INTERNATIONAL DIVING SCHOOLS ASSOCIATION

iDSA

NEWS EDITION No.29 FEBRUARY 2017

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INTERNATIONAL DIVING SCHOOLS ASSOCIATION
IDSA
NEWS

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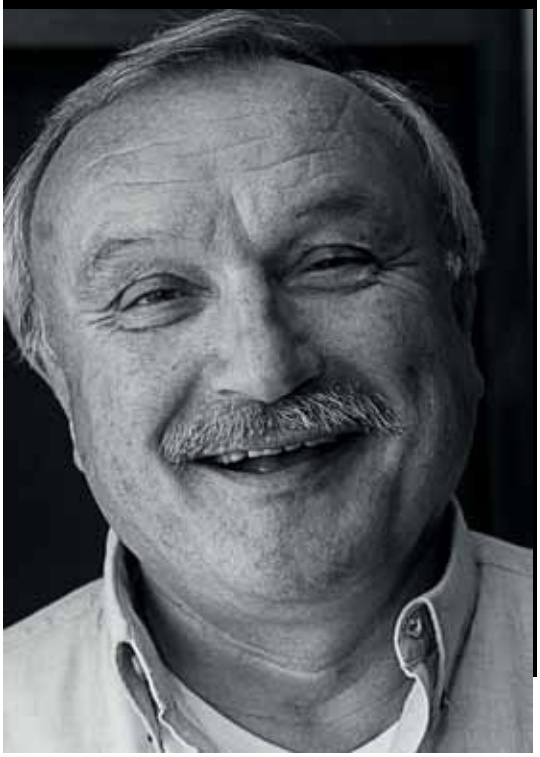
A REPORT FROM THE CHAIRMAN



Dear Members

I must first apologise for the very late distribution of this issue of IDSA News, due mainly to the illness of our Art Editor Michel Norriss who unfortunately spent nearly a month in Hospital which delayed the preparation and layout work more than expected. I am glad to report that he is now recovered and hard at work again.

The next point which I would like to comment on very strongly, is that again our reputation is being threatened by Associate Members, whose advertising is implying that their courses are authorised by IDSA. This is a very serious matter and the Board are investigating it very carefully indeed, and propose to take very strict action whenever evidence of this breech of the IDSA Standards is found. The policy of IDSA since its beginning has been to maintain the highest training standards by auditing all schools which wish to issue IDSA Diver Qualification Cards (IDQC's), and experience has shown that the only fair and reasonable way to maintain high and consistent standards is to carry out an on-site audit for all schools wishing to become Full Members (Diver Training). Associate Members are not audited and therefore are not eligible to train to IDSA Standards.

On a more encouraging note, having achieved ISO 9001 the Board are considering the redesign of some Publicity Materials, and re-designed Wall Certificates will soon be issued. The transfer of the Administration from France to Delft is also continuing and currently the Accounts, and Web site are being run from the Dutch Office.

I also hope that as many members as possible will attend the Annual Meeting in Palermo, hosted by Cedifop a long-standing Full Member of the Association. While speaking of the Annual Meeting I would like to look ahead and ask if any school would like to host the meeting in 2018? If so, please contact me.

Finally, we are sorry to lose John Rabone from the Board on his retirement and thank him for his support as a Board Member for over 8 years. We welcome Robbert de Bie from IHC Hytech in the Netherlands on his election to the Board at the Annual Meeting.

THE 2017 ANNUAL MEETING TO BE HELD IN PALERMO 17th TO 19th OCTOBER, HOSTED BY C.E.DI FO.P, A FULL MEMBER OF IDSA

ACCOMMODATION

The Conference Hotel is the Astoria Palace
Address: Via Montepellegrino, 62, 90142 Palermo, Italy
Phone: +39 091 628 1111
E Mail : astoria@ghshotels.it
Web : http://astoria-palace-hotel-palermo.hotel-ds.com/it/
Special rates have been arranged for the period of the Meeting which are :
Single Room : Euros 75 per night
Double Room : Euros 85 per night
BUT bookings must be made by 18 September quoting IDSA.

TRAVEL

The Hotel is about 30 minutes drive from the Hotel, and the fare is about Euros 50 one way. There is also an Airport Bus to the city centre.

CONFERENCE FEE

The meeting is open to both Members and non- members - the latter as observers. The Conference Fee is expected to be Euros 325 per delegate for members, and Euros 375 for non-members. This will include Attendance, welcome drinks on Tuesday evening, refreshments throughout the meeting, lunch Wednesday and Thursday, the Association dinner on Thursday evening and any necessary transport.
Wives or partners wishing to attend meals and other social occasions e.g. the Association Dinner, are very welcome on payment of the amount relevant to the event.

PRELIMINARY PROGRAMME

– Subject to Change

TUESDAY 17 October
1830 to 2000 Registration in the Astoria Palace Reception and Welcome Drinks in the Bar

WEDNESDAY 18 October

0930 WELCOME

1000 MEETING SESSION 1

- Introduction of Delegates and apologies for absence
- Chairman's Introduction and the report of the Executive Board
- The acceptance of the Minutes of the last meeting in Larnaca 11 to 13 October 2016
- Matters arising from the Minutes not included in the Agenda.
- Administrators Report.
- Treasurers Report.
- The Election of the Chairman

1115 Break

1135 MEETING SESSION 2

- The Promotion of IDSA
- IDSA News – Possible improvements. Help from Members
- The use of the IDSA Logo
- The new style Wall Certificate
- Using the Social Media
- CEDIFOP Proposal for a Student Register
- A reduction in the annual subscription for an organisation wishing to teach Level 1 only

1240 Group Photograph

1300 Lunch at the Astoria Palace

1400 MEETING SESSION 3

- Liaison with other organisations
- The European Diving Technology Committee (EDTC
- COFRAC - French Committee of Accreditation
- IDRCF – The International Diving Regulators and Certifiers Forum
- IMCA – The International Marine Contractors Association

1445 Break

1505 MEETING SESSION 4

- IDSA Supervisor Training
- The IDSA Rescue Diver Qualification

1700 END of DAY

THURSDAY 19 October

0930 MEETING SESSION 5

- A Proposal for an IDSA Commercial Diver Instructor Qualification
- A new system of Training at NYD
- Any other Business the Chairman may allow
- Date and Place of next Meeting

1300 Lunch at the Astoria Palace

1400 A presentation of new Cavit Cleaner Equipment – To be confirmed

1500 Observe a CEDIFOP course during a practical surface supplied training session

1600 Return to Hotel

1830 Pre Dinner drinks

1930 Association Dinner

NOTES :

• The above programme above is subject to such changes as are necessary for it's smooth running.

• All meeting sessions wil take place in the Astoria Palace Hotel

• Transport will be provided from the Hotel and return as necessary throughout the meeting

• Break times are approximate.

ABOUT PALERMO

Sultry, edgy, noisy and chaotic, Palermo feels like an eastern bazaar transplanted to the edge of Europe. Fought over by Phoenicians, Arabs, Normans, Swabians and Spaniards, the city reflects the influence of all in its architecture, its people and its food, which, fruit-packed and spicy, is positively life-enhancing. And, if the sheer energy of the city centre proves exhausting, the splendid, expansive Mondello beach and the Tyrrhenian Sea are just a bus ride away.

The east-west axis is created by corso Vittorio Emanuele, at the end of which stand two must-see attractions: the Cappella Palatina at the Norman Palace and the cathedral. The Palazzo Reale or Palazzo dei Normanni (piazza Indipendenza, 091 705 7003-705 6001, closed Tue, Thur) was one of the finest courts of medieval Europe. Adapted by the forward-looking Normans from the original Saracen palace, its highlight – and indeed one of the highlights of the whole city – is the Cappella Palatina (closed Tue, Thur). Built between 1132 and 1143 and once the private chapel of Roger II, its intricate interior is an excellent example of combined Arab-Norman craftsmanship, seen in the richly carved ceiling and the patterned marble floor. The period from the start of Roger II's rule in 1130 to the death of Frederick II in 1250 saw multiracial medieval Palermo flourish. The monarchs lie buried in the impressive cathedral, a short walk from the Norman Palace, which is a hotchpotch of styles and additions to the 12th-century Norman original.

