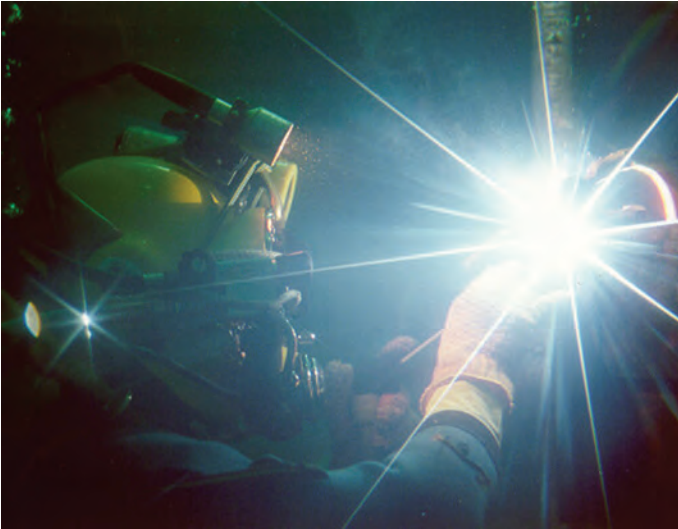




WET WELDER TRAINING

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TRAINING COURSES

General overview

Hydroweld offer our well established, internationally recognised, wet welder training courses that have become the most respected wet welder training standard in the world. These unrivalled wet welding courses are run at several locations around the world, including the USA, UK and Thailand. The courses which are provided in 10 day modules are intended to take students up to the high standards set by Hydroweld and as a minimum, to pass a Welder Performance Qualification (WPQ) to the AWS D3.6M Specification for Underwater Welding.

A 10 day training module includes a theoretical element, intensive in-water practical training and on the final day we invite an independent surveyor from Lloyds Register (LR) to witness (observe) the welding of the coupons (test piece) and the testing of specimens to ensure compliance with pre-qualified Hydroweld wet welding procedures and the AWS D3.6M:1999 specification. Successful students will then be issued with a LR WPQ certificate appertaining to the type of weld completed. LR is a major classification society and certification issued by them is generally accepted by other classification societies throughout the world.

The courses are aimed at qualified commercial divers who wish to pursue a career in wet welding and/or who wish to improve on their current wet welding capabilities and gain an internationally recognised wet welding qualification. Whilst no previous welding experience is required it is an advantage and preferred. The courses are realistic in terms of what can be achieved in the time frame with the intent to provide the student with a real understanding of wet welding

and develop skills to a repeatable high standard. With this in mind the courses have developed in to a modular programme related to the competence level of the student which has resulted in a high success rate. The modular programme means that students can develop their skills over a period of time to suit their financial situation and schedule and gives dedicated students the opportunity to progress on to more demanding joint geometry's and positions.

Why take a wet welding course

Over the last 20 years or so, systems of quality assurance, such as ISO 9000 or equivalent, have been developed and put in place. The overwhelming majority of clients operate such systems and are obliged to put in to practice QA/QC systems so, irrespective of whether a project is in the offshore oil and gas, shipping or civil engineering industry, it is likely that some form of qualification or proof of



competence will be required. In many cases where a diving contractor requires a wet welder and is presented with a choice between someone with a certificate and someone without, a wise and likely choice would be to consider the certified welder-diver first. With this in mind, as with any training course and qualification, successful students could become potentially more employable.

With the development of our Hydroweld FS wet welding electrodes, Hydroweld have been instrumental in significantly improving weld quality. This improvement in quality has been recognised by the industry and has encouraged greater use of the process but there is a lack of suitably qualified, skilled and experienced wet welders to complete some of these projects to the required standard. Sadly,

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there is a misconception that welders with topside welding experience will automatically be able to produce high quality wet welds without any additional training, but this is very rarely the case. This has contributed to the loss of credibility in the process due to substandard welds being produced. Although wet welding is a manual metal arc process (MMA/ SMAW) the techniques used in wet welding differ somewhat from conventional surface welding, it is principally these techniques that we aim to pass on to students along with additional knowledge regarding Codes and Standards, Terminology, Weldable Materials, QA/QC, Equipment, Weld Testing and Safety.

Who should qualify?

