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Dear Members

hope that you have all had a successful start to 2016, and I am pleased to welcome the following new members of the Association:

- Gulf Marine Contracting FZE
 United Arab Emirates
- Nahshon Marine Construction Ltd. Israel
- Daryakav Jonoub Co Iran

While on the subject of Membership, I regret that I have to report that after considerable discussion the Board agreed that the Membership of the YAK Academy situated in Mumbai should be terminated. The Academy contravened a number of IDSA Rules and did not change them after several warnings, it was a difficult decision, but the Board considered that it was essential to uphold the Standards of the Association.

Planning for the next meeting which will be in Larnaca, Cyprus 11 to 14 October, has been slower than usual. The details have not yet been finalised, however, preliminary information is given later in this issue and full details will be sent by Memo to all members as soon as they are ready. If you have any questions concerning the arrangements, before the Memo is circulated, please contact the Administrator.

Looking to the future, following the discussions in Cork, we are working on the first change to the Standards and plan to circulate them to members well before the Larnaca meeting, so that they can be considered and there is time for comments, suggestions or corrections to be returned to the Administrator by **1** August.

Your input to the Agenda for the Annual meeting will also be most welcome, please send you your ideas and comment by **1 September.** The posts of Honorary Secretary and Treasure are open for nominations, please send them together with the agreement of the person nominated, to the Administrator by the same date.

We are maintaining our contacts with IMCA, EDTC etc and are slowly improving our liaison with them.

Finally the transfer of the Administration and accounts to Delft continues, although it is a slow progress - as everybody has much to do – it is being carried out in conjunction with our ISO application, and we hope that there will be more to report before the Annual meeting



Sincerely, Leo Lagarde, Chairman

THE IDSA ANNUAL **MEETING IN** LARNACA Wednesday 12th to Friday 14th October 2016

About Cyprus

Cyprus, is the largest island in the eastern Mediterranean some 350km from east to West and 100km from North to South. It has a rich, turbulent history stretching back over 4500 years. Known for its beaches, it has a rugged interior with wine-growing regions. The population is well over a million, the local languages are Greek & Turkish but English is widely spoken, and the currency is the EURO.

Cyprus gained its independence from the United Kingdom in 1960. Despite a constitution which guaranteed a degree of power-sharing between the Greek Cypriot majority and the Turkish Cypriot minority, the two populations - with backing from the governments of Greece and Turkey, respectively, clashed in 1974, with the end result being the occupation of the northern and eastern 40% of the island by Turkey. In 1983, the Turkishheld area declared itself the "Turkish Republic of Northern Cyprus". So far, only Turkey recognizes the TRNC, while all other governments and the United Nations recognize only the government of the Republic of Cyprus over the whole island. The UN operates a peacekeeping force and a narrow buffer zone between the two Cypriot ethnic groups. Fortunately, open hostilities have been absent for some time, as the two sides (now with the growing involvement of the European Union) gradually inch towards a reunification of some sort.



About Larnaca

Larnaca is an area of outstanding beauty - endowed with numerous attractions, waterfronts and scenic vistas as well as some of the islands most outstanding beaches. It is located on Cyprus' southernmost coast and is the country's third largest city and home to the second largest commercial port. Larnaca's International Airport is located in the outskirts of the city with easy access to and from the city centre. The Meeting Programme

The meeting will follow the lines of previous meetings beginning with Registration in the evening of Tuesday (11th) and ending midday Friday 14th. Thursday afternoon being given over to presentations/excursions followed by the Association Dinner in the evening Accommodation

A special rate is being negotiated at one of the leading Hotels, and full details will be circulated to members by Memo as soon as arrangements have been made. The intention being that the meeting takes place in the Conference

Hotel

Attendance & the Conference Fee

The meeting is open to both Members and non-members - the latter as observers. The Conference Fee this year is expected to be about €300 per delegate for Members and €350 for non-Members. This will include Attendance, welcome drinks on Tuesday evening, refreshments throughout the meeting, Lunch Wednesday, Thursday & Friday, the Association dinner on Thursday. and any necessary transport.

Wives or Partners wishing to attend meals and other social occasions e.g. the Association Dinner may do so paying the amount relevant to the event. Travel

Larnaca International Airport is the main airport of the Island and is about 5km from the town centre. The easiest method to get from the airport to the Hotel is by Taxi.

