

INTERNATIONAL DIVING SCHOOLS ASSOCIATION

idsa

NEWS

EDITION NUMBER 12 / JULY 2008





Edition 12: July 2008

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*Front Cover
Photograph
shows divers
from the
Swedish
Armed Forces
Diving School*

ANNUAL MEETING 2008 WILL BE HELD IN PHILADELPHIA

Monday 15 to Wednesday 17 September 2008

ACCOMMODATION

The Conference Hotel is the Hyatt Regency Philadelphia, at Penn's Landing.

Address: 201 S Columbus Blvd
Philadelphia PA 19106 USA
Telephone: +1 215 928 1234
Fax +1 215 521 6600

BOOKINGS

Bookings must be made directly with the Hotel. A Special IDSA room rate (single or double occupancy) has been arranged at \$199/€127 per night.

Rooms may be booked in two ways, either by going to the Hotel Website www.pennslanding.hyatt.com then to 'Find Rooms & Rates' on the left hand side, entering your dates etc and typing the code G-DIVE in the window under 'Group/Corporate #'. Then click 'Check Availability' and book' or by calling the Hotel reservations number +1.800.233.1234 ask for "Divers Academy International" or use the code G-DIVE.

The reservation deadline at this special rate is 18 August 08.

TRAVEL

The fare for a Taxi with 3 passengers from the airport to the Hotel is about \$30/€19.

ATTENDANCE

In addition to delegates from member schools and organisations, the meeting will be open to non members by invitation; interested individuals and organisations should contact the Administrator info@idsaworldwide.org

The Registration Form is readily available from the News Section of our Website.

Wives or Guests wishing to attend meals and other social occasions, for example the Association Dinner, are welcome on payment of an appropriate fee.

THE CONFERENCE FEE

The Conference fee for each delegate is \$390/€250. (exchange rate as at 25 June 2008) This fee will include:

Attendance at the Annual Meeting

Welcome drinks Sunday evening.

Breakfast in the Meeting room Monday & Tuesday.

Lunch on Monday.

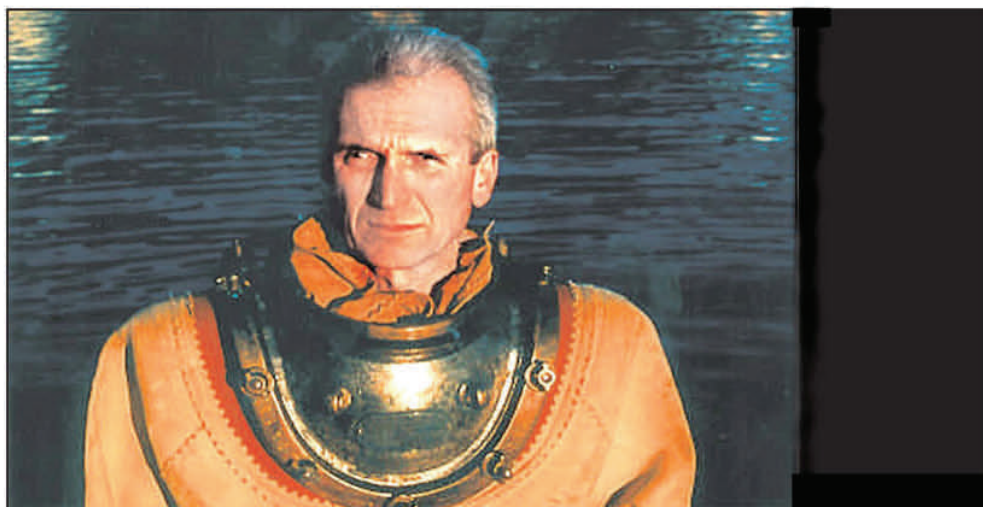
Lunch and the Association Dinner – including pre dinner drinks - on Tuesday.

Refreshments throughout
Tours.

Transport as required during the meeting, but not between the airport and the Hotel.



IDSA thanks Divers Academy International for hosting this event.



A LETTER FROM THE CHAIRMAN SIX MONTHS OF STEADY PROGRESS

Even though there have been no major landmarks since my previous Chairman's Letter, IDSA has been progressing slowly but steadily toward its target of creating an internationally agreed acceptable and accepted platform of guidelines and training standards for the education

of divers.

Professional diving has become a multi-faceted area of activity; the era of the "factotum" diver, capable of fulfilling all possible requirements and meeting all

needs for underwater construction and salvage, has faded away. In its place has emerged a picture of a more specialised diver, capable of operating on different tasks with different kinds competencies, within a limited field.

The diver of today is, necessarily, a specialist, whose expertise is characterised by depth of knowledge and skills, rather than the old willingness to 'have a go' at anything and 'hope for the best'. In the modern world, diving is no different from other professional activities - medicine, agri-

culture, shipping, and navigation for example - where the enormous expansion of knowledge and skills means that there is more and more requirement for the specialist and less and less room for the generalist.

Nowadays areas of expertise are not only more profound but, necessarily, narrower and the possibilities for 'transference of skills' are thus more limited, apart from at some very basic levels. Aquaculture, harbour services, salvage, oil and gas industries, are just some of the examples between which there is limited transfer of skills and we have learned to our detriment that too many casualties and fatalities have occurred - and continue to do so - because of the application of diving skills which are insufficient or inappropriate to the diving project.

IDSA has been working for more than a quarter of century to achieve training standards and educational programmes which can be agreed upon and accepted worldwide, standards which fully respect and adhere to national regulations and statutory instruments where they already exist.

