



Unmanned Underwater Vehicles & Working Machines

Certified for reliability and safety

A challenge to your business

Whatever kind of unmanned underwater vehicle (UUV), underwater equipment or underwater machine you operate, your prime concern is that they function reliably. After all, underwater operations are expensive, particularly for offshore oil and gas installations, and reliability is of utmost importance for the success of a project – and your company's reputation. Having the functionality of your unmanned underwater vehicles and working machines classified or certified makes sound business sense. Because proven reliability brings you bottom-line benefits.



Heavy duty work class ROV, certified for 6000m diving depth

The solution you need

At Germanischer Lloyd (GL) we classify and certify remote operated vehicles (ROVs), autonomous underwater vehicles (AUVs), underwater working machines (stand-alone systems) and underwater working devices (as part of a vehicle) and certify sub-systems or components to our own GL Rules.

Our engineering services also cover:

- Pre-design assessment: FEM calculation of, for example, pressure hulls with external pressure
- Risk analysis (FMEA) of ROVs, AUVs and underwater installations
- Feasibility studies
- Computer programs for special engineering tasks

GL – your best partner

Why choose GL? We are not only one of the world's leading IACS classification societies for underwater and diving technology but can also point to many years of experience and expertise in this field. Moreover, we ensure our know-how remains the state of the art through cooperation with universities, research and development institutes, engineering offices, manufacturing companies and operators all over the world. Last but not least, around 6,700 skilled staff promise you friendly service and competent support in 208 offices around the world. Whenever you need us, we'll be there to help.

Benefits that make all the difference

- Certification and classification of all kinds of underwater vehicles and devices
- Regularly updated GL Rules for Classification/Certification and Construction guarantee your full access to GL's comprehensive technical know-how
- Experience from certification of highly sophisticated ROV and AUV projects for diving depth of 6000 msw
- Planning reliability ensured through many years of underwater know-how
- Detailed, practice-oriented tests and trials can be performed with GL specialists on site
- Quick and professional response if there are any queries about the survey and approval process
- GL's global network of Head Office experts, surveyors and local office staff at your disposal



TV grab, underwater working device certified for 6000m diving depth



Underwater pile driver ram

One-stop shopping at GL

GL's broad underwater technology portfolio allows you to take advantage of a wide range of classification and certification services, e.g. for manned submersibles, pressure vessels and pressure chambers for ships and offshore platforms, underwater technology and industrial applications, or personal protective equipment for underwater use.

Our one-stop shopping portfolio also includes a variety of welding technology services and **certification to ISO 9001 or 14001** as well as **assessment services for material manufacturers**.

Please take an information tour on our homepage www.gl-group.com/supplyindustry for more combinable products.