ISE Wreck Diver Level I

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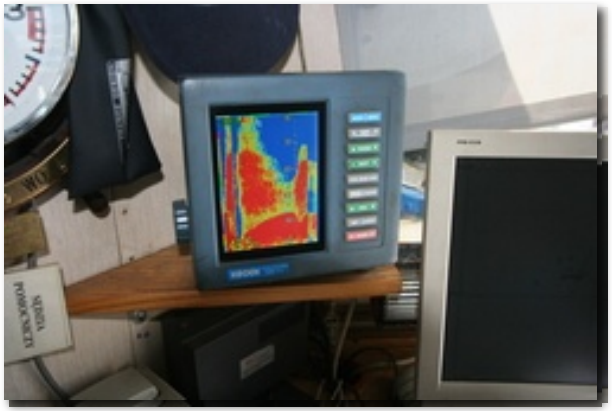
- **Introduction to InnerSpace Explorers**

Mission Statement

Inner Space Explorers was founded to provide the highest quality training available, for all individuals sharing the common goal of underwater exploration and conservation.

The four main pillars of education, training, research and exploration builds the base line of all ISE training that greatly enhances the thrill, safety and ultimately the fun of 'Your Passion'.



Why ISE?

•Strict global standard and procedures of the organization
All instructors are to follow it so as to have standardized training and procedures, as this greatly removes inconsistency in within the organization.

•Re-qualification
This is to ensure divers and instructors do not jump back into the sport after long period of absenteeism hurting themselves, or greatly reducing the quality of diver training provided by ISE. Divers have to do an evaluation dive with the ISE instructor of that level of training.

•No 'back to back' or 'bundled' courses for divers.
Experiences have to be gained through personal dives before progression. Such divers enjoy advance training much more and have much better chances of excelling in the advance subject.

•Non smoking organization.
As the founders are active explorers, they know a healthy and fit diver will get the best out of the sport. We allow smokers to enter the foundation class, and give them the mindset that exploration brings more fun then smoking and help them quit.

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Past, Present...

- ISE was founded by active explorers and educators
- ISE have increased the quality of diver training and education
- ISE is ready to set new standards to the topics of:

  Education
  Training
  Research
  Exploration

Diver training have often been focused on getting somebody to breathe underwater fast. By doing so,
diver accidents occur at a significant rate. By redefining the four pillars of ISE, we provide a solution to these and significantly turned diving into a sport much enjoyed by all divers alike.

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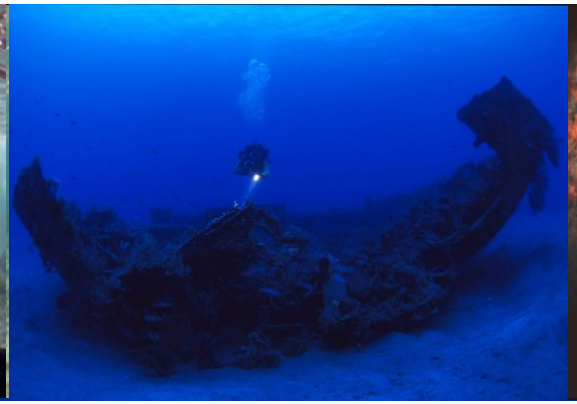
Future

- Develop programs that serve certified divers in their desire to get more out of the sport.
- Develop the highest set of standards in the industry.
- Develop an international base of dedicated instructors to serve divers around the world.
- Develop dive centers around the world to support explorers in their logistics and ability to explore the aquatic realm.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Introduction

- Why this course?
- Back to the basics?
- How is it going to benefit us?
- What to expect from the course?
- What are the minimum standards?
- How does ISE brings us to that level?
- What am I allowed to do after this class?

You are already a good diver, ISE wants to bring you up to the next level.

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Index & Class Structure (sample)

Day 1

09:00
ISE overview
ClassOverview
Paperwork and Fees

10:00
Wreck Enviroment
types of caves
How caves were build

Additional Equipment

Reels & Spools
Lines & Linework

13:00 lunch break
14:00
Dryruns for Linework

14:30
Dive" #1 (open water)
16:00
Video Debriefing

18:00
End of class & Dinner

Day 2

9:00
Navigation
Propolsion on Wrecks

11:00

Dive #2

13:30 lunch break

15:00
Dryruns & Dive #3

17:00
Dryruns & Dive # 4

19:00
Video Debriefing

21:00 End of class & Dinner

Day 3

9:00
Situational awareness

13:30 lunch break

15:00
Land-Linework & Dive #5

17:00
Dive # 6

19:00
Video Debriefing

21:00 End of class & Dinner

Day 4

9:00
Dive Planning

10:30
Diving in
Overhead Enviroments
13**:00**
lunchbreack

15:00
Dive # 6 &
#7 (Expirience)
19:00
Video Debriefing

21:00 End of class & Dinner

Day 5

9:00
Theorie Review and outview Cave 2
10:00
Test
11:00
Test Review
12:00
lunch break
14:00
Dive # 8 (Expirience)

16:00
Final discussion / End of Class

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Message from the founder:

"You may ask what the heck? Why should I take this class and what is it all about? This class will show you some facts, skills and items that in the end make your diving safer, more efficient and ultimately more fun. The term "Exploration" is what you may have found a bit strange in the name of the class.

Well, what is Exploration? When a kid strolls through a ruin somewhere, the kid is exploring. If a Geologist wanders through a cave never seen before by human eyes, he is exploring it. If you swim through a popular reef you have never before been to, you explore it. Diving in general has a lot of potential for exploration.

Now we believe that there is a difference in how you do that. You may be able to breathe underwater and see because you have a mask, but that does not make you an explorer. An explorer is not only defined by the desire to cover new ground, but by the heart to preserve this ground, and make the knowledge gained accessible for others, at least through a clear documentation.



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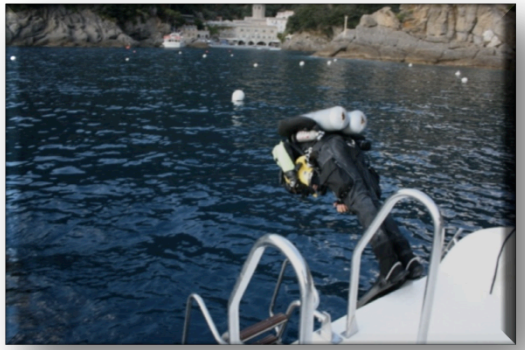
Continued:

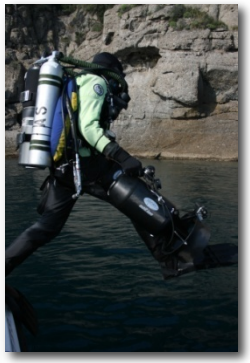
If you have poor trim, buoyancy and fin techniques for example, you stir up silt that covers anemones or corals that might damage it. Even in clear water, you may ruin your visibility at best. In a cave, a careless fin stroke will damage the pristine limestone formation, in which a geologist may be able to understand the history of millions of years of which nature developed.