Other attractions include the lush green oasis of the Orto Botanico (via Lincoln 2B, 091 623 8241, closed Sat and Sun afternoons), housing an enormous variety of exotic plants, and the excellent Archaeological Museum (viale della Libertà 52, 091 611 6805). After the trials of the 1980s, the assassination of two anti-Mafia judges in 1992 and the gangland killings of the mid '90s, Palermo is, for many, synonymous with the Mafia. But, while they are largely responsible for the post-war neglect, the city is no longer in the stranglehold of the bad old days, and a visitor is unlikely to see any obvious signs of Mafia life.

Tourist information: piazza Castelnuovo 35 (091 6058406).

THE ANNUAL MEETING 2016

HELD IN LARNACA CYPRUS 12th & 13th OCTOBER 2016

The meeting was attended by some 17 Delegates
Some brief notes are that :
1. IDSA received ISO 9001 accreditation in September 2016.
2. A new member to the Executive Board, was elected - Robbert De Bie from IHC Hytech, Holland.
3. The rules for the use of the IDSA Logo will be revised and circulated by the Board.
4. The draft of Revision 6 of the Standards and Procedures dated 30 August 2016 which was circulated to all members on 1 September was agreed subject to changes to the Availability of Chambers, which will be circulated to Members. When Revision 6 is complete it will be published in book form.
5. A new design for the Members Wall Certificate was tabled and will be introduced as soon as it has been printed.
6.The New Italian law in which IDSA standards are mandatory in Italian Diver Training programs taking place in Italy, is now in operation.
7. The negotiations with the French Accreditation Committee 'COFRAC' are continuing.

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REAL WORLD TRAINING IS THE KEY IN CHARLSTON

The International Diving Institute (IDI) is a commercial diving and underwater welding training facility in Charleston, South Carolina.
Real-world training is the key to IDI's success. With a dive site on the Cooper River, the students learn to operate next door to an active shipyard. Everything at IDI is designed to mimic a commercial diving job. Students perform real underwater tasks using the same diving equipment and safety gear as expected in the industry.
On a good day the visibility in the river is marginal, and mud is a constant factor in all dive operations. Students learn to perform tasks by feel rather than by sight. This proficiency makes graduates of IDI highly sought-after by commercial diving contractors.
IDI is committed to producing excellent divers. By limiting class size to 12 students, IDI maintains a low student-to-teacher ratio while making sure no one is left behind. Due to smaller class sizes, students are able to accumulate dive times well beyond the minimum requirements and feel a more personal connection to their instructors and fellow classmates.
Facilities at the International Diving Institute campus include a 48,000 gallon

wet tank, a dedicated underwater welding tank, a “dark” tank for zero-visibility diving, two river dive stations, a welding shop, two hyperbaric chambers, and two wings for classrooms and offices.

IDI features a modular approach to training, allowing students to choose a training and career path that is right for them. Entry-level training starts with the Air/Mixed Gas Surface Supplied Diving program. In just four months a student can be ready to work in the commercial diving industry. Graduates have training in a variety of underwater construction skills, including underwater welding and burning, and receive a commercial diver certification from the Association of Diving Contractors, Intl (ADCI), and a restricted certification from the Diver Certification Board of Canada (DCBC).

Restricted divers can also train for a DCBC Unrestricted certification through a five-week course which includes training at a deep-water facility to increase their skills and competency. This optional add-on is ideal for students who want to work in offshore oil, especially overseas.

For commercial divers who wish to focus primarily on underwater welding, IDI offers a third-party certification op-

tion. With testing proctored by Lloyd's Register, the advanced underwater wet welding course is designed to provide an internationally-recognized certification for qualified students.

Remotely operated vehicles, or ROVs, have recently become a staple of the inland diving community. To meet the increased demand for qualified workers, IDI offers an ROV Pilot and Technician course on a quarterly basis. Students train for four weeks, covering topics such as piloting, inspection, hydraulics, fiber optic splicing, and other useful skills. At IDI there are no simulations. All piloting and repair work is performed on real inspection-class ROV units, and the training exceeds IMCA recommendations.

IDI offers placement assistance, and successfully placed 92% of their 2015 graduates within the maritime industry. Tours of the facility are offered by reservation. Visitors can view divers at work through observation windows on both the training tank and welding tank.

The International Diving Institute can be reached at (843) 740-1124. Find out more at www.idicharleston.edu.

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NAMAKA SUBSEA

Longevity, performance and most important safety

Namaka Subsea, a subsea auditing and consulting company based in Aberdeen, is offering its software based planned maintenance system, DiveCert, to diver training schools free of charge.
DiveCert is now being operated by over 40 companies, in over 15 countries across 5 continents, with over 150 users logging in daily. But how does DiveCert enhance a diving contractor's operations?
Maintenance is a crucial part of any life support system, not only to ensure longevity and performance of any asset, but to ensure the safety of the divers. DiveCert can help you achieve it all, in a simple manner!
DiveCert have taken a different approach to more traditional maintenance systems, designing over 400 templates, based on global diving equipment standards, to help diving contractors achieve a simple approach for life support equipment.

Asset Management
DiveCert will allow the user to enter all their dive system asset into the database, which can then be manipulated as the user requires. Information help on the assets include: Location, Asset ID (Unique), Description, Manufacturer, Model and Serial Number.
Assets can also be transferred between systems, projects or locations with a simple click of a button. All documentation & attachments are carried over to the new system, which is fully traced and searchable.

Certification
Compliance with best industry practice as laid out in IMCA D018 can be easily achieved by the selection of one of the system certificate templates. Unique certificate templates are available for all diving system equipment test requirements, with the required fields pre-populated with the relevant IMCA D018 detail sheet references.

DiveCert is designed in such a way that once an asset is stored in the database you simply assign a certification template and complete the inspection details. Each template also has a set periodicity, which is based on the IMCA requirements, allowing the software to alert you before the certificate expires.
The software includes several features, many suggested by diving contractors, to help the complete certification and auditing process as simple as possible.

• Store user's details, including a digital signature, for automated singing off
• Attachments can be attached to certificates, for storing user manuals and documentation.
• One click recertification for certification
• A simple filter and search function
• Creation of custom template for addition equipment requirements
• Multiple user and database ability
• Exportable Excel (CSV) reports
• Workstation, server based or cloud system database hosting
• And best of all… It's both Windows & iOS compatible

Planned Maintenance
All manufactures manuals can also be stored within the database, providing easy access to all supporting documentation.
We've implemented a traffic light system to the software, allowing users to simply identify the status of an asset.
Orange - 30 days remaining.
Red - Requires recertification.
Dive Technicians can simply login, with secure personal details, and produce work orders, Exportable Excel (CSV) maintenance reports or complete maintenance schedules from multiple locations.
Planned maintenance can be implement by the end users, any of our assigned distributors or one of our data population technicians.
Best of all, once a maintenance schedule is assigned to an asset it will continue to remain with that asset for its entire life cycle, just by clicking one simple button!