As part of this, a growing number of members from an increasing number of countries are joining us in our efforts. In addition, *(continued page4)*

A Letter from the Chairman cont ...

reciprocal membership with several international and national associations and industrial entities has been and continues to be, put in place.

IDSA is a democratic organisation where decisions are made through majority voting.

A small number of member schools, often after a change of ownership or direction, have felt unable to accept the majority view and, regrettably, have resigned. In general, though, our steady progress is the result of discussion and negotiation, always with the good of divers and the industry in view. We take our standards and practices very seriously, and continuing membership by any individual or group depends on acceptance and commitment to them.

Industrial diving communities, because of the explosive expansion they have gone through during recent years, are facing conditions of technological strength and of human weakness.

Shortage of competent and qualified diving and supervising personnel, lack of preparation and education, forgery and faked certificates allowing non competent and non trained divers into the industry, lack of appropriate information on diving aspects among people dealing with engineering, are the drawbacks and negative aspects which Schools have to fight against.

Diver education, beside and above training, is the first target for IDSA. Schools have already started the valuable process of exchanging experiences and competences. This will be in the future the best possible service IDSA can provide for the industry and the professional diving community.

When I was elected as a chairman in Galveston two years ago I made a commitment "I will serve" In terms of concept, those words were and still are the meaning and the spirit of IDSA as it was created by Alan Bax and Jim Joiner 26 years ago (1982). IDSA is to serve the worldwide diving community by creating training and educational standards which produce divers capable of performing basic work tasks with a known level of safety and competence.

On this basis, each individual specialty or competence can be built and developed to the appropriate level. Without this uniform and internationally agreed educational platform diver's competence would remain unstable like trees having their roots in quick sand.

Julio Melegari

THE PROFESSIONAL DIVERS HANDBOOK

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for professional divers.



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ASSOCIATION & MEMBERS NEWS



The Board meeting at the Norwegian Commercial Diving School near Oslo.

Left to right: Julio Melegari (Chairman), Eric Clogenson (from INPP by invitation), Mark van der Esch (Treasurer), Dag Wroldsen (Secretary). The Administrator was unable to attend because of illness.

Dag Wroldsen (IDSA Secretary) has agreed to join the Board of the Hydrocat Diving School in Genoa.

The Administrator has agreed to join the Advisory Board of the Magazine H2Ops.

In February the Administrator also attended a meeting of the Diving and Manned Submersibles Committee of the Society for Underwater Technology (SUT) in London. He has been a member of the Committee for some years. It's members are drawn from a wide range of diving activities Commercial, Recreational, Scientific etc, and includes representatives from HSE and IMCA.

Among the many things discussed in preparation for the Annual Meeting in Philadelphia were:

The introduction of 'Reciprocal Membership'

An exchange of Membership with Organisations whose aims are similar to those of IDSA, and from which both sides can benefit.

The Programme and Agenda for the Philadelphia meeting.

Consideration of the advantages obtained by the previous decision of the Association to become a Corresponding Member of IMCA.

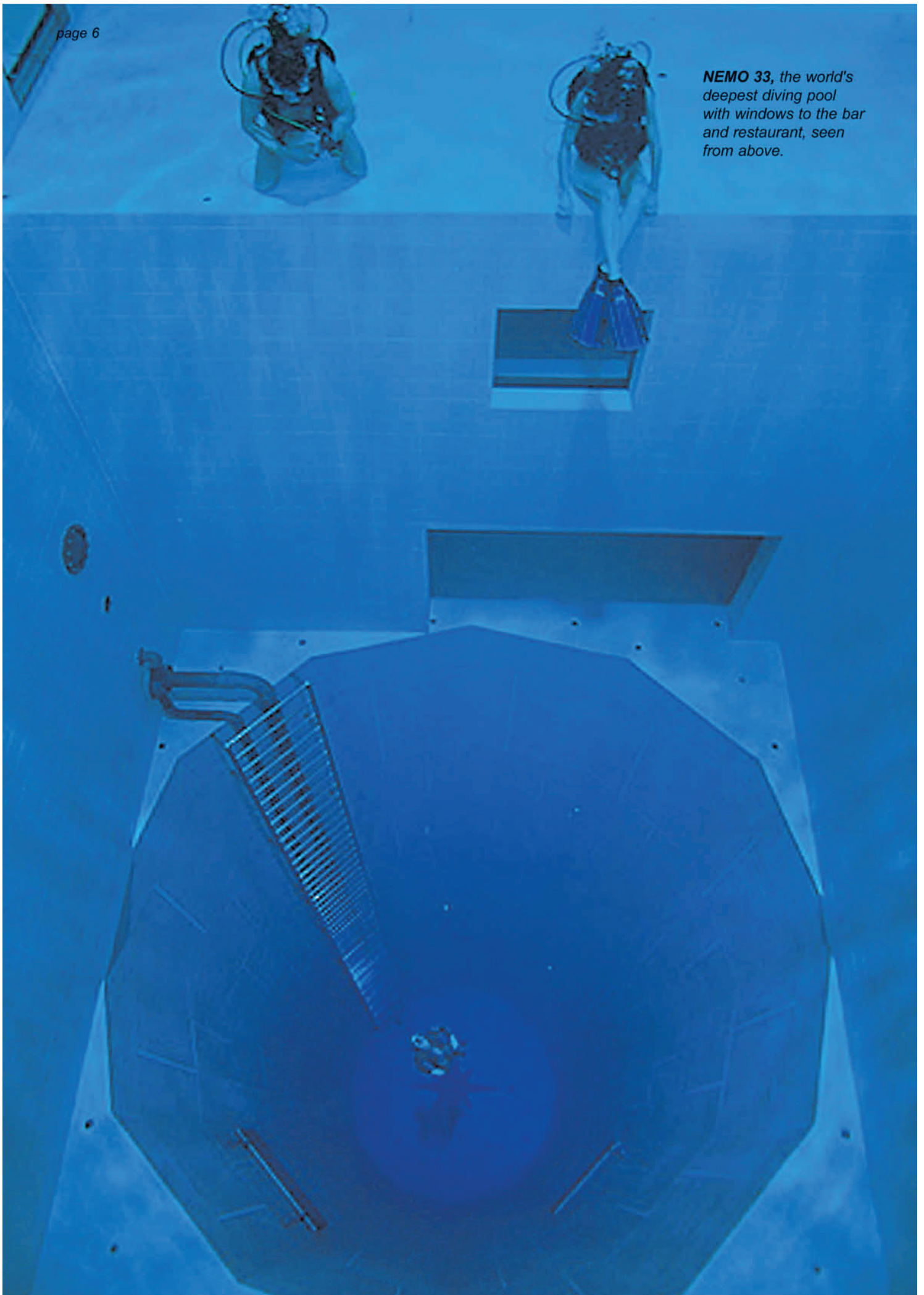
Minor changes to the Rules & Regulations
The possible increase in Membership fees.
The content of this Newsletter, including the change in the layout of the front page
The possible change of the Association Logo.