Good skills are essential to exploration, the well prepared diver keen on diving new sites will also need some additional equipment to be prepared for the demands of the dive. Although this class can be done on a single tank, we will introduce you to the idea of doubles or at least two regulators on an H valve.

Murphy's law of what might happen, will happen gives an understanding that trouble is always around. The right equipment and skills needed to handle the situation can make a difference between a good dive, or the last dive. You will also be taught the spool – a simple tool that hold lines can be the most valuable piece of equipment ever, from sending up a surface marker, to measuring and surveying a site to doing search patterns – the possibilities are endless.."

Ready? Lets go!





Certification Policy

- Every level of ISE training has specific requirements that the student must meet before being awarded certification.
- These requirements include both academic knowledge as well as robust diving skills and techniques.
- The student must fulfill every skill and technique required for each step in the training before progression to the next step is possible.
- It is expected that the ISE student understands and accept the ISE Instructor obligation to deny certification if the training requirements have not been fulfilled.

Students pay for training but earn the certification.

Types of grading

- **Pass**
- **Fail**

Pass: Student have performed well in the required skills and shown positive attitude in training.

Fail: Student is required to consult the instructor again and remedy shortcomings.

There can only be a successfull or a failed exploration

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"I heard there is a resident Napolean Wrasse somewhere at the first rock off the shore, I want to see it."

"The government wants to know where does water from the caves flow to in case of pollution. Shall our team volunteer to check it out?"

"Have you been to the deep wrecks of the HMS Repulse or the HMS Prince of Wales?"

What does exploration mean to you?

- Curiosity
- Purpose
- Excitement
- Research
- Share

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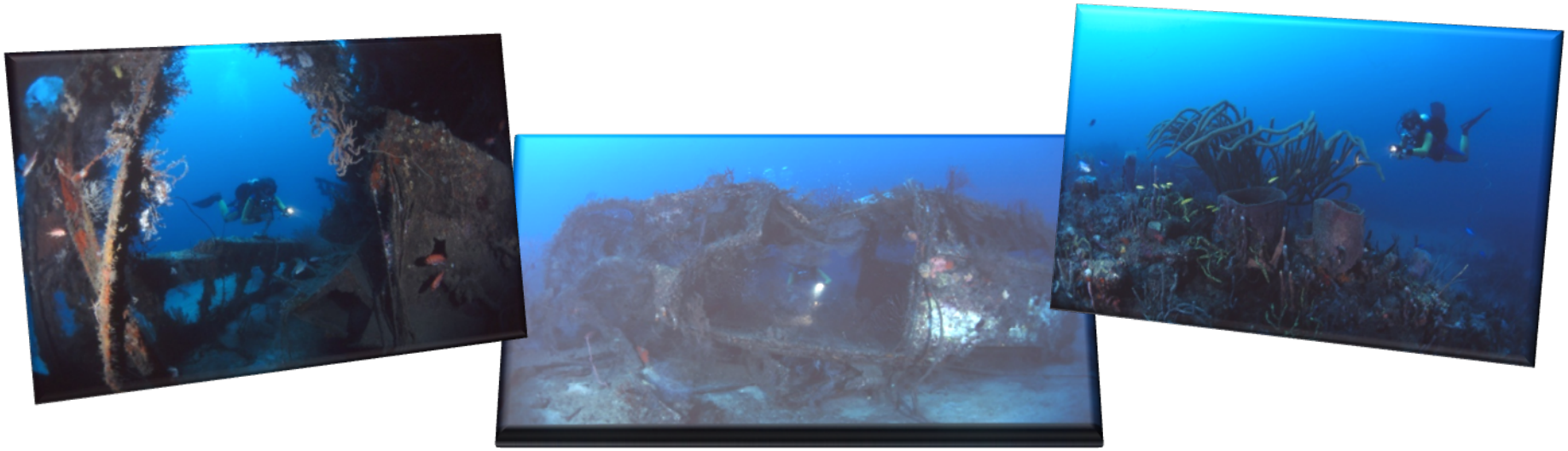
HOW DO WE BUILD

THE EXPERTICE OF AN EXPLORATION

GRADE DIVER?



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By primarily receiving the right education!

Education

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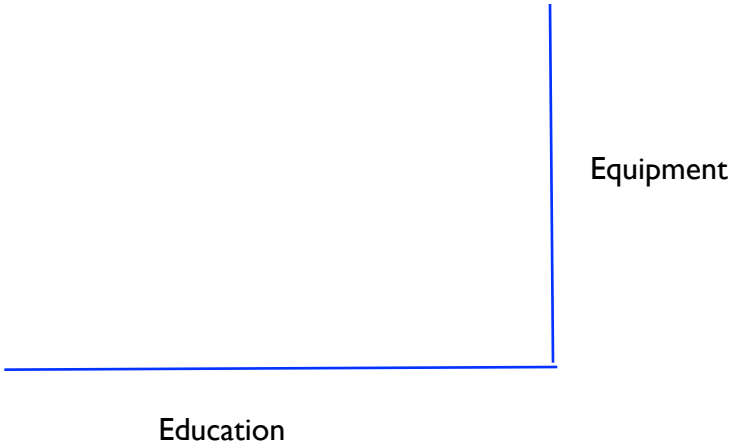
By selecting the specific equipment to support our dives!