Diver Training Schools
Namaka Subsea are now offering the DiveCert software to Diver Training Schools free of charge. The move is to emphasize the important of asset management and planned maintenance at the beginning of a divers career.
For demonstrations visit:
www.divecert.com
or contact lee@namakasubsea.com

IDSA PEOPLE

JIM JOINER AND ALAN BAX

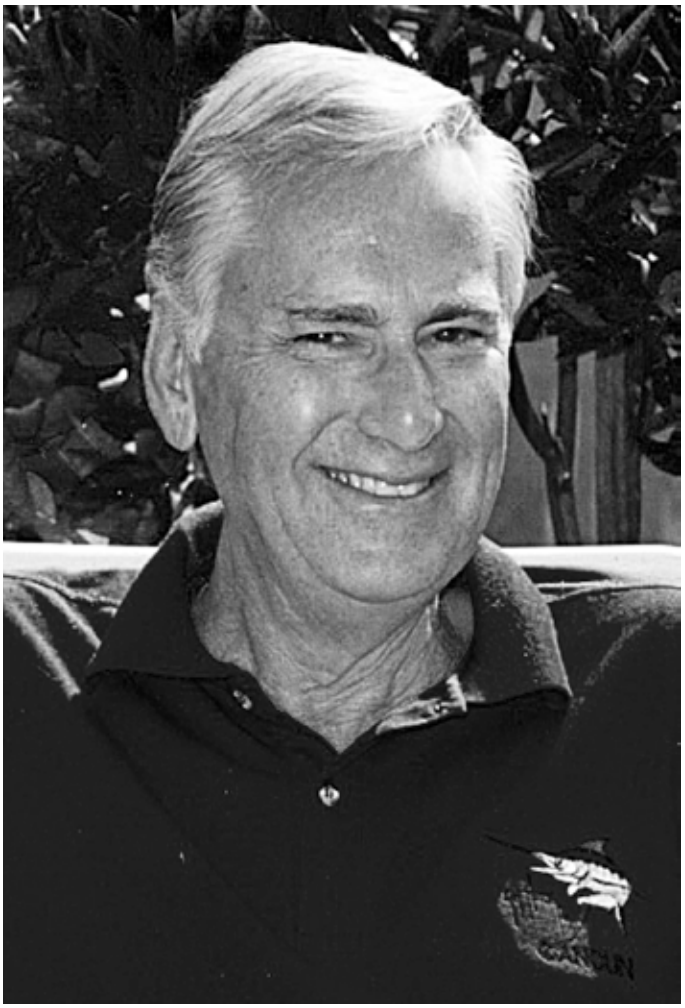
By Jill Williams

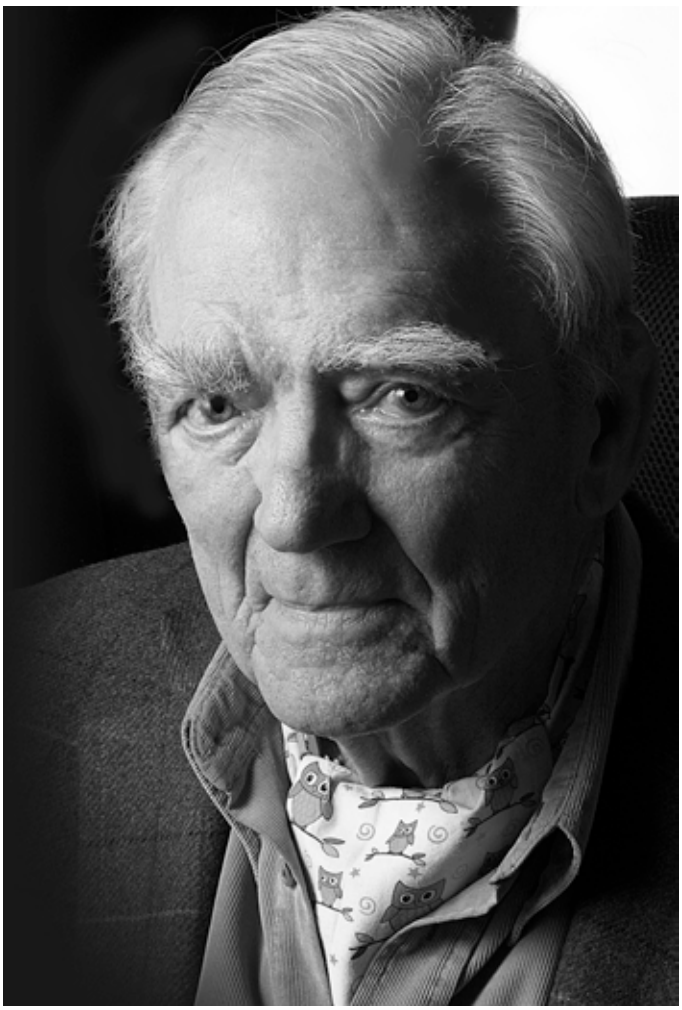
If you read my article (IDSA News Edition 27) about the early days of IDSA you may remember that the Association started informally in 1982, formed by a group of owners or directors of diving schools, based around the annual meetings of the ADC (Association of Diving contractors) in the United States. These meetings were a good opportunity to meet potential employers of the students who had been trained in their schools and to catch up on present trends and needs of employers so that students stood a good chance of future employment. In the absence of national and international regulations such generalised agreement was the only way in which a relatively consistent approach to shared standards could be achieved.

Alan and Jim were the first two 'Chairs' of IDSA, at first informally as an offshoot of the annual meetings during the early 1970s, Jim as Owner and Director of the College of Oceaneering based in Los Angeles harbour (see previous article), Alan as co-owner and Director of Fort Bovisand Underwater Centre in Plymouth UK, and then as elected 'chairs' of what became known as the International Diving Schools Association (IDSA).

Although both shared a strong commitment to the setting of high standards for divers and diver training their backgrounds were very different; Jim - as readers of the previous article will know - came from a strongly religious background to which he has recently returned, running education courses for prisoners within the State system in California, whereas Alan's was his training as a naval officer in the Royal Navy. When I first knew Jim Joiner he was keen to move away from Los Angeles and focus on his publishing business (Best Publishing) in Flagstaff, Arizona, where the business was based; part of his concern was also to move away from Los Angeles which was not a good environment to raise three school-age children, and so he sold his interest in the school leaving Alan to carry on the development of IDSA. Today Jim continues with his commitment to community service by working as a volunteer with the California Prison Service.

When I knew Alan Bax as a school boy all he ever talked about was joining the Royal Navy and in the week following his 16th birthday in 1947, he left home to join the training ship HMS Ganges on the east coast of England Starting as a 'boy seaman' he rose through the ranks completing officer training at Dartmouth and Greenwich and then served in Frigates, Mine Sweepers, and Submarines, finishing finally as a Lieutenant Commander





Jim Joiner

Alan Bax

specialising in Under-Sea Warfare in 1960, which introduced him to diving. Up to this stage the navy had been everything he had hoped it would be but his 40th birthday coincided with a phase of cut backs in the armed services and a chance to take early retirement. During a ship's visit to India he had met an American (Jim Gill) with shared interests in diving and underwater archaeology, and the two decided to go into business together, opening a centre which could both teach diving and carry out diving contract work. After a lot of searching they finally found Fort Bovisand — a derelict fortress built on the eastern approaches to Plymouth Sound for defence against Napoleon 3rd (though, in typically British fashion, by the time it was completed, he was living in exile in England). They made enquiries about renting a room for use as lecture room but their application was refused- they could not have a single room but could rent the whole fort! This was something of a shock as the whole site was in a very poor state with the central road unpassable and no fresh water available. The Fort was to cost a considerable amount of money to bring into reasonable condition and its development was only possible in the early days with the support of volunteer divers who often exchanged their services for courses but there were some very useful advantages, namely a space near the sea where it was possible to build a block of self-contained hotel style rooms, casemates (gun rooms) which could be converted into dormitories for students on courses and, crucially, a sheltered harbour. This had been built originally to provide shelter for sailing ships to collect fresh water when anchored in the Sound and. apart from one disastrous occasion, provided safe and sheltered landing for dive boats. There were also a kitchen, dining room and bar — important for a residential centre as the Fort was six miles outside the town! It also provided a centre for an annual Underwater Symposium, reflecting Alan's interest and expertise in underwater archaeology - he was involved in finding the first ancient wreck in the Out Skerries (Die Liefde) and in locating the wreck of the Mary Rose. Apart from training courses for divers at various levels and a number of linked specialisms (boat handling,underwater welding etc), the Fort also offered employment to a considerable number of people including instructors, domestic staff, engineers, and the maintenance staff associated with any large establishment; as Director of the Fort, Alan was responsible not only for selection of students and oversight of standards but also of staff employment and timetabling whilst his partner had oversight of outside contracting work. During this time the work with IDSA increased and Alan took responsibility for the administration which included the early negotiation with bodies such as HSE and MSC (Manpower Services Commission) to try to link course levels with those of outside bodies - a process which had been ongoing since the early days. By the mid 90's the work for IDSA had increased to such an extent that it was agreed that Alan should hand over the Chairing of IDSA to another member and continue as Administrator -this coincided with the opportunity to sell his share in the Fort and move to France. The present move of some of the administration to the Netherlands Diving Centre in Delft reflects the long held intention to reduce some of the basic work of the Administrator in order to allow him time to develop links with other associations and broaden the scope of IDSA.