Any commercial diver can enrol and take a wet welding course but those with surface welding skills are likely to gain the most benefit in the long term. With that said some of the best course results have been achieved by students with none or very little experience that have no preconceptions and habits likely to impair their progress. Students enrol for different reasons, some, in order pursue a career in wet welding others to code up or qualify with a specific project in mind and others who are in full time employment and are enrolled by their company. Students should be aware that to become a competent and skilled wet welder it will take time irrespective of their surface welding ability. The courses are intense and demanding and require a lot of effort to achieve each level of competence; therefore, you should be prepared for a busy but rewarding course. In addition these courses are not just an attendance course although attendance certificate may be issued. In order to gain the WPQ the weld produced must meet the requirements of the specification and be acceptable to the LR surveyor.

Why train with Hydroweld?

Hydroweld have been specialising in wet welding for over

23 years and the company was originally formed and run by personnel with significant technical and practical dry and wet welding experience. Over these 23 years Hydroweld have become established as acknowledged leaders in the field of wet welding and have successfully completed hundreds of wet welding projects in the offshore oil and gas, shipping, marine and civil engineering industries.

Hydroweld are also the manufactures of the industry standard wet welding electrodes (Hydroweld FS), manufactures and suppliers of wet welding equipment and have an ongoing research and development programme in to wet welding techniques, processes and consumables. Hydroweld can lay claim to have significantly improved the reputation of wet welding by developing welding consumables and techniques that have pushed back the boundaries and overcome some of the historical deficiencies with the process. This unique and unrivalled knowledge and expertise in the field of wet welding can be drawn upon and passed on to a new generation of wet welders and we can claim to have trained more wet welders to a higher standard than any other training organisation in the world.

What makes Hydroweld courses stand out in comparison with other training school's courses?

There are a number of differences including the quality of the electrodes used. Students at some diving/wet welding schools have to battle against the odds by using substandard or 'home made' electrodes in order to reduce costs. They simply do not perform in the way they should which makes it difficult for students to achieve their true potential. Students on Hydroweld course will be using the industry standard Hydroweld FS electrode throughout the whole course.

Without doubt, one of the most significant differences is the quality and the experience of the instructors. Every instructor has at least 25 years practical experience in the field of wet welding and is still involved with projects around the world.



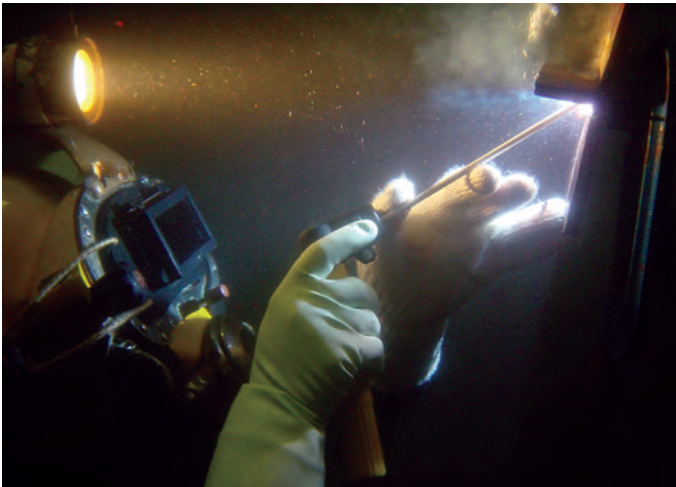
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Secondly, Hydroweld courses are run at either, purpose built facilities or at world class multi purpose underwater training facilities around the world using some of the most modern and sophisticated equipment available.

Finally, every student will have the opportunity to complete a Welder Performance Qualification (WPQ) witnessed by an independent Lloyds Register surveyor who also issues the certification. This isn't an in-house certificate; this certificate is issued by an internationally accredited classification society recognised throughout the world. Although the training course objective is to improve student's general skill and knowledge. The aim, at the end of the course is to successfully complete this WPQ and to this end we have a 95% success rate, but don't be fooled, it's not easy.

Enrolment pre-requisite

Please Note: Hydroweld does not train students to dive, only 'Qualified Commercial Divers' to wet weld.



Students are required to hold an appropriate national or international commercial diving certificate such as those approved by IMCA, HSE or ADCI etc. (not recreational diving certification such as SAA, BSAC or PADI etc.). In countries that do not require formal diving certification, proof of appropriate work experience will be required. In all cases a valid in-date commercial diving medical/physical certificate will be required.