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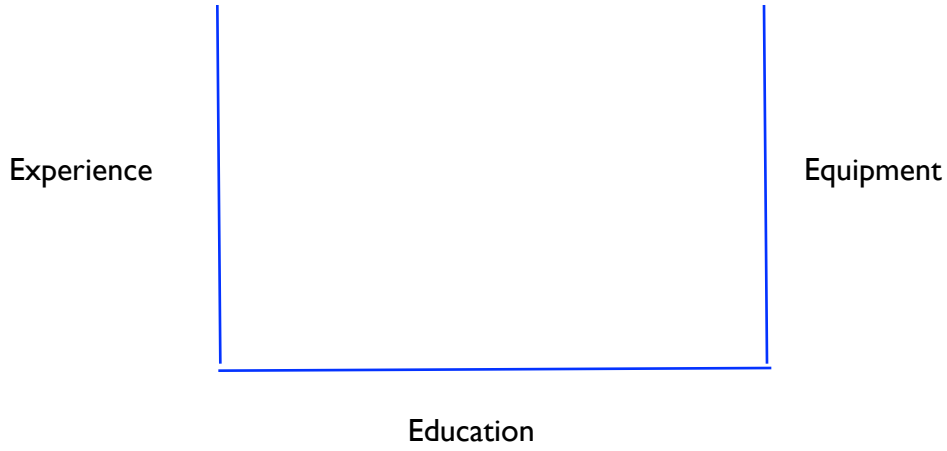
We have to dive to gain experiences, and once we have a solid foundational support…



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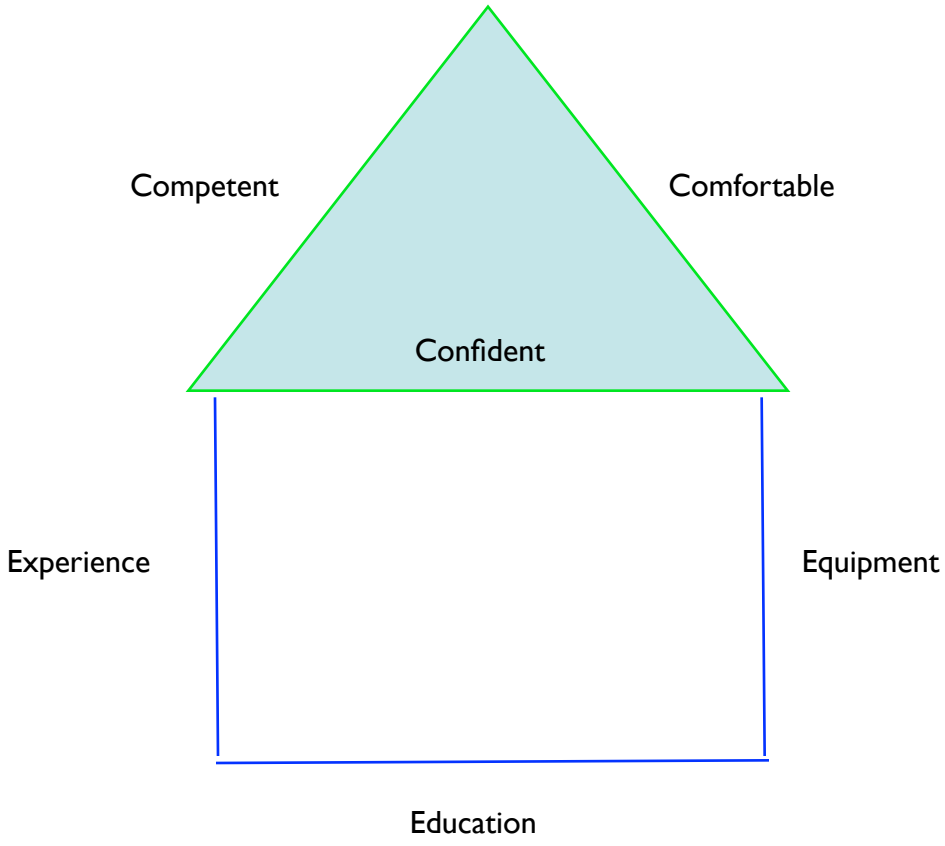
We inherit the qualitie through constant practice!



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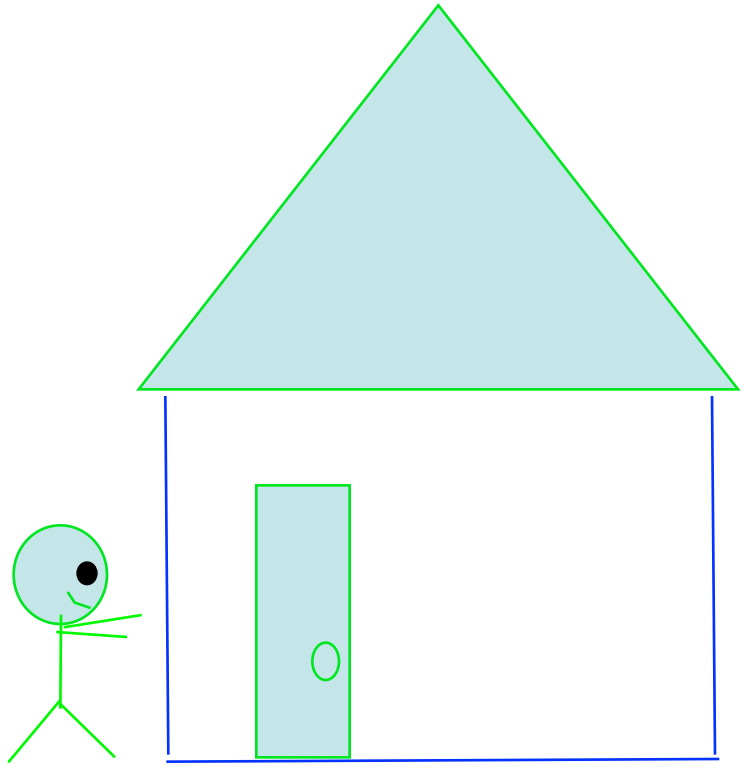

You are here!

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- **The Wreck and its Surroundings**

The Wreck and its Suroundings

Wrecks can be found in every water, from the quarry to the open ocean. Ships, boats, aircrafts, cars and trains, ancient or modern, sunken in accidents or in wars or simply dumped. This class is about diving on wrecks of a certain size, so we will focus on more or less intact structures of any kind and in all possible enviroments.

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Wrecks – different types

We will have to „classify“ certain types of wrecks to later on specify rules and procedures for theses unique enviroments

Ships

- antique – no structure anymore
- broken apart
- intact but fragile (WW1 often)
- intact but not modern (ww2 often)
- modern
- submarines

Aircrafts

Cars & other Vehilcles

Antique Shipwrecks

Such as roman wrecks are usually not recogizable as wrecks but normaly only a field of amphoras or other cargo is visible. Sometimes the only thing that remains is a row of ballast stones.

On this kind of wrecks the biggest issue is legal nature because in most countries diving on antique wrecks is either forbidden or somehow restricted.

Diving in general is like diving on a reef and care should be taken to not touch anything or even worse destroy any items.