Correspondence with various members.
The possibility of working more closely with Europe.



Part of the SUT Committee at their meeting in London.

NEMO 33, the world's deepest diving pool with windows to the bar and restaurant, seen from above.



NEMO 33 WORLD'S DEEPEST DIVING POOL

During their meeting in Brussels last November the Board visited the deepest diving pool in the world. It was built at the turn of the century and opened in 2005. It is composed of different levels at different depths: -1.2m; -4m; -10m; -35m. The water is permanently heated to 30° C, by solar energy. The panels are installed on the roof. It is located on the south-west side of Brussels with easy access and parking facilities from highways and ringroads around the capital.

At the -4 level four large windows look out into the bar and restaurant facilities so you could order a delicious thai dinner and drinks from there.

At the -10 m. you will find two "habitats" with drawings and decorations of captain Nemo's Nautilus in one of them,

and of an underwater icecave in the other. From that level you hang in the water above the - 35 m. deeper level. The deepest tiles are covered by the compass rose indicating the cardinal directions.

The facilities can be used for receptions, fairs and meetings. Anybody wanting to dive can come, following the main rules as set out by the major sportsdiving organizations.

The price is of 20 € for one dive of 1 hour for a person without PDI (Personal Diving Identity which is generated through the NEMO website). According to the hours, the prices then vary between 12 and 16 euros. From June 2008 all divers must wear a dive computer.

Website: <http://nemo33.com>



"Barman! make mine a Nitrox" Board members Mark and Dag order a couple of wet ones for later through the bar window at level -4 of the world's deepest diving pool.

ABOUT THE AUTHOR

Steve Barsky is a graduate of the Marine Technology program at Santa Barbara City College. He worked as a commercial diver in the North Sea and Gulf of Mexico, and now works full-time as a consultant, underwater photographer, author, and filmmaker.

Training divers to work in contaminated water is one of the most important skills you can give to your students today. The reality of our world is that there is almost no place where people work underwater where there isn't some type of pollution present. While many of the contaminants may be at low levels, repeated exposures can lead to long-term disability or death.

The most common types of contaminants are biological and petrochemical products. While most biological agents may only make a diver sick over the short term, some can cause debilitating diseases.

Toxic dinoflagellates, such as *Pfisteria* *Picicida*, can cause sores on the skin, memory loss, and mood changes. These organisms have been identified along the Southern coast of the U.S. but are undoubtedly present in other warm water areas around the world.

Petrochemical products, such as oil, gasoline, and diesel fuel are common in most harbors. These hydrocarbons are all known carcinogens, i.e., cancer causing agents. Of course, direct contact with petrochemical fuels can cause eye damage and skin irritation. Other chemicals can disrupt liver func-

TRAINING DIVERS TO WORK IN CONTAMINATED WATER

BY STEVEN M. BARSKY

*He has published numerous books on diving topics including **Diving in High-Risk Environments**, **The Simple Guide to Commercial Diving**, and **Investigating Recreational and Commercial Diving Accidents**.*

TYPES OF HAZARDS

Biological contaminants are especially common along coastlines where there is livestock, such as cattle, pigs, and sheep. However, any location where there are leaking septic systems or where raw sewage enters the water due to an accidental spill or ruptured pipeline can cause serious illness.

Swallowing *E. coli*, found in human and animal wastes is a common bacterium that will leave most people very sick. If fecal coliforms are present, it's a safe bet there are probably several other forms of biological pollution as well. Other dangerous bacteria include *Cholera*, *Vibrio vulnificus* and *Aeromonas hydrophilla*. *Cholera* is a good example of a bacteria that can survive in seawater.

Like bacteria, many protozoans occur as a result of pollution. For example, eight different species of *Acanthamoeba* occur in polluted waters. This deadly single celled organism causes inflammation of the spinal chord, with death as the end result.

Giardia lamblia, another protozoan, causes intestinal pain, diarrhea, and high fever. *Giardia* has been positively identified in stool samples taken from the New York City Fire Department dive team members.

One of the most commonly known viruses, Hepatitis type A survives outside the body in both fresh and salt water. In Hepatitis A, the subject's liver will become inflamed. Like other disease producing organisms that spread through contact with raw sewage, hepatitis can be found in fecal matter.

tion, or can cause lung, nerve, or muscle damage.