Married three times, Alan had two sons from his first marriage -the youngest sadly died from a heart attack last year – and two daughters from the third, with three grandchildren ; he has been with his present partner – Jill - for the last thirty years.

UNEARNED DCI, MICRO-BUBBLES AND RIGHT TO LEFT SHUNTS ... ETC ...

Bob Cole
SAA Decompression Office and author of Out of the Decompression Matrix
Published by AquaPress ISBN 978-1905492-28-2

Recently I was giving a decompression talk to a group of divers. I started by saying that diving is a relatively safe sport. Nevertheless it is still a risk sport with between 100 and 200 cases of DCI a year. However, last season produced only 39! Good news; or is it? The fact is that the sport and industry are going through a lean patch.

I then asked the audience if anyone had suffered a DCI hit. One young lady put her hand up and said that she had, but that it was "only" a skin bend. I then asked what she did about it. She said "nothing" because the Dive Master said it would go away on its own.

I'm sure that some of you might guess what I said.

Keep in mind a number of things: firstly, unless you are a hyperbaric doctor you are not qualified to say if symptoms need no treatment, furthermore, you run the risk of litigation if you are wrong. Secondly, skin bends (SBs), for example, may go away without treatment however, SBs may be a precursor to other major issues for example Patent Foramen Ovale (PFO) a small hole in between the two upper chambers (atrium) of the heart or a warning of a Pulmonary Arterial Venous Malformation PAVM) a by-pass or so-called shunt in the lungs. Both can allow free gas (bubbles) to pass from the venous circulation into the arterial circulation. So although this is relatively rare (20-30% of people have a PFO and about 10% have a PAVM), don't ignore any symptoms that you didn't have before the dive – including skin bends. Check everything out with a hyperbaric doctor.

Delivery of Micro-bubbles (MBs)

Many ordinary dives produce micro-bubbles (MBs), which flow in the venous blood to the lungs (the lungs are often called the pulmonary filter). Here they become trapped. Then, and almost instantly, they dissolve releasing their excess nitrogen and other gases which are breathed out in the normal way. It is the volume, of MBs that's important. The pulmonary filter can be overwhelmed. For those with a PFO or PVAM things may become even more dramatic. Under the right conditions MBs can flow from the venous circulation via the PFO/PVAM into the arterial circulation. This is called a right-to-left shunt or R-L Shunt. If the arterial blood now delivers these MBs to tissue that' is at a higher tension they can grow into decompression illness (DCI) bubbles!

Nature is on your side!

Normally, for about 95% of the time (ie the cardiac cycle), the pressure in the left side of the heart is higher than the right side. This tends to keep the flap valve closed preventing right to left blood flow. So, it's not all bad and additionally you can work with nature to improve the odds in your favour, more of this latter. More good news: cardiologists say that only the larger PFOs cause problems

Why do people have PFOs?

They are a remnant left over from our time in the womb, prior to birth, when we do not use our lungs to breathe and oxygenated blood and nutrients etc. are supplied by mum. There are more shunts in the body, which like the PFO normally close after entering this world. This is a complicated story, so I've confined this article to major right to left shunts to help show the need for better MB control via knowledge.

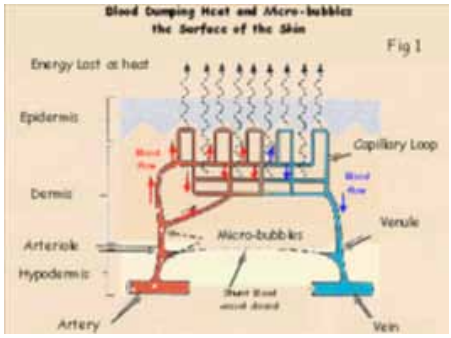
Other Shunts

So far, we've been discussing shunts that are defects, i.e. shunts that should not be there! There are many shunts in your body that are perfectly normal. During your diver training you were probably told that the average person of 70 kg has between five to six litres of circulating blood. The average person has about 150 liters of blood vessels. Clearly, six liters of circulating blood in a 150 liter blood vessel system seems wrong. Nature is a very clever thing; obviously the whole system can't be open at the same time. So, some shunting takes place. Your own life experiences will tell you that. As an example when running for a bus your leg muscles need extra oxygen compared to, say, sitting watching television. So, if you exert yourself underwater with say a little nonferrous excavation, the blood vessels supplying your working muscles will open to provide more oxygen. Unfortunately, the oxygen brings with it more nitrogen (inert gas). If you fail to account for this fact you may suffer DCI.

Another example may be during those amorous moments. I'm sure you know what that means guys; that feeling in your stomach is not love it's blood moving to meet a more important need for a short while - for about 30 seconds? Not all shunts are bad.

Your Skin

Did you know that your skin is the largest organ in your body? It has a number of functions; two of which are of particular interest to us as divers. The first is that it acts as an insulator during cold weather and when diving in cold water; the skin's blood vessels close down in order to prevent cold blood being transferred to the core of the body. This causes blood to be transferred to the body's core, which in turn removes some of the fluid in the blood to the bladder and make you want to pee; increasing the risk of dehydration and DCI. The second skin function we are interested in is dumping excess body heat to the atmosphere. Removing excess heat generated during a dive may also transfer MBs to the surface of the skin. This may result in a skin bend. It may also be a precursor to some more



important DCI event to come!
Skin Bends - The Elephant in the Room
Under the right conditions, MBs can by-pass the pulmonary filter (lungs) via R-L Shunt(s) (PFO/PAVM) to be delivered into the arterial circulation and the skin, see Fig 1 where they can be seen and

felt. For this reason skin bends can tell you more than you might at first think! It's this ability that can allow micro-bubbles to become visible, see Fig 2 (If you were able to see and feel your Bend, would you deny DCI? Some people do!).
Be very careful, skin bends may not be benign: MBs delivered into the arterial circulation may only show as minor symptoms and signs. However, if in the same event some of the MBs find their way to other parts of your body, the brain, spinal-cord etc, where the inert gas tension could be higher than that within the MBs.