Broken Wrecks

Reasons for broken wrecks can be age, salvage or wave action. Depending on on the enviroment this can also be a potential danger for the diver. If, for example the wreck is detroyes by heavy waves, this can be da thread to divers as well as the diver can be jammed into sharp wreck parts be waves.

In any case, broken wrecks produce sharp edges and traps for divers and should be handled with care. While there can be intact rooms, there might also be dead end hallways and moving parts, that seem safe in the first place but can be potentialy dangeroous.

Intact but fragile

Wrecks exposed to the enviroment for a long time corode and and some stage break down pretty rapitly. A lot of the WWI wrecks around the world are in this state and penetration should be generally avoided or very well planned in areas that are safe. Uncontrolled moves and even exhaust gas collecting under the ceiling can cause stable looking structures to collapse.

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Intact but not modern (often WWII)

WWII produced tons of wrecks in very different „Quality“. While military ships are often in excelent shape, freighters, often built fast and with limited resources can be in terrible shape.
Generally speaking those wrecks can offer great penetrations and although sometimes heavily silted can be very much like a seel „cave“

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modern

Modern wrecks are considered to be ships sunken in the recent years and completely intakt. Although some of them like the Milford Haven or the Fushang Hai are quite spectecular due to their sheer size, they rarely offer anything interessting to the ambicious wreck diver, as their history is usually wel known.

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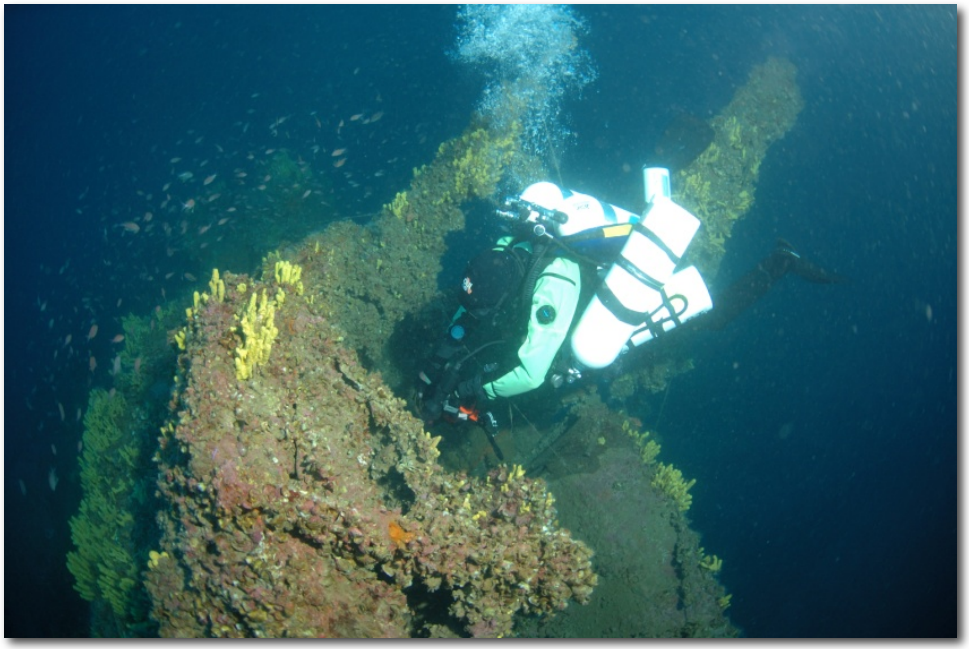
Submarines

Submarines are somewhat special and usually create a special interest for divers. A lot of subs are war graves and should not be penetrated for this reason. Even if not, penetrating a sunken sub is challanging at least as it is extremely narrow and, depending of the status of detoration, can be a deathtrap in the original meaning.



Aircrafts

Aircrafts can be fould in all kinds of waters. Depending of the age and the size of the plane the posibilties of diving can vary. Fighters from WWII can make great picture motives, while an intact B17 can be also great for (limited) penetration. Aircrafts are made from Aluminium in most cases and this material does not preserve very well in sea water. In fresh water aircraft wrecks can be quite exiting as they are sometimes completely intact. Actually a Ju52 wreck that was found in a lake in Norway flew after an overhoul...

Cars & other Vehicles

This covers a wide field and no general outline can be given. Cars can be quite szenic but usually do not make „wreckdives“ in the original meaning. Other vehicles like for example a train can be more like a shipwreck with all the hazards and precautions You would need there.

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- **Additional Equipment for Wreck Diving**

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Additional Equipment for Wreck Diver Level I

Reel
2 Spools (50 Meter min)
Liftbag
Alertmarker
2 Backup Lights
Wetnotes
Cuting Tools

Additional Equipment for Wreck Diver Level I

Reel

The reel has to hold at least 400 ft / 130 Meters of Line and must be designed in a way that prevents jams and line traping without housings, breaks, etc.

Reels for Exploration Dives need to be knoted so layed amount of line can be measured. New reels must be emptied completely to ensure line is properly attached to the reel and not cut or otherwise damaged.

Additional Equipment for Wreck Diver Level I

Spools

have to hold 50 Meters at lease.Two are needed, one for bags and one for emegencies

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Additional Equipment for Wreck Diver Level I

Liftbag

is used to add stability to the diver´s position in long decompression in blue water.

Additional Equipment for Wreck Diver Level I

Alertmarker

is used to mark the diver drifting or surfacing and can also be useful to signal the boat on the surface. This item should be considered an emergancy tool and therefore be pre attached

to a spool in the right pocket

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Additional Equipment for Wreck Diver Level I

Back-Up-Lights

2 Backup Lights are essential. While one is the back up for the primary light, the second one is for a „lost Diver Scenario“ and will be clipped in the line by the searching diver at the moment he or she has to leave the cave. This with not only help the lost diver to locate the line but also indicate that the search team has left the cave.

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Additional Equipment for Wreck Diver Level I

Wetnotes

are needed to scribble down decoprofiles, survey data and to simplify more complex comunication between divers. Wetnotes are worn in the left pocket and should be equipped with at least 3 pencils (100% graphite works best) and a plat mapping

compass.

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Additional Equipment for Wreck Diver Level I

Cutting Tools

2 are considered the minimum. The classical knive on the belt will work fine for most appications. A so called Z-Knive is what we recommend as a back up. When diving wrecks sometimes wire and cabel have to be cut – so a pair of good pliers or sissors are helpful

and can be worn in the right pocket.