IDSA ANNUAL CONFERENCE Cork, Ireland September 2015

Over thirty delegates were present at this year's meeting representing 12 countries. Our hosts, the Irish Navy Diving School, shares a site with the National Maritime College of Ireland, and the Association was able to benefit from access to the facilities of both, with the use of an excellent lecture room and daily lunches in the College. Our sincere thanks to Lt Cdr Tony Reagan and Lt Shane Mulcahy for their excellent organisation and co-operation with the Board which made this a very successful event.

The meeting was opened by Commodore Hugh Tully, Flag Officer commanding the Irish Naval Service

The Meeting began with the usual review of the Administration since the 2014 meeting in Oslo. The Board remains the same for next year, as Leo LaGarde (Holland) was re-elected as Chairman, with, John Rabone (UK), Dag Wroldsen (Norway) and Mark van der Esch (Belgium) as members. The Administration continues its reorganisation with Alan Bax moving some of his responsibilities to the offices of Netherlands Diving Centre in Delft, under the guidance of Carin Bot, to allow him more time for liaison with schools and organisations.

Amongst the many items for discussion there was interest in the possibility of developing IDSA Log Books for students and for instructors and Leo Lagarde agreed to investigate the possibilities on behalf of members. There were informative papers from several schools on ways in which IDSA might achieve international recognition through various National channels, including Italy and Denmark; Mark van der Esch





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Tel. +31(0)70 511 47 40 Fax +31(0)70 517 83 96 spoke about IDSA's current liaison with 'COFRAC' the French Accreditation Committee; and the Chairman led a discussion on the relevance to IDSA of ISO recognition. Alan Bax and John Rabone presented the meeting with the results of their updating and development of IDSA Standards and Procedures, which it is planned to circulate to members and interested organisations by the end of 2015.

Visiting speakers were, as usual, well received with topics which included The Exploration of the Titanic - Rory Golden told of his fascinating dives by manned submersible

The latest in Digital thickness measurement – Mark Harris (Cygnus Instruments)Diver Welder Training 'Challenges and Solutions' - David KeatsThe Hyperbaric implications of tunnelling - Robbert de Bie – (IHC Hytech)

The Technip video 'Hyperbaric Evacuation' showing the verification method for the rescue and stabilisation of Self Propelled Hyperbaric Lifeboats (SPHL's) was also shown, and during a tour of the school – which is an IDSA Full Member of IDSA - Giuseppe Basile gave a demonstration of the Italian 'Vic System' helmet-mounted low light television system.

Finally, Shane Mulcahy gave a fascinating talk on the role of the Irish Naval Section - particularly interesting for his description of the role played by divers in rescuing refugees in the Mediterranean (from whence he had returned the previous week); in the majority of such situations, divers are the only personnel qualified to enter the water and were thus in constant demand in situations where refugees (often women with babies and small children) had abandoned their boats – for whatever reason – and were struggling in the sea.

An excellent Association Dinner in the Officers Mess on the final evening attended by members, speakers, and guests brought to an end a stimulating meeting.

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INNOVATION IN HONG KONG THE HONG KONG FIRE SERVICES TRAINING FACILITY TAKES AN INNOVATIVE APPROACH TO DIVER TRAINING



The main training pool at the HKFS. Various situations a diver might encounter at sea can be re-created in the pool, including working in heavy seas and dealing with wrecks in varying positions. The sphere is part of the wave machine system and below the surface can be seen a number of large steel boxes which are configured to simulate various kinds of shipwrecks. As well as on the spot instruction all of this training can be monitored by closed circuit TV from the control box.

Decause search and rescue is such a large part of the Hong Kong Fire Services Department's daily work they have to be on call twenty four hours seven days a week. They are kept very busy with between 600 to 700 incidents a year ranging from rescuing amateur divers and swimmers to incidents with Hong Kong's busy port as well as the deep underwater tunnels and sewage system (the rescue of amateur divers is only a tiny fraction of the incidents they encounter). To cope with all this activity there are four bases spread around the harbour area, each with teams on standby 24/7.

It goes down to 70 meters in the

Hong Kong marine area but the majority of incidents are inshore incidents.

At the moment the four bases around the Hong Kong Marine area are each manned by four teams (this could well be expanded to six) operating 24/7 and using eighty divers at any one time.

SIZE OF THE TRANING OPERATION

Simple arithmatic shows that with four bases using eighty divers at any one time covering six to seven hundred incidents p.a. a great deal of manpower is required, so it will come as no surprise that there is a need to train around 2500 students a year. To cope with this demand there is a teaching staff of seven plus four on admin.