Most harbors also have silt or mud on the bottom that has accumulated contaminants that have entered the harbor through run-off from the land, as well as intentional or accidental dumping. One of the most toxic chemicals found in the marine environment is tributyltin, which is used to paint the hulls of large ships. This chemical is designed to kill organisms such as barnacles and marine worms. The poison is designed to move through the cell walls of animals at the molecular level. Divers who work on ships hulls, or in the sediments of harbors, who are not properly protected may absorb this toxin through their skin.

Another critical hazard in many contaminated water dives is overheating of the diver. One way to combat this problem is with chemical cooling vests. These vests are designed to use "phase change" packets which can be reused and draw the heat away from the diver's body.

Wear the Right Equipment

As divers, most people accept these contaminants as part of the risks of diving. However, there are simple steps that can be followed that will help to prevent these dangers. The recommended protection against most of these pollutants is a vulcanized rubber dry suit, with a mating helmet, and dry gloves. Keep in mind, however, that there is no one set of diving gear that will protect a diver from all chemicals. The tenders who

assist the diver must be properly protected as well.

Of course, even if you wear the right equipment, accidents can still happen. Several years ago, a diver working on a sewer outfall accidentally punched a hole in his foot with a high-pressure water blaster. Because he was not wearing foot guards or steel toed boots, the water jet punctured his dry suit and injected raw sewage into his foot. The diver suffered a serious infection and had to undergo multiple "debridements," where tissue is removed to cut away the infection. Following this accident he was unable to work as a diver. Following the dive, the diver must be properly decontaminated to remove all traces of contaminants from the diver's equipment. All of the equipment for decontamination must be set up prior to the dive.



Dry gloves are essential part of the equipment for contaminated water diving. The diver must be totally encapsulated.

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TRAINING IS KEY

Training for contaminated water diving should include dry suit training, the use of surface-supplied gear, hazard recognition, and decontamination procedures. A basic course in hazardous materials procedures is essential. The ADCI in the U.S. has established a standard for polluted water diving that is available as part of their Consensus Standards. IMCA has also published a document on this topic.

The golden rule of diving in contaminated water is that if you don't know what is in the water, you must not dive. Unfortunately, most divers don't think about this prior to entering the water, unless there is an obvious problem.

However, just because the water does not smell bad, or look bad, does not mean that contamination is not present.

Most developed countries have governmental water quality agencies that can tell you what the baseline contaminants are in any major body of water. Unfortunately, it's rarely possible to know if someone has dumped something into a river or harbor upstream from where you are working.

While the diving procedures themselves are virtually the same for diving in contaminated water, it's the dress-in and removal of gear that are most critical. Extra care must be taken during dress

One of the areas that most divers fail to think about is the transfer of contamination of infectious diseases from one diver to another. This can happen anytime a diver shares a diving helmet, dry suit, or dry suit underwear. This equipment must be sanitized between use by different divers to avoid potential health risks. With the rise of MRSA (methicillin resistant *Staphylococcus*, i.e., staph) this danger has become particularly acute.

Contaminated water diving is an unfortunate reality in our world today. Fortunately, with the right equipment, training, and procedures, we can eliminate much of the risk in this type of work.

Steve Barsky



Weldcraft Pro Underwater Welder Training

Speciality Welds Ltd (an IDSA Affiliate Member) are pleased to announce the underwater welder training course 'WeldCraft-Pro'® is now fully accredited through EAL/SEMTA Awards. This training course is based on an 80 hour syllabus, split over two phases (dry and wet). The course is open to non-welders and welders alike and follows the International Institute of Welding (IIW) syllabus 570-01 for fillet welder - plate.

The WeldCraft-Pro® already has an excellent track record, with training established since 1990. However, we can now, for the first time offer diver training schools a fully accredited '**self-teach**' programme, through our accreditation under EAL (part of SEMTA) - Sector Skills Council for Science, Engineering and Manufacturing Technologies; the leading awarding-body for engineering qualifications. This accreditation provides independent quality assured, audited recognition. Thus, making this course the only externally awarded underwater wet welding programme to issue internationally recognised qualifications, anywhere in the world.



The WeldCraft-Pro® uses a well proven, documented methodology to teach, utilising our professional materials, expertise and accreditation, but using the dive schools own staff and facilities. Thus, allowing schools to deliver a recognised verified welding programme, using our approved centre status, to issue internationally recognised welding certification. David Keats the author of the course has been involved with the world of underwater welding for over 25 years and is both an accomplished author and an accepted industry expert in this field. David says; "the first underwater welding course I ran was back in 1990 and was cutting edge, but had only a very limited market in those days. However, wet welding has seen an explosion in demand since these early days and we have continued to develop and provide specialist sub-sea welding services to the diving industry, ever since".

As accredited UKAS/SAFed welding surveyors, Speciality Welds can also offer insurance authority approved welding certificates for both above and below the waterline.

David Keats says: "I am very excited about this new '**self-teach**' package, as it marks a fresh new step in welder training; allowing established diver training schools to adopted a training package that fits in with their own expertise and course calendar, but offers qualifications through a recognised engineering awarding-body". As a result, we hope to see fewer and fewer schools running 'add-hock' welder training and instead, opt for this cost effective approach. This will provide all their divers with the highest possible range of welding skills; equipping them for an exciting new career in a world of underwater welding. We welcome all enquiries from any dive school wanting to adopt this system.

Applications for enrolment are available for our website at:

<http://www.specialwelds.com/services/underwater-welder-training.htm>

More information about EAL and SEMTA can be found at their website at:

http://www.semta.org.uk/about_us/semta_group.aspx



INTERDIVE SERVICES LTD

NEW DIVING BELL SIMULATOR!