Deal with the Bubbles
Dealing with bubbles can be quick and easy while they remain bubbles. However, if you don't treat them it's possible for them to cause some real damage which can be much more difficult to resolve. From your own experience you will know that if you cut yourself the blood leaks out and when it meets oxygen in the air it will start to clot. Well the same process occurs inside your body when the oxygen in the bubbles confronts your blood. The immune system swings into action to defend you against the invader. Clotting occurs and other stuff (triggering an acute inflammatory response including complement antibody C5a, which leads the release of free oxygen radials etc) that can seriously damage the walls of your blood vessels causing them to leak fluid into the surrounding tissues (so-called oedema). This slows blood flow in the region, restricting off-gassing of excess inert and other gasses that are causing the DCI – things from here on can get really troublesome!
This damage will linger long after the offending bubbles have dissipated! The damage will depend upon volume of the bubbles and where they lodge. Who knows it may be in your spine or brain etc?
So, the longer you delay DCI treatment the more blood chemistry changes occur and the greater the damage done. Never ignore and symptoms you may have after diving that you didn't have before. Always quickly seek advice from a hyperbaric doctor. That said: even hyperbaric doctors should not self-adjudicate on their own symptoms!
Be aware that DCI is a multi-faceted disease and strikes randomly; it shows no respect for rank, qualification or experience. All DCI cases must be treated by a hyperbaric doctor and the therapy, including that for skin bends, must be medically reviewed to determine the efficacy of the results and to determine any follow-up treatment, which may include PFO closure. However, not all R-L Shunts can be closed, so the review may conclude it would be unsafe to dive.

PORPOISE

By Des Williams,
Historical Diving Society,
Australia and Pacific

This article salutes an Australian diver and inventor who over the last fifty years or so has received little or no international credit for what has to be one of the major steps forward in regulator design. It must have taken a very inquiring mind to realise that the twin hose regulator could be replaced by a more compact single hose model, and a particular type of genius to design it, market it and make later improvements. But that is exactly what happened withTed Eldred, inventor of the "Porpoise" single hose scuba system.

Tony Gregory using 50 year PORPOISE scuba gear at Latchford Barracks pool. (Photo by G. Fotopoulos)

It is 60 years since Jacques Cousteau, with input from Air Liquide's engineer Emile Gagnan, invented the "AQUA-LUNG", but sport divers today do not use his invention. Instead, today's modern scuba systems all employ a feature which originated in Melbourne, Australia. It was invented and perfected by diving enthusiast Ted Eldred, in the late 1940's, when he turned his engineering skills to a safe and powerful air delivery source for the diver.

Cousteau and Gagnan's twin hose system was very clever and revolutionized the underwater world but, with their demand regulator set high on the diver's back one of its annoying limitations was the unequal delivery of air, when either leaning forward (too little) or back (too much). Ted Eldred was a diver himself and it wasn't until he had a close call struggling against a very strong tidal current, that he realized how very difficult it could be to draw enough air to breath from those early twin hose systems, in stressful situations. He resolved to improve the device and made calculations which suggested the human body, under extreme stress and load, actually needed a demand regulator which could deliver a maximum of 300 litres of air per minute. This estimate was laughed at by the "experts" of the day, as contemporary regulators were delivering about 140 litres, which was thought to be adequate. History has now shown that Ted was ahead of his time, as very quickly 300 litres per minute was adopted as an acceptable value by both the British and Australian Navies.

Tony Gregory fitted out in complete 1950's PORPOISE scuba gear, complete with snorkel. (Photo by G. Fotopoulos)

The French company Air Liquide, already owned world patents on the twin hose "AQUA-LUNG" regulator, as a result of its technical input from Cousteau and Gagnan. Consequently, Ted Eldred had to come up with a totally different system capable of delivering 300 litres per minute. He did this by leaving the first stage reducer mounted on the cylinder and using a single small diameter intermediate pressure hose to bring air to the second, demand stage held in the diver's mouth. Exhaust air then escaped by way of a valve located in the diver's mouthpiece. This eliminated the need for a second hose that, in the Cousteau/Gagnan system, returned exhaust air to the regulator behind the diver's head. Ted Eldred named this single hose regulator the "PORPOISE" and was to make frequent improvements during its production years, including the introduction of what he termed "vacuum assist", to deliver air more effortlessly to the diver.

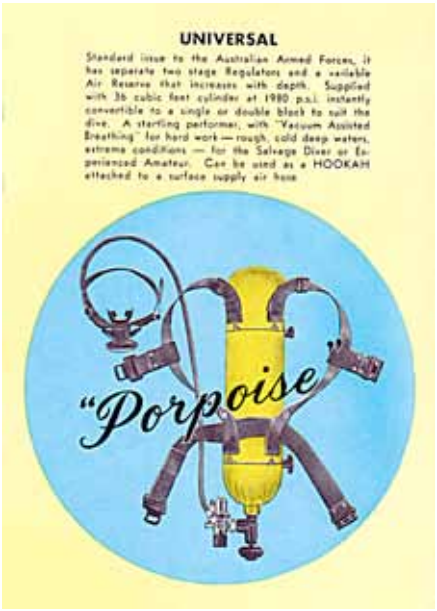
By 1954, Ted had set up the Breathing Appliance Company in Melbourne, together with Maurice Batterham, a WW2 Navy Clearance diver. 'Venture Capital' was impossible to obtain from Australian banks during this period and the Breathing Appliance Company struggled on without capital assistance, even winning over the Royal Australian Navy, who adopted the new "PORPOISE" scuba gear. The Australian pearling industry also employed the "PORPOISE" in a beautifully built hookah configuration.

It should be pointed out that there were many inventors around the world who claimed to have invented the single hose regulator, but none delivered 300 litres of air per minute and they were therefore difficult to breathe from, under more extreme conditions. This was confirmed in 1960, after Eldred's "PORPOISE" scuba units had come to the attention of the worldwide diving community. It was then that Air Liquide in France, sent a delegation from their sister company La Spirotechnique, out to Australia and purchased the "PORPOISE" system from Ted Eldred.

The rest is history and today Ted Eldred's single hose scuba system is still in use, 50 years after its invention. On the other hand, the original Cousteau Gagnan twin hose "AQUA-LING" was gradually

A contemporary advertising photo of the original PORPOISE scuba gear.

phased out in the 1960's.
In March 2004, Des Walters of Descend Underwater Training Centre (DUTC) in Albury, New South Wales, organized a weekend gathering of enthusiastic historical diving buffs, to celebrate 50 years of the Australian "PORPOISE" scuba system. Special guest for the weekend was none other than Ted Eldred himself!
Des Walters' weekend was a brilliant salute to a great Australian inventor. On the Friday evening, at the headquar-

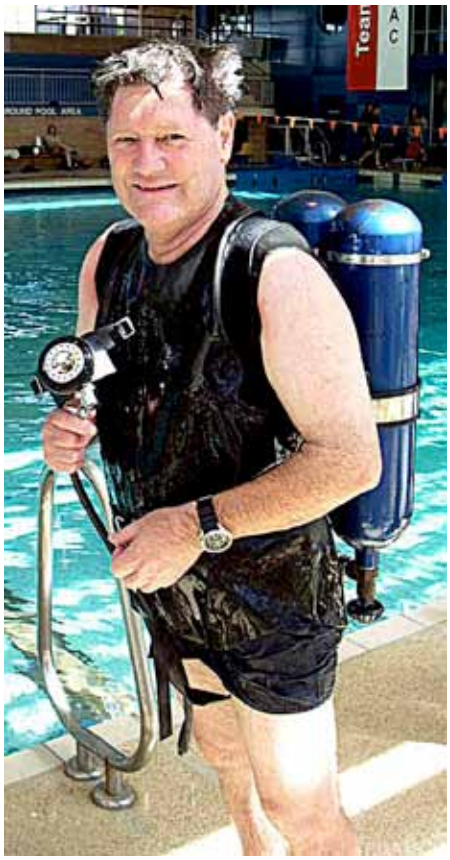


Contemporary PORPOISE advertising

ters of the DUTC, a group of some 50 interested people drawn mainly from the Diving Historical Society of S E Asia & Pacific, assembled for a few drinks and an informal chat with Ted Eldred amongst Des Walter's excellent display of early "PORPOISE" diving gear. Ted is now in his early eighties, in excellent health and still has a 'memory like a steel trap'! Many old items of "PORPOISE" gear were brought along by those assembled and Ted was able to answer all questions regarding the development of the regulator system and identify the subtle changes made as the years progressed. It was a very impressive performance by a most modest inventor.
Des Walter's has been assembling a Time Line of "PORPOISE" equipment and with Ted's input during the evening, much progress was made. Imagine having the chance to talk to Cousteau or Gagnan today about their scuba developments! It as an honou r….. Ted is living history and we are very proud of him here in Australia.
The following day, we assembled at Latchford Army Barracks near Albury, where Des had organized the use of their magnificent indoor swimming pool. Those attending brought along vintage scuba gear and standard dress outfits, to dive and share. There were seven sets of working standard dress and an underwater pokers game was organized by helmet gear enthusiast, John Allen, to keep those divers busy. The game was attended by at least five divers crowded around the underwater table, complete with cards and poker chips and of course bottles of rum. The airlines on the surface looked like spaghetti junction!
"PORPOISE" scuba collectors Des Wal-