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- **Navigation on Wrecksites**

Navigation

Navigation in and around wrecks can vary from very simple to very complex depending on the wreck, ist condition and the conditions the wreck sits in. Navigation on the outside of an intact vessel is rather simple. Stern and bow, starbord and portside are easy to locate and the memory of where the upline is attached is all you need. If the outline of the wreck is not noticeable eithe rdue to the size of the wreck or the condition of the wreck you need additional information to find teh way back. The depth the line is attchached is the first thing to remember, followed by some easy to recognize spots around that should be memorized. If any doubt, the diver needs to be either prepared to lay line or to ascent in the blue. This can be an option but needs to be prevously planned and discussed with the boat. In some loctations this might not be an option at all – for examaple in case of heavy shiping traffic around.

Navigation continoued

If you decide to penetrade you basicly dive overhead enviroment and a continous guideline to open water is required. During this class wreck penetrations are limited to a point where the exit can be seen and no restrictions are allowed to be passed. Therefore lineworl inside the wreck is not required.

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- **Linework**

Linework

While the previous chapter descriped the theory of how to navigate in a cave, the practical aspect of linework is even more important, as working with lines under water can provide as much difficulties and problems as it can create benefits.

Linework

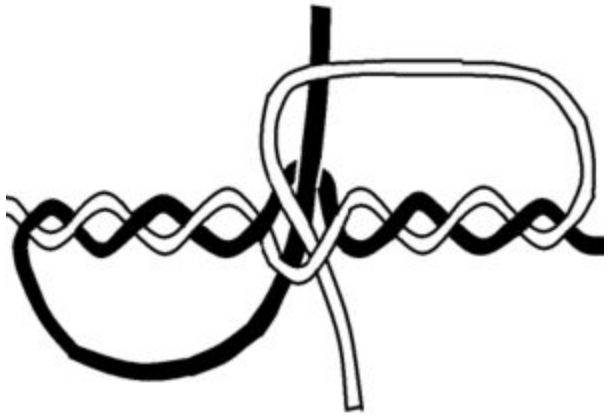
Line needs to be carefully maintained and stored and old line has to be replaced frequently. Broken lines can be fixed – the proper knot for this is the so called „bloodknot“

Lines for Reels and Spools are available in three different diameters:

#18 = 1,5mm (exploration)

#24 = 2,0mm (standard – for cave diving)

#36 = 2,5mm (heavy - for wreck diving)



Linework

Line entanglements must be avoided by proper line laying techniques. Your instructor will focus on the topic in various land and in water drills and will make sure Your skills are honed before you enter an overhead enviroment.

Rules are:

-Reel is always on a streched out arm and below the diver .
-The diver is horizontal and paralell to the line, so he or she can turn above the line without getting entangled
-Line is ALWAYS tight and slack is taken care of IMIDEATELY

Linework

When entering a wreck, the the first diver in is laying line while the second team member checks the ties and the line laying.

On the way out, the sequence turns and the diver that was first in is now last out and takes care of the reel, while the person in front of him or her frees the ties and takes care of eventual slack.
In case of trouble the reel is not worth to be be taken but can always be retrieved on a second dive!!

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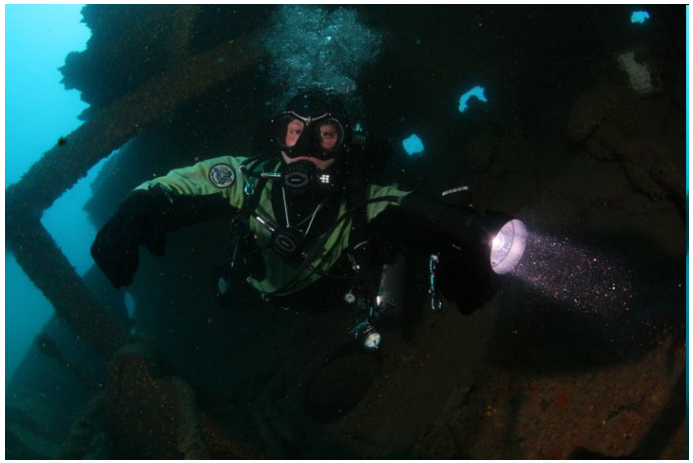
- **Propulsion Techniques in Wrecks**

Propulsion techniques in Wrecks

Inside a wreck – as in every other fragile enviroment – care mast be taken to not disturbe visibility on one hand and to not endanger yourself by falling or collapsing structures. Therefore techniques have to be used that ensure absolute control over the the divers movements. Minor Frog, Mod. Flutter and Pull & Glide are the prefered methods to maneuver thru a wreck



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- **Potential Problems & their Solutions**

Potential Problems & their Solutions

Loss of Gas

”

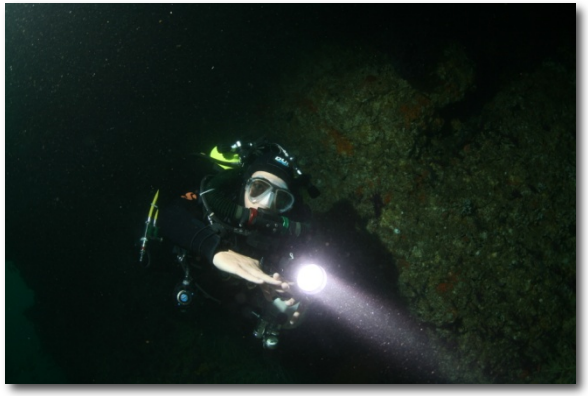
Loss of gas can be some small bubbles or a terrible, sudden noise – in any case your life-support is draining and You need to react immediately.

the problem solution is based on the likelihood of the problem, in 99% of all cases the loss will be from the right first stage as it is the working one-

* Close right post DO NOT CHENGE REGULATORS and listen
* if it does not stop – reopen and close left post simultaneously
* purge backup and listen
* if is does not stop, reopen and close Isolator simultaneously.
* be aware that the loss will not stop – check SPG, breath from draining tank and call dive

THIS WHOLE SZENARIO SHOULD NOT TAKE MORE THAN 30 SECONDS

In case of low visibility or any other need to maintain physical contact with the guideline. The procedure is done one by one and one hand always stays at the line!



Potential Problems & their Solutions

OOG

One Diver is out of gas. Immediate action is needed – keep in mind that you do not only have to donate gas but also attention and decisions.

* OOG Diver signals OOG
* Donator makes eye contact, deploys longhose – Mouthpiece pointing to receiver
* donator retrieves Backup
* Donator makes body contact (left hand on right arm of receiver
* Donator asks OK
* Donator frees lightcord and deploys full hose length – make sure Reg is not pulled from receiver
* KEEP EYE CONTACT
* route Hose – depending on where Receiver is (left or right)
* Exit – donator in the back touch contact on receivers ellbow.