Inside the Bell

Interdive Services Ltd, the UK based Diving Operations Management and Training Company has added a diving bell simulator to their list of hi-tech equipment used to provide quality training in their Plymouth school.

The "Bell" has been installed in one of the lecture theatres and from the outside appears nothing special. However, on climbing in through the lower manway the interior appears just like the real thing! It includes umbilicals, communications, survival packs, gas manifolds, valves & pressure gauges & diver recovery equipment, in fact all the standard equipment one expects to find in an offshore saturation system diving bell.

The bell simulator was installed to give bell divers and diver medics the opportunity to carry out diver rescue drills and practice related medical

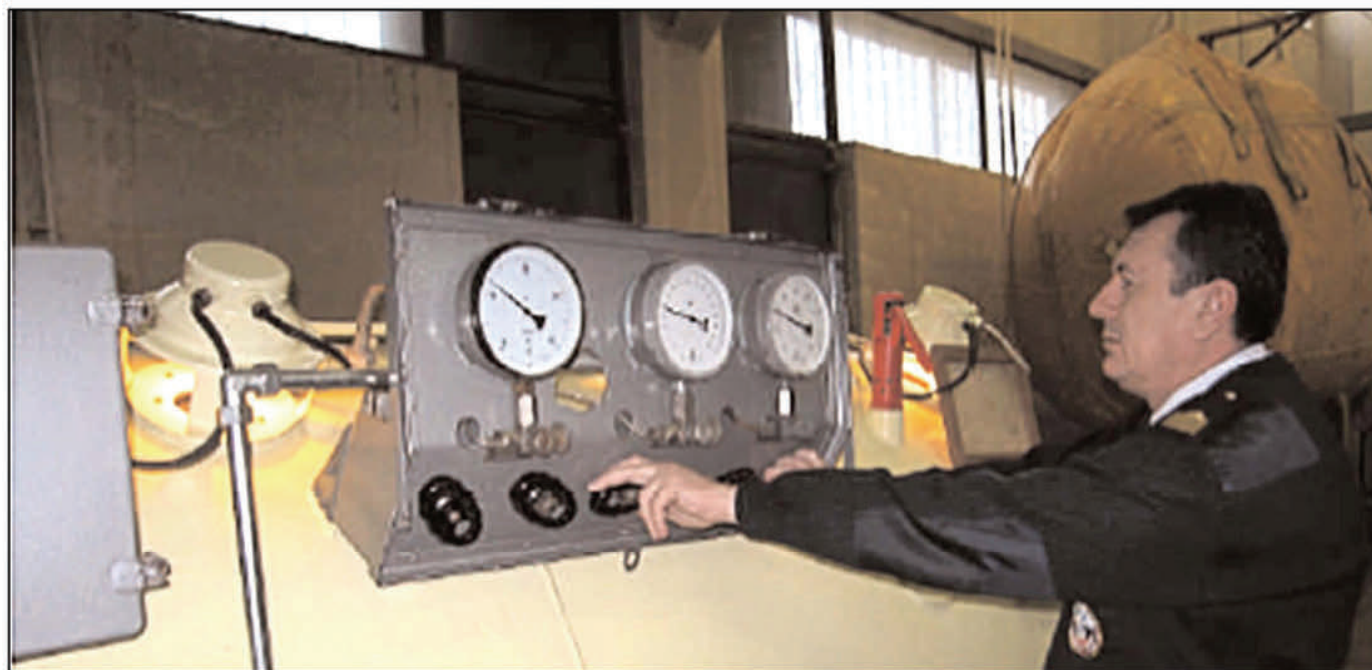
emergencies and first aid procedures such as Mouth to Mouth and CPR which require different techniques inside the cramped confines of a diving bell.

So far, after several scenarios with many experienced offshore bell divers & supervisors, the feedback has been very positive providing both food for thought for Interdive instructors as well as the candidates going back to their companies to discuss drills for the recovery & treatment of ill, injured or even unconscious bell divers.

For further information

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Fax: +44 (0)1752-56 90 90
E-mail: Diving@interdive.co.uk

PODVODRECHSTROY DIVING SCHOOL MOSCOW RUSSIA



The Podvodrechstroy Diving school has been training for more than 40 years. Now it is one of the main diver training facilities in Russia. The school teaches commercial divers, diving supervisors, rescue divers, and recreational divers.

It also organises consultations and seminars for specialists on the latest techniques and innovations in new equipment, diving technologies, questions of law and regulations, ecology and environmental guidelines. The School's Central Diving Qualification Commission evaluates divers and supervisors levels for annual renewals.

There are about 300 divers from different Russian and international companies and organizations take part in training process at School base every year.

Diving School has special classrooms for teaching scuba, surface supplied equipment, underwater construction, survival and rescue, maritime, diving physiology, etc. It also has a 25-meter

swimming pool and 5 smaller pools which are used for for special training - welding, cutting etc.

The Podvodrechstroy School has been licenced by the Education Department of the Russian Government in Moscow since 9 July 2003 under licence number A 102501, reg.014728 for Professional Diving Teaching.



Victor Zgursky,
Podvodrechstroy Diving School Director

18 MAN STRONG RUSSIAN DELEGATION VISITS NYD



The visit of an 18 man Russian delegation to the Norwegian Commercial Diving School (NYD) near Oslo on the 24th of May 2008.

Among the delegates were representatives from the Russian underwater entrepreneurs and salvages companies, from Russian authorities, Academy of Sciences, diving equipment manufacturers and the diver training centre. Leader of the delegation Chief Diving Specialist Sergey Smolsky from MPCSA, Ministry of Transport of the Russian Federation has visited NYD several times last 3 years and therefore knows the school and the staff very well.