SIMULATING HELICOPTER RESCUES: Above: To simulate the downdraft caused by helicopter rotors, four powerful turbines have been suspended above the main pool which generate a very realistic turbulence.

Right: to simulate lines being dropped from helicopters to people in the water a gantry can be rolled the length of the pool to effect rescues.

Left: a second pool is used which simulates very strong currents. Divers are trained to work and effect rescues while coping with extreme conditions and powerful currents.

Below: the top of a deep water tank used by divers undergoing cutting and welding training.





INNOVATIVE TRAINING POOLS

There are two training pools. In the main pool, as well as general training, they can simulate rough sea rescues and wreck training using a wave machine. Also there are four giant turbines on a gantry overhead to simulate the downdraft found in helicopter rescues plus, under the water, a set of steel boxes to simulate rescues from sunken vessels. The second pool is for simulating rescues in strong currents.

Their technique training for sunken vessels comes from a dissatisfaction with the usual method of training. They thought that the traditional training of underwater rescue using existing wrecks at sea left a lot to be desired. They observed that because a real wreck had to remain in the same position on the sea bed, students quickly became used to the environment and that meant that the element of surprise and the imperative to think and make decisions on the fly was lost. Also that this did not reflect reality where wrecks can be found in any position even upside down. So they devised a number of steel boxes which had various ships interiors that could be quickly reconfigurable to simulate all kinds of wrecks in any position and put them at the bottom of their big pool. This means

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that the students can be presented with an infinitely variable range of problems in very different environments while their progress can be closely monitored on camera by an instructor at all times.

DIVING STANDARDS

Over the years they have developed their own standards but because of HK's British heritage they started with the RN standards added USN standards then added ADEX 1,2,3 -HSE equivalent IMCA !A and IEE Nitrox and Tech.



Above: a control console for the de-compression chambers.





Above: Chairman Dan Kong with Assistant Divisional Officer Benjamin Yuen.

INTERNATIONAL CONTACTS

They have a number of international contacts for information exchange and assistance including PDRC Sapiers Pompiers in Marseilles and exchange programmes with the Transport Bureau in China.

RESOURCES

They have five decompression chambers in the school plus underwater training for welding and cutting. They have the use of two of the Fire Departments' fire fighting boats (one and six) for training and rescue which are each equipped with decompression chambers. They have 2 speedboats and support vessels.

2 very well equipped large support vehicles

FIRE SERVICES DEPARTMENT DIVING BASE



PLANNING FOR THE FUTURE

An important part of the HKFC's work is aimed at the prevention of incidents and to this end they work closely with the Hong Kong Police Department on safety education for the general public, however activity in the already very busy harbour area is increasing all the time. In addition to this the planned bridge to Macao is very likely to generate even more activity, so it seems inevitable that many more incidents will be generated in the future. Therefore it seems inevitable that more HKFS centres will be needed to deal with this expansion

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DEVELOPMENT AND PROSPECTS OF THE ITALIAN COMMERCIAL DIVER TRAINING AT CEDIFOP



Manos Kouvakis

n December 2015 Students from CEDIFOP (A full member School of the International Diving Schools Association - IDSA - based in Palermo) successfully completed a Surface Supplied Offshore Air Diver course to the IDSA Level 3 Standard The course was run jointly with the Norwegian Commercial Diving School in Oslo, taking advantage of the IDSA Procedures which allow Full member Schools to collaborate and utilize staff, equipment and all other necessary facilities including dive sites from each school, demonstrating the effectiveness of the IDSA programme which allows and encourages such cooperation.

The IDSA Level 2 course – Surface Supplied Inshore Air Diver - taught by CEDIFOP is divided in to two parts. The first part is the standard Italian OTS Diving Course (14 weeks) and the second a conversion course (4 weeks) to complete the IDSA Level 2 syllabus, including additional underwater welding training. Recently the 'Italian Institute of Welding Certifications' recognized that the content of the two parts of the Level 2 course concerned with Underwater welding met the requirements of UNI EN ISO 15618-1 "Qualification testing of welders for underwater welding underwater welders for hyperbaric welding in wet environments" and came to an agreement with CEDIFOP that they would hold an examination at the end of each course. This means that the examination is only open to students who have completed both parts of the Level 2 course. In the future they will also have to be registered as divers with the Sicilian Regional Government under the terms of the proposed new diving legislation "DDL 698", which is currently being finalized, and can be found on the Government Website.