John Allen deals the cards during the standard dress poker game. (Photo by Peter Fields)

ters, Mal Brown and Tony Gregory made working sets of Ted Eldred's famous gear come back to life. It was wonderful to see 50 year old Australian made "PORPOISE" sets working perfectly in the pool, and many divers took the chance to breathe history! Of course Ted Eldred was there to see history repeated and he was very impressed with the enthusiasm shown by our group of historical divers.
On Saturday evening, it was a tired bunch that assembled at a beautiful function room in the Albury Commercial Club



PORPOISE collector Mal Brown, after a dive in one of his early PORPOISE scuba sets. (Photo by D. Williams)

for dinner and a final salute to Ted. Des Walters presented a detailed Powerpoint presentation of his "PORPOISE" Time Line, incorporating many interesting early historical notes provided by Ted over the last year during meetings with Des. It was a great way for us all to say "thank you" to Ted and acknowledge his contribution to recreational diving.
The following day, Sunday, we were back at the Commercial Club in a lovely lecture theatre, where several speakers made

Des Williams (left) and Ted Eldred view some of Mal Brown's early PORPOISE scuba collection. (Photo by G. Reed)

presentations on some of our Australian diving heritage. We were also lucky enough to have Ted Eldred address us personally and recount the very early years of his development of the "PORPOISE" scuba system. He also answered questions from the audience and illustrated his presentation with original technical drawings made in the early 1950's. It was a great weekend!

Many thanks are due to Des Walters for his organization of this fine weekend. Special thanks also to Mal Brown, who has an enormous collection of early Australian diving gear, both home made and the famous "PORPOISE" gear, for making working sets and part of his vast collection available. Tony Gregory and Air Liquide are also to be given thanks for making available special commemorative "PORPOISE" T-shirts for those present at this historical event.

KBA HAS RELOCATED ITS COMMERCIAL DIVER TRAINING CENTRE TO THE TOLL OFFSHORE SUPPLY BASE

The KBA Training Centre (KBAT) has moved from its previous location in the SAF Yacht Club Changi and re-located their commercial diver training center to the TOLL Offshore Supply Base in Loyang. The center was officially opened by Mr. Wong Weng Sun, President & CEO of Sembcorp Marine Ltd, in February 2015. The move became essential as the government had reclaimed the Changi land area for development. Nevertheless the new location at the Loyang base jetty will prove to be a better training venue as it is in the offshore working environment. With the move-in and set-up all completed, it is ready for operations and KBAT will be recommencing the nationally approved commercial diver training course from January 2017.

From 2014 to 2016, KBAT conducted 4 full courses and within weeks of completing their training graduates gained employment with local commercial diving contractors.

The training center has been established to provide formal commercial diver training in Singapore and the region. It aims to raise the operational safety standards within the inshore commercial diving industry.

With the recommencement of Inland and Inshore Commercial Diving Training in 2017 under the new ISO 29990-2010 standard accreditation scheme, KBAT is the first nationally accredited commercial diver training center in Singapore and Asia. It is certified under the ISO 29990 Learning Service Providers accreditation scheme and approved by MOM Singapore. Moreover, KBAT has collaborated with the Professional Diving Academy (PDA) – a Commercial Diving School in the UK. KBAT has designed their training program to be in line with PDA's existing learning requirements. This means that KBAT graduates have the option to apply to PDA and attend their HSE Surface Supplied top-up course which will certify them with a UK HSE Part 1 offshore commercial diving qualification.

The next training has been scheduled and confirmed – Level 1, CSCUBA Diver course (09 January to 03 February 2017) and Level 2, SSDE Diver (06 February to 03 March 2017) with courses scheduled throughout 2017.

For further information regarding course fees, scheduled dates and in-company package, please contact KBAT at Tel: +65 6542 4984, pebbles.tan@kbassociates.org or visit our website at www.kbat-raining.org

THE UNDERWATER CENTRE AWARDED FOR INCREASING DIVER SAFETY

Leading subsea training and trials facility, The Underwater Centre, Fort William, has picked up a top award at the prestigious 2017 Subsea UK Awards ceremony in Aberdeen (February 2nd, 2017).

The Centre triumphed in the Innovation for Safety Award for its role in improving diver safety through its development of Commercial Enriched Air Nitrox training for the commercial diving sector.

The annual awards ceremony seeks to recognise companies and individuals who are leading the way in Britain's £9billion subsea sector. The Centre was up against stiff competition from Canyon Offshore and JDR Cable Systems for the coveted accolade, which recognises an innovation that has significantly contributed to improving safety within the subsea sector.

The Underwater Centre was the first to respond to an identified shortfall in the commercial diving sector for training in the use and supervision of Nitrox as a breathing medium: a lack of theoretical knowledge by supervisors and clients was potentially hazardous. With the help of several industry professionals the Centre developed a course to address this need, aiming to improve the safety of an entire dive team involved with Nitrox diving operations.

Commercial Director, Steve Ham said, "This award is recognition that our training has significantly increased the awareness of the safety issues surrounding diving using Nitrox, and especially to the supporting personnel of a Nitrox diving operation.

"The development of Nitrox training is part of our strategy of continuously improving our commercial diving courses to meet industry needs. All divers taking our air diving course packages receive this important additional course."

Nitrox significantly increases divers' efficiency and, when used correctly, can add to their safety. However, nitrox also brings with it an increase in other risks and that's why training is so important.

Derek Beddows, BP Global Diving Technical Authority confirms, "In recent years there has been a shift away from the traditional surface-supplied air diving techniques to surface-supplied nitrox diving or equivalent air depth diving.

"This course will certainly help to increase confidence in the competencies and abilities of commercial divers using nitrox in the field. It's a notable step forward for the commercial diving training requirements and one that will continue to promote safe operations."

The Underwater Centre is a purpose-built subsea training and testing facility which incorporates an extensive pier complex including four dive stations, classrooms, workshops and decompression chambers. With access to sea depths to 100m, the Centre's Fort William facilities also include a range of vessels providing air and saturation diver training and an ROV fleet including a work-class ROV.

The Underwater Centre is set up to provide its students with the skills and experience to succeed in their new careers, and provide the subsea industry with the workforce that it needs.

Anyone interested in more information about The Underwater Centre should contact 01397 703 786 or fortwilliam@theunderwatercentre.com.

Issued by The Underwater Centre. For more information, please contact Olivia Gemmill on 01397 703 786 or olivia.gemmill@theunderwatercentre.com.

BEWARE OF SCAMS AND FORGERIES

IDSA had recommended a IDSA member company to a China based company to provide diver training for approx 120 Chinese Nationals. After a great deal of email correspondence to align up the agreement and the prerequisites for entry, the IDSA member company management traveled to China to meet with the organization management team and sign the training contract.

During a pre meeting held at the hotel before going to the company's office it became apparent that on signing the agreement the first payment of 50% fees would be paid, however to complete the arrangement the IDSA company had to agree to pay the Chinese company a notarization fee of 0.6% of the first payment. Following other actions by the Chinese company representatives such as their senior management suddenly not available and the office is now closed, it quickly became apparent that this was similar to an Internet scam, just that it involved a physical meeting and not solely on social media. The IDSA member company walked away from the meeting with no loss incurred.