The delegation was given a brief presentation on NYDs activities, IDSA training standard, international cooperation in the diving business etc. Then they were given a sightseeing tour of the school. The Russians was especially interested in NYD's new offshore training facilities including open and closed bell indoor training.

After the sightseeing NYD staff invited their new Russian friends to a barbeque on the pier. A number of speeches were given by Russians and Norwegians. Ex Captain Sergey Smolsky gave a very interesting presentation on the battle in the Oslo fjord April the 9th 1940. The nazi battleship Blucher was sunk by the Norwegians and the wreck is lying on 90 meters depth just outside NYD diving site.

We all agree on this is just the first step on a closer relationship between the Russian and Norwegian diving industry especially when it comes to training and equipment. I off course invited General Director Sergey Logachev, from the ex military now privatised diving school, in

Voroneg to join IDSA. The barbeque party went on until midnight. We shook hands, exchanged gifts; traditional vodka and bread from the Russians, aquavit and flags from the Norwegians.

We all agreed that it is very important for the two diving schools, NYD Oslo and the Voroneg school to cooperate in training Russian divers to international standards.

The Russian left behind some interesting diving gear for testing at NYD. It includes a free flow helmet, hot water suit, diving panel etc. NYD do more than 4000 dives each year, 1500 between 30 and 50 meter. That gives the Russian a unique opportunity to test their equipment and it gives the NYD staff and students a unique opportunity to see other technical constructions and solutions, dive and try on the non-western made equipment.

The cold war is definitely over; old enemies have become good friends, good neighbours and good business partners.

Dag Wroldsen, Director



General Director Sergey Logachev, shaking hands with NYD Director Dag Wroldsen



Dag Wroldsen making his presentation on the new Training facilities at the Norwegian Commercial Diver Training School, Oslo (NYD)

DIVING SEMINAR IN LYSEKIL SWEDEN MAY 22ND & 23RD

The seminar was held in the small Swedish west coast town Lysekil. The location was Lysekil hotel and host was Si Tech general manager Stig Insulan well known in Scandinavia after 50 years in the diving business. Everything was very well organised by Stig and his team including an excellent seminar dinner and a small exhibition. About 60 participants from the industry, authorities, diving schools and organisations such as the Swedish Coastguard, Swedish Work Environment Authority, Norwegian Labour Inspection Authority, Smith Salvage, Noordhoek Offshore, Technip, NYD, Norwegian Association for Diving Contractors (NBU), and the Swedish Diving Entrepreneurs and contractors. Also many companies specialising in survey, manufactures of diving equipment and underwater gear, manned subs, ROVs etc. Of special interests was the large Russian delegation with representatives from Russian authorities, the diver training centre, manufacturers, the Science and Research Institute and contractors from Moscow, the Black sea area, Murmansk, St.Petersburg and other places.

There is a huge, well-developed and vital Russian diving industry of which some Western delegates were unaware. Hopefully

this was the first real step for the Russians to join the international underwater society.

Other nations represented in addition to the Scandinavians and the Russians were UK, USA and the Netherlands.

One Swedish Coastguard vessel demonstrated diving and how to fight oil pollution in Lysekil harbour.

Many interesting presentations by manufactures on survey gears such as AUVs, video, side scanner sonar's etc.

Noordhoek Offshore presented their TUP diving method which they have successfully used in the North sea for the last 3 years, the Norwegian Commercial Diving School, Oslo (NYD) presented their new closed bell training complex and how to give modern and adequate training in deep air diving operations.

The Russians made many interesting presentations on their ex military now privatised diving school, various research and development projects at the Tambov Chemical Science and Research Institute, and new diving equipment, rebreather, free flow helmet etc manufactured by Sergey Smolsky, the Coastguard gave a interesting presentation on World War 2 wrecks in the Skagerrak and the Baltic Sea and the problems they have with oil spills and chemical dump grounds.

All in all a very interesting seminar arranged for the first, but hopefully not the last, time.

Dag Wroldsen

TRANSFER UNDER PRESSURE

(TUP)

A BRIEF
HISTORY
BY JULIO
MELEGARI

TUP, as a concept, was generated nearly a century ago. When the recently born (1831) heavy gear divers and the caisson workers started diving deeper and staying longer at depth around the end of the 19th century an unprecedented disease, the "caissons disease" or "bends", popped up, crippling and killing them at an increasing rate.

Diving physiology and hyperbaric medicine, similarly new born, indicated that appropriate decompression or immediate recompression were the only available therapeutic remedies.

Therapeutic recompression chambers were used for the very first time by Sir Ernest Moir during the trenching of the tunnel across Hudson River by caisson workers in 1893.

Helmet divers had to wait for an appropriate solution to their problem which came in the mid 1920s, when Sir Robert Davis conceived the idea of a submersible decompression chamber (SDC) capable of being lowered to the appropriate depth and receiving the diver at the end of his dive.

Inside the SDC there was an assistant who eased the entry of the diver into the bell and took his helmet off. The bottom hatch of the SDC was then closed and the chamber recovered on to the deck of the support ship where the diver could be decompressed safely and comfortably, following the appropriate tables, and not suffering the risks and the inconveniences of being decompressed in the water.

The first SDC became fully operational in 1928. In 1931 Sir Robert Davis conceived and built a three lock deck decompression chamber (DDC) capable of mating with the SDC and of allowing the transfer of the diver into the deck chamber, thus leaving the SDC available for another diver to be picked up at depth at the end of his dive. TUP was then born, both as a concept and as a current

mode of operation.