The first examination for the EN ISO 15618-1 qualification will be conducted by the assessment company IIS CERT Srl on behalf of the Welding Institute is expected in February 2016 and will last one (1) day, the next one in the month of July 2016. Successful students will receive a certificate from IIS CERT srl (Italian Institute of Welding - Certifications). This certification is not the same as the certificate "OTS-Welder underwater"; issued by CEDIFOP.

Another step initiative has been taken by CEDIFOP in recent months was to set up a database, reserved for CEDIFOP students, which includes about 4000 companies of underwater work in ports, inshore or offshore, regional, national and international, with full references and contacts. It is being supported by a National pilot project which has the same intention of linking supply and demand..

A national pilot project is improving the current database of CEDIFOP to increase its effectiveness in making contact between supply and demand in this sector. Students and alumni of CEDIFOP, holding the OTS certificate,



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DEVELOPMENT AND PROSPECTS OF THE ITALIAN COMMERCIAL DIVER TRAINING AT CEDIFOP (cont.)

can access the database to update their entry so that the data available to users of it will have the latest and most accurate information.

On request companies will be able to access the Database using their individual personal access codes, CEDIFOP students will be listed in accordance with the level of qualification achieved (OTS, Inshore, Offshore), and a list of dives that the student has performed during the training will also be available. It will also contain:

a worldwide list of the companies involved in underwater work, broken down by country or region

a list of Offshore platforms in Italy, with their coordinates, distance in kilometers from the coast and depth in meters,

a list of underwater pipelines (subsea) owned by ENI SpA (National Body For Hydrocarbons)

a large collection of links to jobs in the offshore world.

Currently considerable progress is being made with the new law DDL698

- the Law Lentini - "Discipline of training for the commercial diver" and is likely to be introduced in the near future.

The law provides for three levels of training:

Level 1 - Inshore diver, or "Sommozzatore" (30 meters)

Level 2 - for offshore air divers, (50 meters)

Level 3 - for offshore saturation diver, also called category of "altofondalista" (saturation diver) to depths of more than - 50 meters.

It also requires all training courses to comply with the standards, regarding in water time and activities, set by the International Diving Schools Association (IDSA) and for an advanced first aid (diver medic) course to be included in Level 2 & 3. They must also conform to National and International obligations and general requirements for health, safety and environment (HSE), moreover together with the procedures and methods of recording and endorsement generally required for vocational training activities, in accordance with Directive 2005/36 / EC, on the whole Community

territory.

In order to facilitate the marketability of qualifications obtained in the labor market and their recognition at the international level the Regional Department of labor of Sicilian region, will promote the publication and updating on its website a register of Divers, issuing them a personal card that includes their qualifications achieved (Inshore - offshore air or sat), contact information, photo and personal data.

This is the first time that Italy has considered revising its diving standards since 1979 and the new legislation is following the highest international standards of education in this field.

CEDIFOP, as well as being a Full Member (Diver Training) of IDSA is also a member of AIAS (Italian Association for Environment and Safety) and sits on its Maritime Committee 'APA MARE'. It also supports the UNI-Italian national body for the unification, and development of standards in Italy and in 2016 is promoting specific rules regarding the safety of Commercial divers in conjunction with the new Law





A number of members and supporters of IDSA have only known the Association in the present century. As a preliminary to our planned articles on 'IDSA People' it seems useful to outline briefly the early days, to try to put later articles into context.

he 'Swinging Sixties' – when most of our members and readers were probably not yet born (or, at least, were very young) - was the story of how a very senior government official got into diving. It seems he had met up with an old friend in a bar in London in the early 1960s. He was 'between jobs' and his friend was going to Aberdeen for a job interview as a diver. Having nothing better to do he accompanied his friend to the interview – the friend got his job offer and the 'employer' asked his companion if he was interested in employment. Of course he said 'yes' but admitted that he had never dived. 'No worry' was the answer 'you'll soon pick it up' and a few days later, sure enough, he was diving in



an astonishing time for what we would now call 'professional diving'. I use the word 'professional' loosely here, meaning just that divers were paid for working underwater so the term was used simply to differentiate those who were paid from those who only dived for pleasure. The idea that 'professional' meant being trained to a high level to perform skilled tasks underwater had very little meaning, and it was often possible to obtain work simply by turning up and asking for a job! A bit of amateur experience was certainly welcome but not essential. I well remember being told the North Sea for his living! Whilst we may be shocked by this, it is as well to remember that although things are now very different in Europe and North America, other parts of the world may have made very little progress over the last 50/60 years!