- **Potential Problems & their Solutions**

Loss of mask

Can happen: fin in face – cracked frame or glass, currrent, marine life. etc

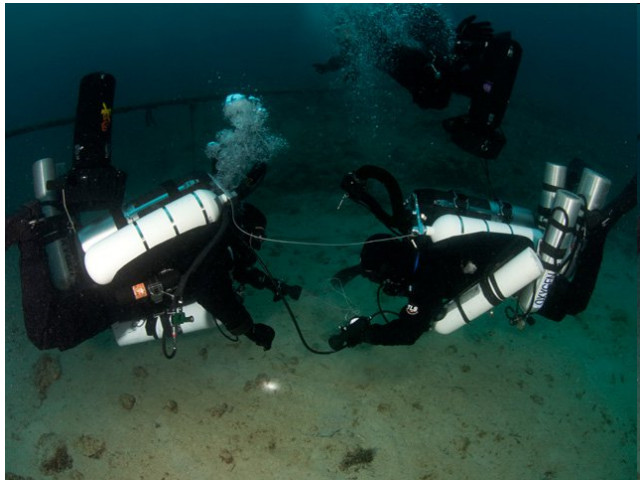
* Signal team
* Stop – control breathing and buoyancy
* get Backup mask from right pocket
* put on and take doubleender back in pocket
* Signal team ok

- **Potential Problems & their Solutions**

Entanglement

Happens if reel is handled incorrect, high current, other teams, bad vis…

* STOP!!
* Signal Team
* do NOT turn or move
* Think and try to free Youself – keep bottomtime, deco and gas in mind
* if you cant - and Your team cant – cut:
* hold the end that leads to exit
* cut before and after you – maintain conact with the lineend and fix it somewhere
* call dive – make sure team is on the line complete and exit



- **Potential Problems & their Solutions**

Lost Line or broken line

Due to loss of light, bad skills, loss of vis

* STOP – every move can bring you further away from the line
* get backupspool out and fix where you are
* go in the direction of where you think the line is.
* if not successful, depending on environment either go back and try other direction or search in circle
* when line is found – make connection and exit.

- **Potential Problems & their Solutions**

Loss of light

Happens more or less for sure once in a while

* stopp and signal buddy if You can
* deploy backuplight, switch on and clip off
* signal team
* store primary
* call the dive

- # Potential Problems & their Solutions

Perculation & Siltout

Perculation is something “natural” in wreckdiving and caused by the exhaused bubbles. Depending on how long you stay in one aera and how the condition of the wreck is – this can be from mild to severe..
A siltout is usually created by an unaware diver, but can also be due to a collapse, current or something else.

* stopp and signal buddy if You can
* GO ON THE LINE!
* in case of heavily reduced visibility leave the wreck carefully and calm

- # Potential Problems & their Solutions

Collapse

Can happen due to an unaware diver, exhaused gased trapped in the wreck or due to weather and sea conditions

* stopp and signal buddy if You can
* carefully free yourself
* check for known exit
* in case wait for some minutes – debris will settle (if gas allows)
* think and search for alternative exit.

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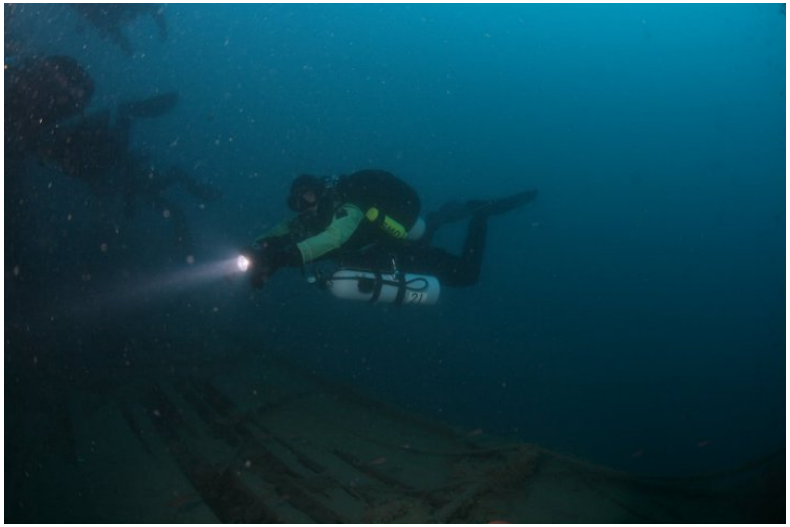
- **Depth – Gas – Light : The Basics of Survival**

Depth

Too Deep

One of the three main reasons for wreck diving fatalities is divers violating their depth limits – no matter if those are set by their training or the gas they are using. The exitment of the wreck and sometime sheer greed are amongst the things that drive people to dive beyond the limits and die.

THERE IS NOTHING IN ANY WRECK WORTH DYING FOR!



Gas

Minimum Gas Violation

One of the three main reasons for wreck diving fatalities is divers violating the rules of proper gasplanning. While some simply forget while exploring, others dont care due to the „it went well last time“ mentailty..

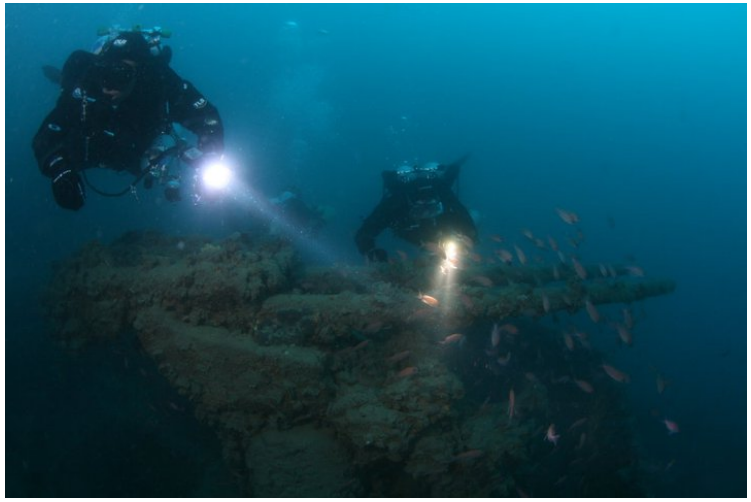
THERE IS NOTHING IN ANY WRECK WORTH DYING FOR!

Light

No Light or no Backup Light

One of the three main reasons for wreck diving fatalities is divers violating the rule of at least one backup light and one bright primary light. Trapped inside the darkness of a wreck they get lost.