As organizations look for various and more intriguing means to conduct fraudulent actions IDSA members are advised to be careful when being contacted by companies that are not directly related within our industry where the benefit appears to be too good for business sensibility, and to ensure a detailed background check is conducted on any new vendor or client company.

IDSA CARD SCAM

We recently acquired an excellent replica of an IDSA Diver Qualification Card which at first sight appeared genuine, but on examination the information on the card in no way matched that in the Central records. Further, all IDSA cards are coated with an almost invisible thin plastic skin with a hologram on which copies of the IDSA Logo are printed when held near a light the logos are immediately visible.

OUR RECOMMENDATION

All Contractors and other employers of IDSA qualified divers are warned of this possibility; if there is no hologram or if there is any doubt of the authenticity of a card, they should check with the IDSA Administration either by E-Mail to: info@idsaworldwide,org or by telephone to 00332 9773 7261

A SCHOOL IN NORTHERN BRITTANY- SUPPLIES THE NEEDS OF INDUSTRY

Any enterprise which uses large quantities of water will at some point, have the need for divers. ***The Centre Activites de Plongee de Trebeurden (CAP)*** in Northern Brittany is dedicated to supplying this need.

In France Diving schools and their training programmes are regulated by a government body which in turn is advised by three specialist bodies, The Contractors Association, Diver Syndicates, and the Medical Advisory Body. They establish the guidelines by which rules and regulations may be passed into law.

3 schools have been set up in France since 2014 with a fourth pending. ***The Centre Activites de Plongee de Trebeurden (CAP)*** was founded in Dec 2014. Working on many industrial tasks a diver may find himself confronted by extremely difficult circumstances. More often than not he will be unable to see his hands in front of his face let alone the tools he is working with. Students are taught that in these circumstances the 'Hands

are the Eyes' and all that that implies.

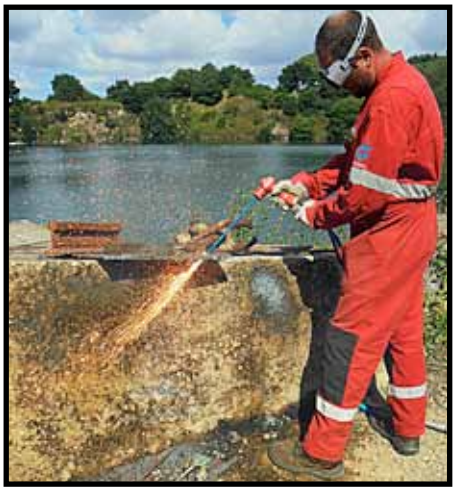
Also they are likely to be working under various different sorts of pressure. As well as physical and physiological there are environmental and professional pressures - working to strict schedules.

Training for work underwater

There is an endless variety of tasks now being demanded of divers by industry and as many of these as possible are covered in the courses with an emphasis on the more common requirements. For example: Underwater Construction. Harbour repair and maintenance. Concreting, Jetting, Lifting and air lifting. Locks. Water Tower maintenance. Cutting and welding. All these tasks are related to working in total darkness and isolation.

The students are also taught to dive from a wet Bell at depths down to 50 meters.

There are several different kinds of locations available for training the students at CAP in order to provide them with realistic conditions. There is of of course the ocean with a boat which is an excellent diving platform, but also the river estuary, lakes and locks, a tunnel as well



as a tank for training cutting and welding.

Training on a variety of suits and helmets

There is training for the most common varieties of basic equipment in general use. Helmet varieties include:Kirby Morgan KNB37 (2), Kirby Morgan KNB18 (2), Gorsky and Divex AH5. Diving suits include: Aqualung, Viking, Northern Dive and Gates.

There are 3 or 4 instructors per team and the average number of students at any one time is 12 with an average of about 50 students per annum.

As well as the the instructors there is the skipper of the boat, technicians for the equipment and technicians for the chamber, plus office staff.

Student and instructor selection

All students must first pass a full medical and be at least 18 years old and have a Class 1 Mention B. Instructors are mainly ex-navy.

DECOMPRESSION CHAMBER

There is a three lock medical Decompression Chamber 2200 Comex Pro of 25cum. The main chamber holds up to six divers and has a separate compartment for medical staff.

The Lavanchy Award is presented annually to an individual who has made a significant and sustained contribution towards the responsible development of the European diving community.

EUF PRESENTS IT'S PRESTIGIOUS LAVANCHY AWARD FOR THE VERY FIRST TIME

On 22 January 2017 the EUF Lavanchy Award was presented for the first time to Deric Ellerby. Mark Caney, the President of the EUF gave Deric the prestigious award in the diving section of the Düsseldorf Boat Show.
The award is presented annually by the European Underwater Federation.
Mark said, "Deric is a very deserving first recipient of the award. He and Jack set up the EUF and he has long served as its General Secretary.
He has worked tirelessly for the benefit of divers, including being very active in the creation of European and ISO diving standards.
The award is presented to honour the vision of diving pioneer Jack Lavanchy, a former honorary vice president of the EUF, who was personally instrumental in the initial development and growth of European recreational diving. During his lifetime, Jack worked tirelessly to try to and persuade the members of the diving community to work together for the good of the sport and the benefit of divers everywhere.

Deric is a well-known figure in the European diving scene and has been a leading figure in the BSAC for many years."

THE BERGEN INTERNATIONAL DIVING SEMINAR 2017

Sharing best practice by meeting

The Bergen International Diving Seminar will take place on the 15th and 16th of November 2017 at the Clarion Hotel Bergen Airport. Please make a note in your diary and make sure that you find the time to attend this well established event.
The main topic of the seminar will be 'Smarter solutions to address the industry's future.'
The Program Committee have already started work on a stunning programme in support of the Seminar's slogan 'Sharing best practice by meeting.'
We are looking forward to seeing you this November in Bergen and please do not hesitate to contact us if you have any practical questions regarding the seminar.

The following speakers have already confirmed their participation:
Allen Leat, IMCA Chief Executive.
Øyvind Mikaelsen, Subsea7, Executive Vice-President Commercial
Johan de Bie, IHC Hytech B.V. Managing Director
More speakers will be announced in the next Seminar News
You will find the late dated at: http://www.nui.no/2017/-2/

The members of the program committee are:
Cato Hordnes, Statoil (Chair).
Steve Sheppard, Helix.
Øyvind Leonnechen, Technip.
Joar Gangenes, Subsea7.
Rolf Røssland, NUI.

AkerBP Statoil REPSOL TOTAL
ExxonMobil GASSCO subsea 7 Technip

ONLY
FULL MEMBERS (DIVER TRAINING)
are authorised to award
IDSA Diver Qualifications;
they do so having successfully completed
an
On-site audit to IDSA Standards

ABOUT IDSA

The Association was formed in 1982 as a result of a meeting between Schools attending the American Diving Contractors Conference (Now 'Underwater Intervention') in New Orleans.

The aims of the Association were then, and are now ;

- To implement common International Standards of Diver Training
- To provide a means of effective communication between schools.
- To improve the quality of commercial diving education
- To work towards improved standards of safety, emergency drills and procedures.
- To provide a common and collective voice to government industrial agencies on any matter affecting members.
- To co-operate on matters which may improve placement opportunities for graduates from member schools.
- To promote any activity, idea or subject which furthers the international operations of the Association.