Whilst this story may seem a little far-fetched, there is no doubt that divers were working at that time with minimal training; the death rates in the industry bear this out, and by the end of the sixties had reached such an unacceptable level that, in the United Kingdom, government money was made available for diver training, funded through the MSC (Manpower Services Commission). Individuals with a concern for diving safety and, often, experience of the area, began to set up training courses and, as these developed, so 'diving schools' emerged; some of them were set up by individuals who had already worked within the oil or civil engineering fields, others by individuals who had themselves been trained as working divers in the navy or army. This pattern of school development was repeated in North America and several European countries. In some cases, National Regulations and inspections guickly followed though, even today, over fifty years later, there are still notable exceptions.

It was during the late 60s and early 70s that regular Dive Shows emerged (mainly in the USA) where manufacturers focussed on the presentation of new products and the sale of equipment. Naturally, owners of dive schools used these shows to keep up to date with developments and, in turn, these shows provided a useful opportunity for school owners and trainers to get together on an informal basis, At this time most schools produced their own curricula and the absence of agreed standards led to numerous problems; this was especially true where divers, once 'qualified', expected to be able to work anywhere in the world - and were naturally very annoved when they found their qualifications were often acceptable only in the country where they had been trained. There were, of course, some National Regulations in existence, though I have found these difficult to track down .However, the UK regulations in force at the time are probably fairly typical. Thus, in 1960, under the umbrella of the Factories Act, we find a four page update for diving operations which replaces the 1937 version, whose purpose is to

"...impose requirements for the safety and health of persons employed in diving operations in any place to which the Factories Act 1937 is in force.

It was from this background that Alan Bax (Fort Bovisand Underwater Centre, UK) and Jim Joiner (College of Oceaneering, USA) proposed the setting up of an international association of diving schools with the aim of collaborating on the development of courses which would reach acceptable international standards and meet the needs of divers, employers, and government legislators. Initially the group was called the Association of International Diving Schools, (AIDS) but this was later changed, in view of its unfortunate connotations, to the International Diving Schools Association (IDSA). Early records of the meetings show that they were attended by varying numbers of school representatives from Australia, Canada, France. Italy, Norway, South Africa, and the UK, and that it was usual to invite guest speakers with expertise in various fields including Manufacturers, Employers, and Government Departments. Minutes from meetings showed that there were



marked differences between countries, and even schools, in what was considered to be adequate training levels - from the content of the Basic Air Diving courses to Bell Training standards. Jim Joiner left the group after two years in order to concentrate on his publishing business - Best Publications - whilst Alan continued to organise and encourage attendance at meetings. In the UK, with about twelve professional schools, the HSE had already produced Diving Regulations (1975) and instituted school inspections to make sure that standards were maintained, but was on record as claiming that it had '.... no desire to set international standards' .One result of these Regulations was that, in the UK, the total number of diving schools who could meet these requirements was reduced to three.(a number which was thought to be sufficient to meet the needs of the UK).



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At the same time, some other countries were working towards developing their own standards 'similar to those of the UK'. Some representatives expressed the hope that common standards might be developed since there was added cost in following individual pathways, though they recognised that constructing and agreeing 'International Standards' would be a massive task.

And so it proved to be! The1980s and 1990 were difficult times for schools as demand from industry encouraged the setting up of new schools which, in their efforts to attract students, offered cut-price courses. The net effect was detrimental to the established schools as there was now no government subsidy (as there had been in the early years) and it took some time before the newer schools realised that their cut prices were unsustainable – and several then closed their doors! With other financial and business pressures, time for supporting IDSA was limited and although there continued to be both formal and informal meetings, progress was very slow. Nevertheless, in a press release following a meeting at Fort Bovisand,(May 1999) - attended by 22 representatives from North America, Scandinavia, the Middle East, and Europe - we read that IDSA has now published its procedures for the recognition of schools, quality control, and a full description of the Standards themselves.

This, then, marks the beginning of IDSA as we know it today, with its focus on high standards and the development of courses which would meet international requirements. Initially Alan Bax was Chairman with duties that embraced administration, marketing, and record keeping, as well as orgagnising meetings and acting as liaison between schools; two years later it was clear that the work load was such that there was a need to separate the roles of Chair and Administrator and Alan took over Administration with the oversight of both established and new schools, and included such tasks as record keeping, the issue of qualification cards, and oversight of new applicants through to the inspection and recognition of applicants who meet IDSA Standards. ;Sitzche Zwiers (NDC) took over the role of Chairperson, to be followed in 2009 by Leo Lagarde.