THERE IS NOTHING IN ANY WRECK WORTH DYING FOR!



Line

No guideline

Another reason in wreckdiving – especially in deep penetrations is the missing guideline. Divers follow their curiositry instead of a line and get lost.

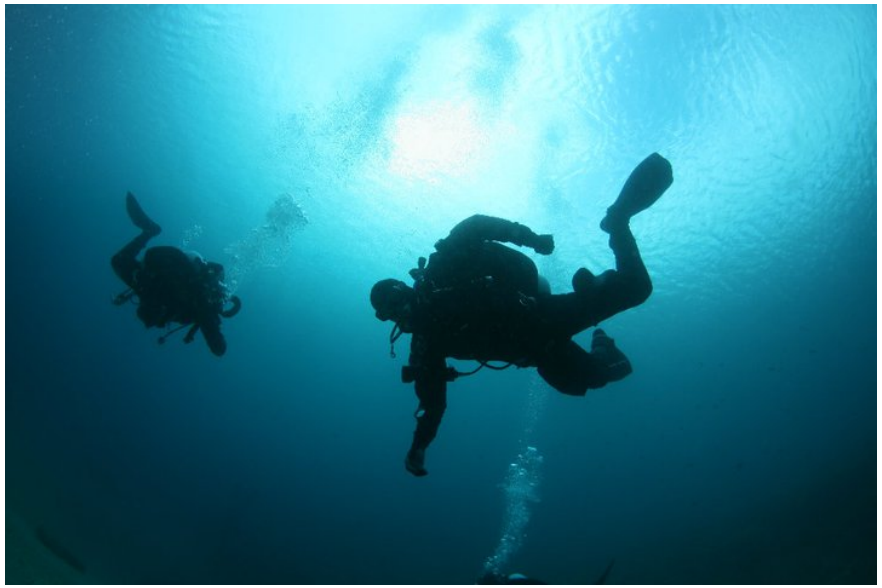
THERE IS NOTHING IN ANY WRECK WORTH DYING FOR!

Blue Water

Missing ability to ascent in the blue

This may sound funny in the first place but more than one diver died after the upline could not be found and a blue water ascent was not accepted as an option due to lack of training of such an ascent.

THERE IS NOTHING IN ANY WRECK WORTH DYING FOR!



ISE Wreck Diver Level I

- **Diving in an Overhead Enviroment**

Situational Awareness

Create Awareness on the Situation

Although this may seem logic in the first place it is not something that is given to the diver naturally. In fact, the more demanding the dive becomes, may it be trough more and advanced equipment or may it be through the tasks of the dive itself, the higher the chance is, that the diver is not able to focus on all matters at once.

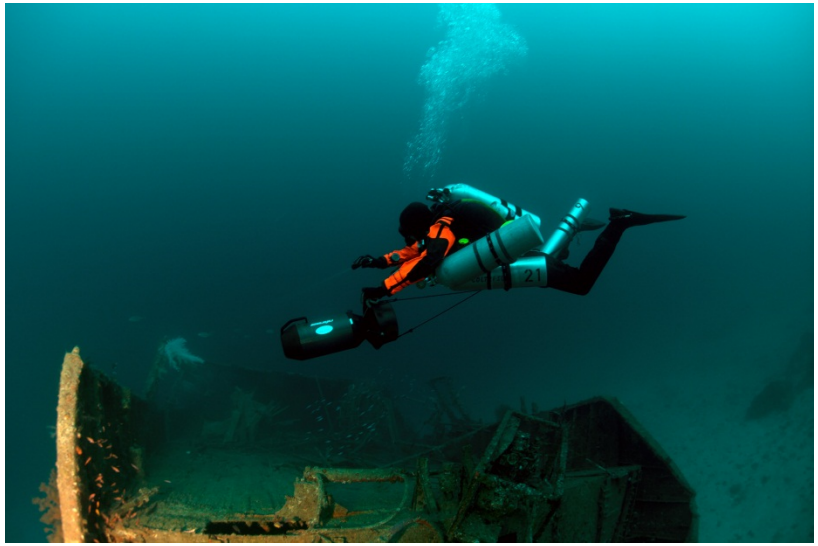
A big part of situational awareness is to visualize the dive before and play mentaly with the tasks and problems that may arise and have a solution and a tactic ready.

Situational awareness means to be able to adapt to the situation coming up on You – may it be enviromental issues, marine live, partners or changes in the plan.

Enviromental Awareness

Create Awareness for the Enviroment

Especially when diving on such delicate and demanding enviroments as wrecks, envirmental awareness is essential to not harm the enviroment on one hand and to not get harmed by the enviroment on the other hand.
Diving in overhand enviroment is challanging by a couple of reasons, one of the the psycological aspect of the ceiling above and the fact that you have to always go back instead of up which makes planning a bit more difficult.



ISE Wreck Diver Level I

- **Training Dives Review**

Training Dives Review

ISE Wreck Training has a minimum of 5 – 8 Dives on at least 3 different Wrecks.
(in some cases this can be changed in case the region where the class is conducted is limited regarding the access to more dive sites, may it be due to conditions, or simply the lack of more sites. This has to be approved by ISE HQ) The number of dives depends on the environment and how much of the training can be done in a single dive. Temperature and other circumstances can have influence here.

In the following a quick overview of the dives are given which should only serve as a guideline and can be rearranged by the instructor depending on the situation.

ISE Wreck Diver Level I

Dive 1:

- Lead by instructor
- ISE RULE
- Flow check
- Hose Deployment
- Bubble check

- Buoyancy and trim
- Propulsion Techniques
- Classical review + Pull & Glide
- Tie in & off
- Line laying with the Reel
- Line following

- Quick debrief by team leader
- Quick debrief by instructor
- Video review and discussion

ISE Wreck Diver Level I

Dive 2:

- Lead by team captain
- ISE RULE
- Flow check
- Hose Deployment
- Bubble check

- Line work / no vis
- Line work / OOG
- Lost Line
- Lost Buddy
- Line work / Loss of Gas

- Quick debrief by team leader
- Quick debrief by instructor
- Video review and discussion

ISE Wreck Diver Level I

Dive 3:

- Lead by team captain
- ISE RULE
- Flow check
- Hose Deployment
- Bubble check

- Experience Dive
- OOG & OOM
- Blue water ascent

- Quick debrief by team leader
- Quick debrief by instructor
- Video review and discussion

ISE Wreck Diver Level I

Dive 4:

- Lead by team captain
- ISE RULE
- Flow check
- Hose Deployment
- Bubble check

- Experience Dive
- Navigation
- Lost Line
- Lost Buddy
- No Mask / OOG Blue water acsent

- Quick debrief by team leader
- Quick debrief by instructor
- Video review and discussion

ISE Wreck Diver Level I

Dive 5:

- Lead by team captain
- ISE RULE
- Flow check
- Hose Deployment
- Bubble check

- Experience Dive
- Basic Survey

- Quick debrief by team leader
- Quick debrief by instructor
- Video review and discussion

ISE Wreck Diver Level I

- **Dive Planning for Wreck Divers**

Gasmanagement

Gasmanagement for technical dives is simple:

„You need enough gas to get Yourself and your OOG Partner up to the next breathable gas while following proper ascent procedures.“

Lets look at it on a practical example:

You and Your partner plan a dive to 36 Meters using D12 with 30/30.