Several decades later, in the late 1950's, the discovery and exploitation of Offshore oil and gas caused an explosion in the demand for diving services. The SDC, originally fitted with an internal hatch only, was upgraded by the addition of an external hatch thus acting as an underwater elevator to take divers to the seabed and then back again to the surface, instead of serving as a mere submersible decompression chamber.

The concept of SDC fell into oblivion, and surface oriented diving in the air diving range relied on in-water decompression using a wet, an open bell or surface decompression, in spite of the shortcomings that this method too often created.

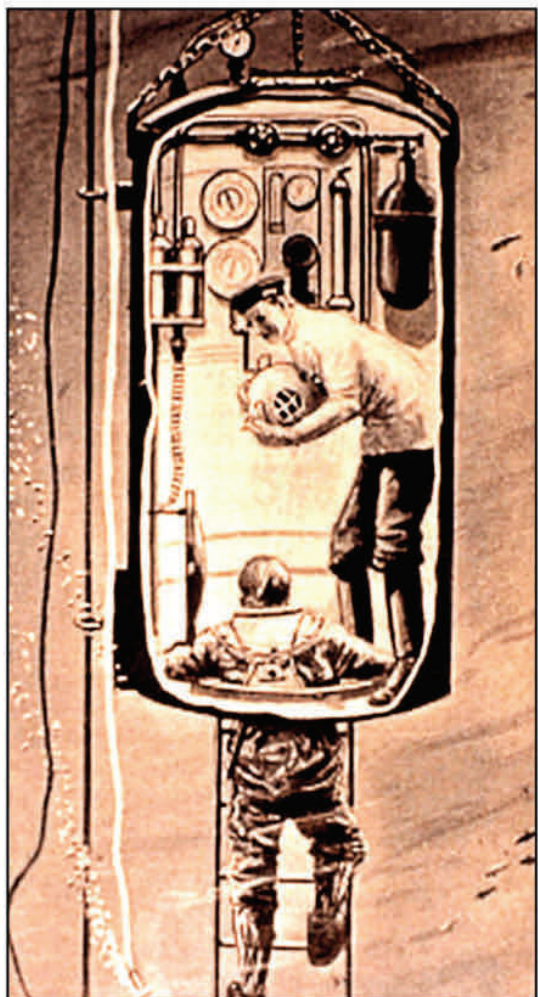
More recently, in our current days, the concept of TUP has been brushed up and considered efficient, safe, cost effective and practical.

The reasons and the implications are the following: divers are safer and not exposed to the unpredictable events and possible delays which may occur between the moment the diver surfaces and the moment he is inside the deck decompression chamber (DDC) being recompressed, longer bottom times can be afforded at critical depths (25 - 50 metres) without increasing the risks of decompression exceeding the pre-planned one, divers have an underwater shelter close to their working location and diving depth and a shorter length of umbilical can be used.

In terms of training for a perspective professional advancement into the area of deep diving in the mixed gas range and in terms of acquiring familiarisation with a SDC - DDC system there is a sound acquisition of experience and competence. In terms of costs, complexity, and deck space requirements there is not much difference between a system based on a wet bell with DDC, and a system inclusive of SDC and DDC.

Incidence of decompression shortcomings appears to be statistically highly reduced by the use of TUP if compared to the traditional air diving systems based on surface supply methods.

A TUP system is being installed at the Norwegian School in Oslo. It is inside a specially adapted building where the conditions of an operating environment on board a diving vessel are reproduced. A description of the system was given in the previous edition of this Newsletter - IDSA News 11.



**A diver entering
the Davis
Submerged
Decompression
Chamber (SDC)**

ceived and built a three lock deck decompression chamber (DDC) capable of mating with the SDC and of allowing the transfer of the diver into the deck chamber, thus leaving the SDC available for another diver to be picked up at depth at the end of his dive. TUP was then born, both as a concept and as a current

SHORT NOTES



CO2 REBREATHER INCIDENT

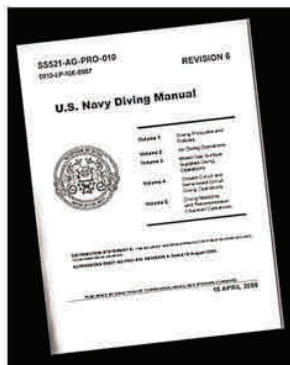
HSE has released a video made by SKY news shows real footage of an incident where a rebreather diver suffers from Carbon Dioxide poisoning. The video takes the viewer through the incident, explaining how it came about and the lessons that can be learnt. Whilst the video is primarily aimed at rebreather divers, there

are issues such as bail-out gas consumption, team size and rescue that may be useful to all divers.

The film carries no copyright and can therefore be distributed to all interested parties.

The CD may be observed or downloaded by going to: www.hse.gov.uk

On the top right of the Home Page you will find a window 'Your Industry', type 'diving'. This takes you to the diving section, on the right of the page is a blue window headed 'CO2 Rebreather Incident', click, and the CD may be viewed or downloaded from the new page.



REVISION 6 TO THE US NAVY DIVING MANUAL DATED 14 APRIL '08

This new edition is the largest change to the US Navy Manual for 52 years, and contains revised decompression tables and schedules which should be noted by all members who

are using it or using it as a Guide.

It may be obtained by going to: www.supsalv.org

In the centre of the home page under 'Latest News' click on 'here'. In the centre of the next page in red text in the column marked 'Title' are the downloading instructions.

It is a very large document and should be downloaded using a high speed internet connection.

Recommend downloading it to your local drive instead of opening the file from your browser.