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BRAND NEW FACILITY FOR POMMEC BV



After having struggled for years with both office and production space, Pommec has moved at the end of 2015 to a purpose build, brand new facility in Bergen op Zoom (Netherlands). Next to the fact that the design of the new building symbolizes the evolution / growth of Pommec over the last years, it will also improve efficiency and production lead times.

Pommec has grown in the last 10 years from 14 to 45 staff, handling the complete production, from welding LARS and DDC's to the full assembly, in house. Overhead cranes, larger and floor heated workshops, etc. will help technicians, engineers, logistics to be more efficient in a more

Jack Fisher,

Founder

environment friendly manner.

To complete this all, the new facility also comprises enough office space for the future years.

Pommec plans to have a opening reception around spring 2016, but welcomes everybody at any time to visit their new premises.

New Address:

Conradweg 22, 4612PD,

Bergen op Zoom,

The Netherlands

New Telephone number: +31 (0)164 745500 Website: www.pommec.com

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he Cavitcleaner System is the result of years of development work and research focused on finding a new world of underwater cleaning products able to satisfy the huge and growing demand for cleaning and maintenance of underwater structures, commercial, military and coast guard vessels, cruise ships, motor yachts, sailboats, etc.

My goal is to find the right products to meet customer's needs: efficiency, versatility and safety, together with excellent performances, affordable costs, time saving.

Cavitcleaner products sum up all the above. And this is why I focused on cavitational technology, for its obvious advantages in terms of high efficacy, capability and security.

Cavitcleaner is a revolutionary and unique underwater cavitational cleaning system, performed by a stream of implosives microscopic air bubbles that are able to dislodges fouling and any other biological material by using an intense shock-wave. Our cleaning system is highly effective, works rapidly and at a relatively low pressure and will not harm the surface being cleaned. It is also the safest underwater cleaning system available today.

The performances are pretty high as the power is generated by the implosion of air bubbles so that the machines work at relatively low pressure of 140/160 bar, that can be compared to a water jet working at 500/800 bar. The system gives a higher yield but it is also safe for the divers as the cavitation stream can get in contact with bare skin without causing any injury.

Champions in safety: Cavitcleaner and Kirby Morgan

Cavitcleaner machines are designed to be used both in sea and fresh water, with no need of any chemical additive. Furthermore our new cleaning system does not remove the anti-fouling paint which makes all Cavitcleaner products environmentally friendly.

Cavitcleaner is extremely effective at removing any type of growth or fouling from any underwater surface (risers, columns, hulls, stern gear, propellers, shafts, rudders, thrusters, sea chests, pontoons, chains, ropes, pipes), regardless on the material type (steel, fiberglass, aluminum, wood, concrete, rope) or the structure's shape.

Heavy growth easily removed

Cavitcleaner products are CEmarked. In addition, TUV has certified that the methods used by us with the support of the cavitation cleaning system meets the ISO14000 environmental standards. As of today many Port Authorities have acknowledged the validity of a cavitation cleaning system that preserves paints and coatings and respects the environment. Also many coastguard has authorized and requested cleaning of their vessels using the cavitation system. Cavitcleaner R&D divers team has been involved in creating and testing specific machines and accessories for every different jobs and needs:

Evo2 gun and the new Turbo Jet gun are the



Champions in safety: Cavitcleaner and Kirby Morgan



BEFORE AFTER

Heavy growth easily removed

chief products among the vast range of our tools. These are capable of removing any kind of encrustations, from light fouling to acornshells and mussels and ensures manageability and safety.

2D Double Diver's kit is a simple and smart system composed by a full stainless steel switch and two cavitational Evo2 guns. This system allows the simultaneous use of two Evo2 guns by two divers using the same machine. The full bronze switch splits the flow, granting the same pressure for the two guns.

Twin Jet gun with double cavitational nozzles, it is perfect for quickly cleaning areas covered with light to medium fouling. It is light weighted and easy to use.

Stingray underwater cavitational cleaning plate, studied to clean easily and fast big areas covered with medium fouling. It has excellent performances in terms of square meters/hour. The plate creates its own suction and it stays attached at the surface being cleaned, making your work easier and lighter.

New Double Stingray plate is our new accessory ideal for treatment of big yachts and vessels. It's very powerful, fast and effective. This tool is composed by two single plates that can be easily separate in a few minutes into two highly efficient Stingray single plates, that can be used by two different divers in two different sites.

Extensions kit is a simple and clever accessory composed by two modular extensions that can be used combined with Evo2 and Twin Jet guns. It allows you to reach and clean inaccessible places and it avoids to remove the grids of the sea chest, bow thrust, etc.

