longer acceptable to check technician's eyesight. The Standard (sect 6(l)) states, "The eyesight acuity of operators is critical and should be checked by an optician on a

*yearly basis*". IDEST consider eyesight checks should be conducted in line with current UK optician recommendations and that tests be conducted within a 2-year period. The Annual Technician agreement (D063) has been updated to include signed confirmation that eyesight has been checked by an optician within a 2-year period.

IDEST does not intend to hold records of individual technician eyesight checks but may require observation of these during triennial Inspections.

### **3. De-pressurising and De-Valving Procedures:**

Section 8 of the 18119 standard makes reference to BS EN ISO 25760:2015 Operational procedures for the safe removal of valves from gas cylinders. Within this standard there are 3 specific procedures which have been included in IDEST D002 Written Procedures. 8.3 (The Pressure Check) 8.4 (The Inoperable Valve Procedure) and 8.5 (The De-Valving Procedure) these procedures are required to be included in the Procedures documents of All IDEST Test Centres! A reference copy of 25760 is also required by centres.

### **4. Over Pressure Control Device.**

First discussed in August 2019 issue of Torque, the requirement for an Over Pressure Device (OPD) has always been a requirement but was miss-interpreted for a while.

18119 Annex D.2 states "*a suitable system control device shall be used to ensure no cylinder is subjected to a pressure in excess of its test pressure +3% or 10 bar, whichever is the lower.* Test centres are required to have fitted such device by their next triennial inspection. They should also include the use and correct setting of the control device in their pressure testing procedures.

### **5. Marking of Cylinders (Blue & Green Quadrants)**

IDEST quadrant stickers have been updated in 2020 to distinguish between periodic inspections PI (Green) and the 5 Yearly PIAT (Blue). This was previously discussed in the Technical Information Sheet T015. The sheet is downloadable from the IDEST website (*click here*) [T015](#).

### **6. How to gain 18119 Certification:**

#### ***New Inspections:***

Scheduled Triennial Inspections conducted after the IDEST Scheme has been accredited by UKAS, will be conducted to the new 18119 standard. Focus will be placed on the points discussed above to ensure new requirements are in place. Technicians will be Certified to 18119 upon successful completion of the Inspection. Prior to the inspection, centres will be provided with an updated document set which must be adopted by the centre and all technicians.

#### ***Update existing Certification:***

Test Centre Technicians who have been recently certified to the old 1968/1802 standards can be re-certified to 18119 following a desk top



review. This will ensure all required additional procedures and policies are in place.

Specific focus will be on the application of Risk Assessment, eyesight checks, recording cylinder usage on worksheets and the criteria shown in Fig 1 to determine next required inspection or test date. Certification Inspections can be arranged in the normal way by sending a completed D005 request to IDEST Admin. Costs are yet to be determined but will be held to a minimum when re-certification, after a recent triennial inspection, takes place.

An on-line desk top review of centres documentation and procedures will primarily be undertaken. The list of required updated documents and reference standards are listed below and are to be adopted by test centres and all technicians. Technicians will be required to re-submit D063 Technician Agreement. On successful completion new updated Centre and Technician certificates will be awarded.

**Updated Document Set:** D001, D002, D003, D032, D054, D063

“UK DIVING INDUSTRY COMMITTEE Risk Based assessment of cylinder internal examination periodicity”

**New Required Standards:**

BS EN ISO 18119:2018+A1:2021 - *Gas Cylinders – Seamless steel and seamless aluminium-alloy cylinders and tubes – Periodic inspection and testing*

BS EN ISO 25760:2015 - *Operational procedures for the safe removal of valves from gas cylinders*

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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**

*Xambor Watersports (9Y) Tonbridge, Kent*

*Bolton Area Divers (9Z) Bolton, Lancs*

*Eagle Divers (A1) Portsmouth, Hants*

*Scuba Shack (A2) Sedgley, Midlands*

*Diveworld Ltd (A3) Sheffield, Yorks*

*Cylinder Testing Station Ltd (A4) Redditch, Midlands*

*Scuba Diver Training Ltd (A5) Chester-le-Street, Durham*

*CFP Cylinder Testing (A6) Harrogate, Yorks*

### **Leaving centres**

*Parwin Scuba Servicing, (4P), Glatton, Huntingdon*

*EPIC International Air Services, (7K),*

*Core94, (6V), Aberdeen, Scotland*

*Reefers & Wreckers (8X) Barrow, Lancs*

*Edinburgh Diving Centre (1M) Edinburgh, Scotland*

*Scuba Equipment Services (9X) Halesowen, W.Mids*

*Troon Cylinder Testing Services (7G) Troon, Scotland*