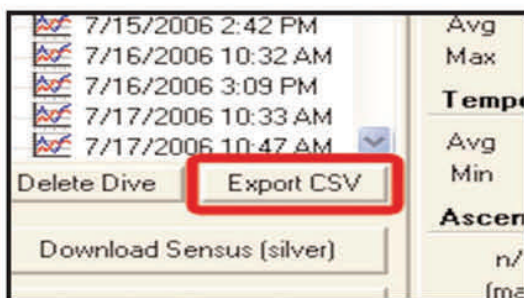
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MINING DIVE DATA USING SENSUS ULTRA

KRIS WILK, REEFNET INC.

In the previous issue of IDSA News the article entitled "Automating Student

Recordkeeping with Sensus Ultra", introduced ReefNet's dive data recorder as a convenient and extensible student data logging tool. Without intervention, Sensus Ultra collects precise depth and temperature profiles for up to 1500 dive hours, with a service life of up to 10 years.

Once recorded, dive data are processed using one of three workflows, ranging from using ReefNet's bundled software as a simple logbook to developing custom software for tracking & analyzing large numbers of divers.

This article elaborates on the intermediate approach. Namely, using ReefNet's software to download data and then manipulating it externally to produce customized results.

Consider a dive school with a few dozen active students, each of which is assigned a personal data recorder for the duration of his training. This simplifies data handling since recorders are uniquely serialized, and ReefNet's Sensus Manager software automatically sorts dives by serial number.

By itself, Sensus Manager presents depth and temperature profiles, dive log summaries (average and maximum depth, temperature, ascent rate, etc.), and permits the addition of notes to each dive record. This is usually satisfactory for daily logging purposes. However, as an instructor or administrator, you need to gather bulk statistics and must verify that each student has met key program requirements.

To accomplish these tasks, you must first export a data set from Sensus Manager. Individual dives or batches of dives may be exported to a simple comma-separated-value (CSV) file with a single click

The generated CSV file contains lines that look something like:

19,SU-

06429,0033932869,2007,7,21,16,48,53,120,1236,301.48

Each line represents a single pressure/temperature sample recorded by the logging device. The data provided are, in order: dive number in the output file, device serial number, unique dive ID, dive start time (year, month, day, hour, minute, second), time offset in seconds,

pressure in mbar, and temperature in Kelvin

Because of its generic format, exported data may be opened directly using any spreadsheet or text editor, where simple macros or scripts can be used to massage it as required. For instance, one can tally the maximum depth, total bottom time, and dive count. The CSV files can also be archived without concern over future software compatibility.

What about more complex reporting? Let's say you need to verify that each student has spent at least 10 hours at a depth of >40 m within the past 30 days. This can be accomplished by first filtering the data set by depth and date and then tallying the accumulated dive time. Achieving the same level of reporting with paper records or proprietary dive computers is usually impossible.

By developing a set of custom macros and scripts, many otherwise tedious data processing tasks can be completely automated. As the number of students increases, so does the time-saving benefit of automated recordkeeping.

A great example of the true potential for customization is the ScubaBase Sensus Profile Viewer*. This Microsoft Excel file includes a powerful VBscript program. After feeding it a CSV dive record, it computes and graphs a nitrogen loading model for the dive using adjustable parameters.

And like ReefNet's own software, it is completely free.

For more information, visit:

www.reefnet.ca

or contact Kris Wilk: wilk@reefnet.ca

*available from:

<http://users.skynet.be/fb588158>

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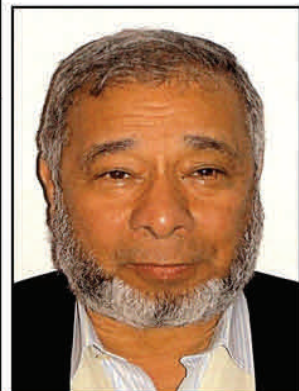
MORE NOTES



ARABIC COMMERCIAL DIVING MANUAL

Captain Mohsen El Gohary Head of the International Academy for Diving Technology based in Alexandria has recently published a series of Commercial Diving Manuals written in Arabic covering the majority of the IDSA Syllabus.

He is to be congratulated on completing such a task, and details of the Manual may be obtained from him at: elgoharyadt@yahoo.com



**Associate Member,
Captain Mohsen El
Gohary Head of the
International Academy
for Diving Technology
based in Alexandria.**

Look out
for the
IDSA
page in
UCi
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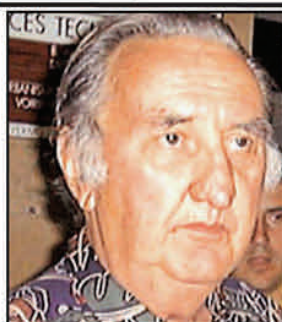
MARINE CENTRE, MUMBAI INDIA

Formally opened in 2000 in Mumbai, this purpose-built campus includes a semi-Olympic pool, 2,000 sq.ft. of gymnasium, fitness centre, a conference hall, and accommodation for 20 students. Additionally, a new building now completed provides 21 spacious air-conditioned rooms including administrative offices.

The owner/director, Captain Partho Das, has 40 years experience in the maritime world, including owning and managing shipping as well as a keen interest in underwater exploration

and Diver Training.

He is committed to providing the highest standards for diver training in India and has, accordingly, joined IDSA as an Associate Member, working towards meeting the requirements of Full Membership.



ANDRE GALERNE

Members will be sorry to hear of the death of Andre Galerne, who died in May.

Born in France he moved to the USA in 1962, and founded the well known Company International Underwater Contractor (IUC). His career in the diving industry spanned over sixty years. His passing will be a great loss to all who knew or worked with him.

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