All these accessories are supported by reliable and efficient machines powered by diesel, gasoline or electric motors:

EASY ENERGY 220 and 380 models powered by a single and a three-phase electric motor respectively, a very useful part of the boat's equipment: light and compact in size, they can be easily stored in a small space. HOT ROAD DIESEL and PETROL models, underwater cavitation cleaning machines driven by a powerful and reliable Yanmar 8 kw diesel engine and a Honda 9.5 kw petrol engine respectively. They are our best sellers.

New ELECTRA ROCKET V3 (single phase and three phase) our last and new models for underwater cavitational cleaning. The machine comes in two versions: mono-phase and three phase electric motor, same power and performances of the Cavitcleaner Easy Energy series machines but now with an unordinary compactness and lightness, easy to carry around and to load onboard, extraordinary performances, quietness and affordable price.



Thanks to the evident advantages in terms of cleaning power, safety and ease of use, performances, efficiency and versatility, cavitation systems are set to become a primary choice in the underwater cleaning growing market. With the Cavitcleaner line we intend to lead the way in product innovation and establish ourselves as a global leader.

For further info, please visit www.cavitcleaner.com

THE IRISH NAVAL DIVING SERVICE



Diving randomly is meaningless. Solid preparations are required before the equipment is donned and the Diver enters the underwater realm. The Irish Naval Diver is required to be a sailor, a seaman, a mechanic and a medic. He is required to think outside the box".

In 2012 the NSDS opened its doors for external agencies to view our school and audit our training process, a first for Irish military Divers. It was felt that the Diving section could only benefit from remaining abreast of ongoing and current commercial legislation and gain valuable knowledge whilst pooling and sharing military and commercial experience.

Background

The Naval Service Diving Section (NSDS) has been in existence since the late 1960s. From humble beginnings, as an internal diving team for the ships in the fleet, it has evolved into the primary State diving team, carrying out many varied tasks for a number of State Agencies. The NSDS have been involved in many high profile operations over the years. Members of the Section have received Distinguished Service Medals for the Air India Disaster, while the Section has received awards from various State bodies for the service it has provided. As well as providing an air diving capability to 50 metres, the NSDS have underwater search equipment at their disposal, including a Remote Operated Vehicle (ROV), Side Scan Sonar and Magnetometer. These allow the Section to search and survey to a much greater depth than divers can operate. Indeed the ROV is rated to over 1000 metres depth. In deep water where diving is severely restricted or unattainable the search equipment allows the NS to search and recover. The roles of the NSDS are many and varied and tend to change on a frequent basis. The main roles are:

- · Search and Recovery
- Underwater Survey
- Explosive Ordnance Disposal
- Underwater Engineering
- Military Diving Training
- IDSA Commercial Diver Training
- Search & Recovery

This is the primary external role of the Section. As well as diving in support of Naval Operations, the NSDS is frequently asked to dive in Aid to the Civil Power and Authority. Divers are involved in an average of 15 searches for missing persons during each year. These tragic situations can last up to 2 weeks at a time and although there are never any guarantees, the Section has a high success rate when dealing with these operations. Also, in the ongoing battle against drug importation, the NSDS have carried out underwater searches on many vessels arriving in Irish Ports. Search and Recovery operations include the following:

- . (i) Gardai (Irish police) missing persons, objects on seabed, recovery of evidence
- . (ii) Customs underwater searches of suspect vessels
- . (iii) Fire Services search and recovery of vehicles and occupants from water
- . Department of Marine missing vessels, persons, investigation of sunken vessels

Underwater Survey

- . The NSDS have the ability to search and survey objects in the water and on the seabed. A variety of underwater cameras and recording equipment are at the disposal of the Section to achieve this. The ROV, Side Scan and Magnetometer can be used together with divers to give a detailed picture of what is on the seabed.
- . (i) Underwater maintenance of Naval Fleet
- . (ii) Survey of historic wrecks or areas of interest on behalf of State.
- . (iii) Department of Marine sunken vessels, dangers to navigation etc.

EOD & U/W Demolitions

The NSDS are trained in disposal of ordnance at sea. The Section assists the Army Ordnance Section in achieving this. World War Il mines, depth charges, pyrotechnics and underwater weapons recovered from the sea on an annual basis. They can be recovered in fishing gear, or smaller items can be washed ashore. The appearance of these items can be very different to what the public are used to seeing on WWII films, but are extremely dangerous if handled incorrectly. They need to be disposed of, as they still present a danger to the public. Naval divers are trained in identification and disposal of these objects. Members of the public are best advised to report any suspicious looking objects along the coast to the relevant authorities. This year presents the greatest challenge in the history of the section as we enter into MCM mixed gas re-breathers.