The Association is concerned with all divers - Offshore, Inshore and Inland - as well as non diving qualifications e.g. Supervisor, DMT and LST. The Association has established International Diver Training Standards based on the consensus opinion of its many members, they are available in a separate publication. The Standards provide both a yardstick for those responsible for either administering existing National Standards or creating new ones, and a guide for Clients, Diving Contractors and Divers themselves. It is considered that the introduction of these Internationally agreed diver training standard will have the effect of ;-

Equating Standards Internationally.
Providing Guidance to Organisations setting Standards for the first time.
Improving Safety.
Providing Contractors with a direct input to the Diver Training Syllabus.
Enabling Contractors to bid across National Borders on a more even playing field.
Improving Diver quality.
Providing Divers with greater Job Opportunities.

Some governments have and will, set their own National Diver Training Standards. The IDSA programme provides a means of equating them by maintaining a Table of Equivalence - see the Publications section of the Association's Website.

THE INTERNATIONAL DIVING SCHOOLS ASSOCIATION (IDSA) LIST OF MEMBERS

FULL MEMBERS (DIVER TRAINING)

Luksia Sukellusala	LEVEL 3	Finland
Royal Danish Navy Diving School	LEVEL 3	Denmark
The Ocean Corporation	TBD	U.S.A
Norwegian Commercial Diving School, Oslo (NYD)	LEVEL 3	Norway
Netherlands Diving Centre	LEVEL 3	Netherlands
Swedish Armed Forces Diving & Naval Medicine Centre	LEVEL 2	Sweden
YRGO-Commercial Diving School of Gothenburg	LEVEL 3	Sweden
CEDIFOP	LEVEL 2	Italy
Irish Navy Diving School	LEVEL 3	Ireland
Oceanos Escuela de Buceo Profesional SL	LEVEL 3	Spain
Ecole Nationale des Scaphandriers (ENS)	LEVEL 3	France

FULL MEMBERS (SPECIALIST TRAINING)

K B Associates Singapore
Interdive Services UK
National Hyperbaric Centre UK

ASSOCIATE MEMBERS

University of Southern Denmark Denmark
Arab Academy for Science, Technology and Maritime Transport (AASTMT) Egypt
National Institute for Commercial Diving (NICD) Egypt
Egyptian International Diving School (EIDS) Egypt.
Middle East for Commercial Diving (MECD) Egypt.
GT Corporation SE Estonia
Faroe Dive Faroe Islands
Institut National de Plongee Professionnelle (INPP) France
Centre Activities Plongee de Trebeurden France
Aegean Diving Services Limited Greece
Diver Ltd Hungary
Dolphin Dive Academy India
Israeli Professional Diving Academy Israel
Nahshon Marine Construction Ltd Israel
IDEA Contracting Kuwait
Baltijas Ronis ßß Latvia
Liepaja Maritime College Latvia
Technosub Mexico
Regional Centre for Underwater Demolition (RCUD) Montenegro
Almaghribia Marine Morocco
Centre Mediterraneen de Plongee Professionnelle (CMPP) Morocco
Mieka Dive Training Institute Ltd Nigeria
Seanergy Indian Ocean Reunion Island
ForesproSpain
PROfessional Diving Services Switzerland
MZPlongee Switzerland
Caribbean Diving & Marine Ltd Trinidad
Gulf Marine Contracting FZE UAE
Atlantis Marine Services LLC UAE
Santa Barbara City College USA
Divers Institute of Technology (DIT) USA

INDUSTRIAL MEMBERS

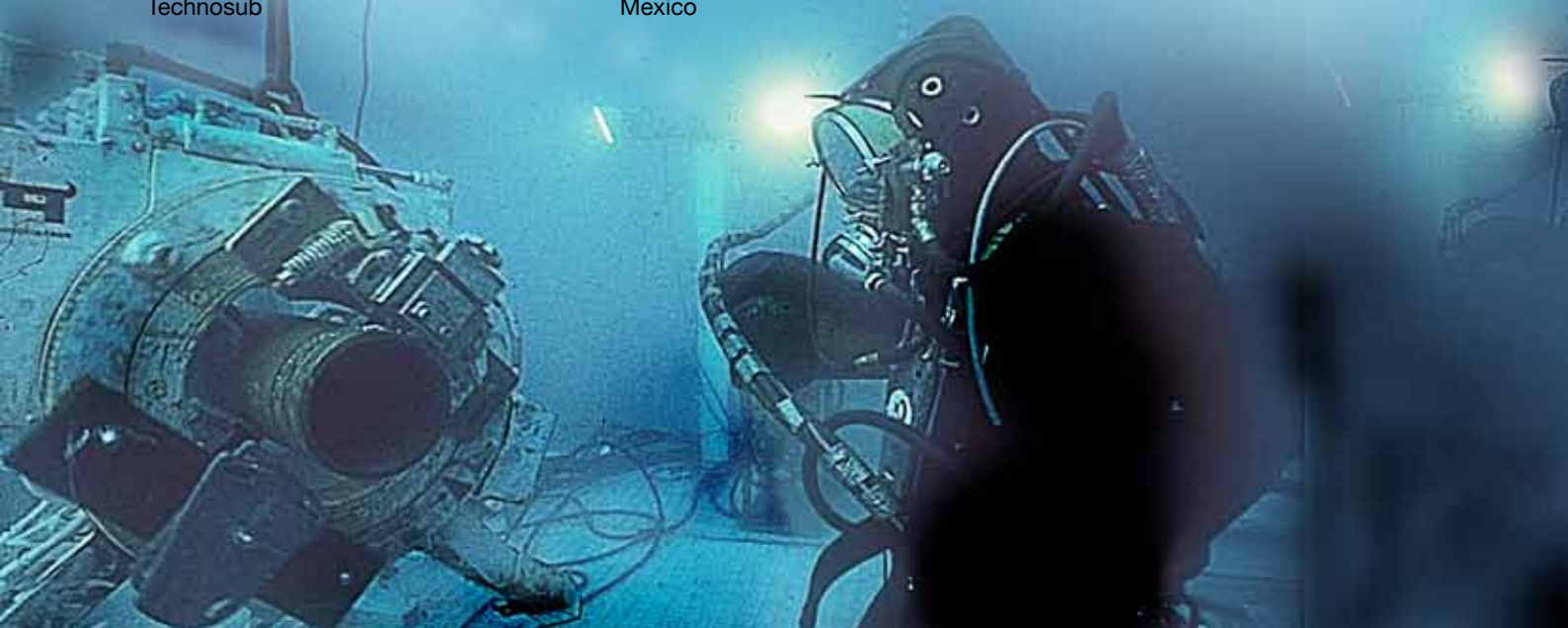
De Zeeman Pro NV Belgium
Drafinsub S.R.L Italy
Cavit Cleaner Limited Malta
IHC Hytech BV Netherlands
Norwegian Association of Underwater Entrepreneurs (NBU) Norway
Svensk Sjoentreprenad Sweden
Submarine Manufacturing & Products Lt d. UK

AFFILIATE MEMBERS

NAVFCO Military Diving School France
Aquamont Service Serbia
Neel Diving India
Scan Srl Italy
Eprons Ltd Latvia
Nautiek Netherlands
Western Norway University of Applied Sciences, Diver Education (HVL) Norway
BPN Explorer Poland
Deep Dive Est Saudi Arabia
Composite-Beat Engel Switzerland
Underwater Centre UK
Minnesota Commercial Diver Training Centre USA

RECIPROCAL MEMBERS

National Association pf Hungarian Commercial Divers (IBOSZ) Hungary
Alliance of Russian Diving Schools Russia
Association of Diving Contractors (ADC UK) UK
Association of Commercial Diving Educators (ACDE) USA
Association of Diving Contractors International (ADCI) USA



IHC Hytech
We keep you breathing
New Building

Decompression chambers

Diving panels

Personal gear

For almost three decades IHC Hytech is specialised in designing and manufacturing high-end commercial and military diving equipment. Every product that IHC Hytech makes or sells is supported by an extensive quality control and after-sales service. IHC Hytech is formed by a group of people, who have a wealth of experience in every area of commercial diving and are presenting a new perspective on many aspects in this field.

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