Individuals who are not currently qualified as a commercial diver or experienced as indicated above need to approach an appropriate commercial diver training school. These schools can be found on the internet and students would be advised to thoroughly research the industry and options before enrolling.

Whilst no previous welding experience is required it is an advantage and preferred. Students should remember that there is a certain amount of dexterity required when wet welding, our experience is that not all students have this.

Course Fees

Course fees are set at the beginning of each year in US Dollars and/or UK Pound Sterling.

The course fee does not include any travel, subsistence, medical insurance, personal accident insurance or accommodation.

The course fee covers facility costs, instructor, consumables, materials, testing, surveyor costs (LR), certification. It also includes a light lunchtime meal, and light refreshments such as tea / coffee and depending on location, transport between the hotel and the facility.

Course Duration

Hydroweld wet welder training courses are provided on a modular basis with each module expanding on the knowledge gained from the previous course(s) / module.

Each module is related to the proven level of skill and competence a student has acquired from a previous module. In some, rare cases, where a student demonstrates a competence and skill level above and beyond the skill level of a particular module and a level which meets the standards set by Hydroweld, he will be invited to move on to the next module within the same course

To cater for students with a limited command of English the theoretical element of the wet welding courses can be clearly delivered using a significant amount of pictorial illustrations and practical demonstration. The practical side of the course is also designed to be as student friendly as possible with the wet welding instructor, where necessary, taking an active in water role to guide the student through the finer techniques that are required to produce high quality wet welds.

The duration of each course / module is 10 days; these 10 days may be continuous or split in to two with a 1 day weekend break in the middle depending on location.

A course comprises:

- One day of theory (Modified depending on the module)
- Eight and half days of intense practical wet welding
- Half day during which the Welder Performance Qualifications are completed.

Welding, whether above water or below requires practice and consequently, in general, the more practice the more

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proficient one becomes. In order for students to become fully competent with wet welding and meet the standards Hydroweld set they will be encouraged to get as much water time as possible.

Objective / Aim / Goal

- Significantly increase the wet welding knowledge and skill level of the student
- To produce wet welds to a highest possible standard
- To obtain an internationally recognised Welder Performance Qualifications (WPQ) issued by Lloyds Register.

Subjects covered (theoretical)

Codes, Standards and Certification, Equipment, Electrodes, Terminology, Joints and Positions, Wet-weldable materials, coupon preparation, repair design, diving mode theory of wet welding, defects, testing, safety, projects and applications

Subjects covered (practical)

Coupon preparation, dive control operation, practical wet welding, coupon testing

Location

Hydroweld run scheduled courses in three principle locations around the world, UK, USA, and Thailand. Irrespective of location the course content, syllabus, equipment, testing and witnessing by a LR surveyor are identical. Only the location changes and the facility design. So in effect, there is no difference between locations and the courses are identical.

Success rate

We use the term success rate rather than pass rate since the objective is to improve wet welding skills and in that we have 100% success, whilst the aim is to attain a WPQ issued by Lloyds Register. In this sense, we have fine tuned the courses to such an extent that about 95% of our students achieve the aim but unfortunately, like any other test, it is up to the individual to put in to practice the skills and knowledge gained during the course. As much as we try there are some students that simply do not have the dexterity / capability to achieve the standard we strive for.

Frequently Asked Questions

Below are three of the most frequently asked questions about wet welding, asked by potential students? There are so many variables it is impossible to provide a definitive answer, so replies are intended to be general.

Is there much wet welding work about?

There are many wet welding projects being carried out around the world but welder divers need to diversify throughout the industry in order to secure a place on a wet welding project. Some diving contractors never get involved with wet welding and others carry out a lot. Don't just look at the offshore oil and gas industry or civil engineering sector look at all areas such as the underwater ships husbandry industry where there is a significant amount of wet welding completed

What sort of salary or rates will I be paid?

Rates will depend on which sector of the industry you are working in, generally speaking, rates are higher in the offshore industry but then it also depends on where in the world you are working. In addition it will depend on what you are welding, the quality required and if additional qualification is required for the project. In general wet welders can expect enhanced remuneration and in some cases this can be considerable.

Can I get sponsored for a course?

There are some companies that put their employees through wet welding courses but these students tend to be well established with a particular company. It is unlikely that any company will sponsor an unknown individual.



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