Underwater Engineering

The Section has equipment to facilitate underwater engineering tasks, such as cutting, burning, welding, bolting and cleaning. Divers are trained to international standards in the safety and application of this equipment. The Section has many enclosed air lifting bags, when combined, offer the ability to move or lift over 12 Tonnes of weight on the seabed. This allows the Section to recover heavy items from depth. The ROV can interface with divers in the water in order to achieve the task.



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THE IRISH NAVAL DIVING SERVICE (cont):

Military Dive Training

The NSDS are the sole training establishment for military diving in the Defence Forces. The Section possesses a Recompression Chamber (RCC) to assist in this task. As well as training Naval Service divers, the Section also provides training for the Army Ranger Wing SF, in air and Oxygen/Nitrox combat diving techniques. In order to achieve the capabilities outlined above, the training for Naval divers is intensive. While many apply and commence training only a few finish as qualified divers. The diving course lasts over 11 weeks and takes volunteers from the NS with little or no diving experience and trains them to dive using SCUBA and Surface Supplied Diving Equipment. Divers are trained in seabed search techniques in nil visibility and strong tides. Typically 30 personnel will apply to commence the course - with, on average, 4 divers successfully completing the training. On completion of the training the divers then begin to gain valuable experience as they respond to the many tasks that befall the Section. These courses are amalgamated with IDSA requirements to meet the standards required in order to gualify the Diver both as a military and commercial Diver. In order to remain gualified as a diver or supervisor, divers meet the following annual criteria:

General Defence Forces Fitness Test

Diving Medical Examination

Divers Physical Fitness Test

Evaluation of Competency and Currency in Equipment

Required time diving or supervising to be achieved on specific tasks

Operation Pontus

In May 2015 the Irish Navy was tasked at short notice with assisting the humanitarian efforts in the Mediterranean. It was a must for each ship to have a Dive team onboard to help with the Search and rescue /recovery. The first SAR Officer was the Diving Sections Lt Shane Mulcahy CDO. During his 3 month deployment Shane and the crew rescued almost 4,000 people. Reports from the Operation Pontus and from the Commanding Officers onboard have praised the Dive teams and the ethos and work ethic. Core and vital skills such as DMT's were huge advantages to the Divers, crews and refugees. On One particular incident after a vessel with 750 refugees capsized, L/ Sea Diver Alex Casey had to call on his DMT skills and resuscitated a small baby twice. In 8,000 people were rescued total almost by the crews and Divers of the Irish Navy from June -Dec 2015.



COMMERCIAL DIVING SERVICES: Inland/Onshore diving • Ship Husbandry

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. he 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

	_
Royal Danish Navy Diving School	D
Luksia Sukellusala	Fi
Ecole Nationale des Scaphandriers (ENS)	Fr
Irish Navy Diving School	Ire
Centro Studi CEDIFOP	lta
Centre Méditerranéen de Plongée	
Professionnelle (CMPP)	Μ
Netherlands Diving Centre (NDC)	N
Norwegian Commercial Diving School,	
Oslo (NYD)	N
Oceanos Escuela de Buceo	
Professional SL	S
Swedish Armed Forces Diving and Naval	-
Medicine Centre	S
Yrgo-Commercial Diving School	-
of Gothenburg	S
The Ocean Corporation	U
	U

FULL MEMBERS: SPECIALIST TRAINING

Interdive Services Ltd. **KB** Associates Ltd The National Hyperbaric Centre ASSOCIATE MEMBERS Aqua Prom Ltd Aegean Diving Services Ltd University of Southern Denmark Arab Academy for Science, Technology and Maritime Transport (AASTMT) Egyptian International Diving School(EIDS) Middle East for Commercial Diving National Institute for Commercial **Diving (NCID) GT** Corporation SE Faroe Dive Centre Activities Plongee de Trebeurden Institut National de Plongee Professionnelle (INPP) **Diver Ltd Dolphin Dive Academy** Israeli Professional Diving Academy Nahshon Marine Construction Ltd Daryakav Jonoub Co **IDEA** Contracting TechnoSub **Regional Centre For Underwater** Demolition (RCUD) Academy Marocaine des Science et Technology Maritimes (ASMTM) Mieka Dive Training Institute Ltd Forespro

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