HOW LONG DOES IT TAKE YOU TO GO TO THE SURFACE?

1 Min @ 36 to solve the issue (deploy long hose and start up)

2 Min up to 18 Meters (10m/min to 50% of max depth)

3 Min up to 9 Meters (3m/min to first deco stop)

6 Min total Minimum Deco

---

12 Min total

Gasmanagement

HOW MUCH GAS DO YOU NEED FOR THAT?

Estemating a RMV of 20 Liters / min and the fact that both of have stress and therfore breath more we can assume a total 80 Liters / min for both of You (we estimate 60 L/ min on rec Dives with NO DECO)

Att.!! This value may vary due to depth, equipment, enviroment and can be significantly more!!! – so plan accordingly!!

12 Min at an average between 36 and 0 (36/2 = 18 Meters) using 60 Liters / min =>

12 x 2,8 x 60 = 2016 Liters of Gas

As You use a D12 this has to be divided by 24 => 2016 / 24 = 84 bar

This means that You need to call the dive with a min of 84 Bars left in You D12 to have sufficient backup!

Estimate a round 15 Liters RMV on a relaxed dive this means that with the left 2784 (4800-2016) You can stay 40 min at 36 Meters. – More that enough!! (2784 / 3,6 / 15 = 40,3)

(the No Deco Limit at 36 Meters with 30/30 is 20 min!!)

Gasmanagement

Rule of Thirds and Dissimilar Tanks

The rule of thirds is a phrase that comes from cavediving and stands for: one 3rd IN, one 3rd OUT and one 3rd RESERVE. This is hard to apply on openwater diving and it does not work in Cavediving as everyboday will crearly notice who read the previous chapter carefully. So whenever the term comes up it is to be seen more as a synonym for proper gasplanning than as a guidline of how to.

Dissimlar Tanks are a topic that arises frequently and should be taken into consideration.
As we plan in Liters and than divide by the the Volume of the tanks every diver gets the right preassure for his set of tanks. (See „Minimum Gas“)

Survey –

The Basics & How To Do It

Survey Basics

Diving new Wrecks and not surveying is like flying to the moon secretyly without a camera.

During their dive divers should make notes of the wreck and its layout. This can be done by video / photo and or sketching. On new wrecks – there are some measurements that should always be taken.

Data that is always taken:
- Depth on sand / on main deck / top
- Kompass bearing (bow pointing)
- Width

Data that might be taken:
- list
- number of masts and chimneys
- portholes
- gunnery
- other points of interesst

Survey Basics

To collect data some tools of the trade can make your life easier

a measuretape like the ones used on construction sites is more accurate than knoted spool and come on a „Reel“ already. Otherwise a small handsonar is a handy gimick to have.

In more advanced projects sopisticated technique like sidescan sonars and magnetometers are used. A good quality sidescan sonar image can give divers a lot of iniformation of what to expect on the bottom before even getting wet.

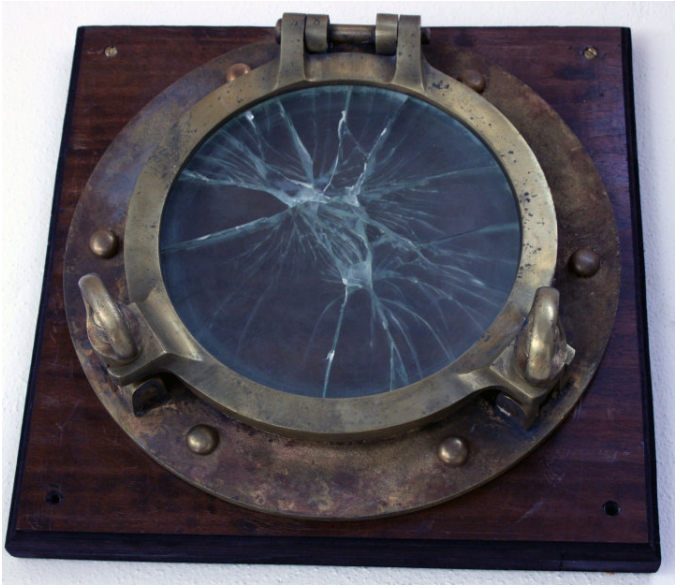
Goodies

a topic heavily discussed

ISE Wreck Diver Level I

Goodies

This is a topic discussed very controverse and we will only list some points of view and appreciate a discussion.



- Taking goodies from a wreck makes it less interessting for other divers visiting
- A wreck often is a graveyard and has to treated with the same respect that You would have for a graveyard on dry land.
- Taking goodies is ileagal in a lot of countries. Jails are unpleasent places in some of these countries..
- Goodies taken and not properly restored and displayed are lost forever.
- Goodies not taken are lost forever for sure at some stage..
- T.b.c.

ISE Wreck Diver Level I

- **Final Words**

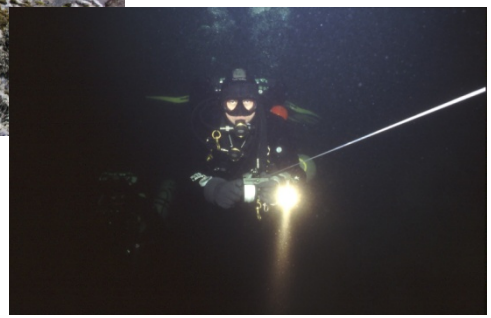
Thank You!

We would like to thank you greatly for all your time and commitment to enroll in this course, and are sure this course have greatly benefited your diving career by enhancing you aquatic fun.

Please remember to fill up the ISE instructor QA forms.

ISE is dedicated to promote intense and solid dive training around the world. Help us spread the system and please show your support for our projects and development. Thank You!



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