



**Training Provider for Safe Working Practice
on High Voltage/Low Voltages
Marine, Production, Drilling and Subsea ROV Systems
Inspection and Maintenance of Electrical Equipment in
Hazardous Areas**



Simmonds Equipment in conjunction with Power & Generation Services runs several Ex & HV courses for personnel working in the Oil and Gas industry. These courses have generic content but can be tailored to customers' specific equipment or personnel requirements.

Appropriate courses for the following:

- Drilling, Production, Marine, Dive, ROV, Refinery & Power Plant Technicians working on the equipment.
- Engineers responsible for specifying equipment
- Equipment Managers responsible for equipment maintenance compliance.
- Technical Buyers and Project Managers who need an appreciation of the legislative requirements for the equipment and personnel.

The HV/LV and EX equipment courses can be run over 1,2 or 3 days depending on the content required, prior knowledge and experience of the proposed participants .

A Certificate of Attainment is awarded to candidates who successfully complete the course and the final assessment.

A Certificate of Competency for the candidate to be able to safely isolate and work on HV equipment up to 11KV can be produced. This would require the assessor to witness the activity at the work site or a suitable simulation exercise that can be demonstrated. The standard attained during the one day course and the prior knowledge and experience of the candidate would also be reviewed prior to awarding a certificate of competency.



**Further detail and course cost
can be obtained by contacting :**

PGS

Brian Simmonds Sr. MIEE
Technical Manager
Earsary House
Ardconnel Road
Oban, Argyll PA34 5DR
UK

Simmonds Equipment:

158 N Tunnel
Belle Chasse, LA, 70037
USA

Tel + (1) 2814447466
Mob + (44(0)7712667542
briansr@simmondsequipment.com

The Course Syllabus is as per the guidance note IMCA C010 July 2006 and is endorsed by the Institutes of Engineering and Technology. This Simmonds Equipment /PGS course is the accepted global standard set by Lloyds and accepted by BP for the HV/LV competency required by ROV technicians on Vessels owned or on charter to them.

Venue: The course can be run at your own premises globally or on a vessel if more cost effective. Courses are presently being run in Aberdeen, Singapore, Houston and Hong Kong. We will do our best to work in with your crew changes to get the most usage of course time and dates.

Course Content:

This content can be any combination of the following and will be made as specific to the clients' equipment as possible

Day one

Electricity at Work Regulations which will include the following:
Electricity at Work (Safe Working Practices HSE (G) 85).UK and European regulation
Electrical Safety in the Work Place NFPA 70E USA regulations
International Marine regulations IEC 20092 and Norwegian marine regulation NEK410
Electric shock (Contact, flash and blast)
Explanation and demonstration of heart start defibrillator
Electrical protection for people at work
Explanation and simple calculation of earth fault
Generator, Bus bar and Transformer configuration for Marine, Sub Sea or ROV systems (Depending on application and voltage of the systems)
Requirements for the safe isolation of HV and LV electrical equipment.
Requirements for proving dead of electrical equipment as per HSE guidance note GS38
Induction and capacitance of HV cables and umbilical.
Requirement and application of circuit earths on HV systems after isolation.
Competency requirements for HV isolating authority and requirement for switching Logs.
Responsibility of supervisors with regard to the Electricity at work regulations as they apply to onshore and offshore installations.



High Voltage Test Kit Available For Purchase

Day two-three

Ignition properties of flammable gasses and liquids
Concepts for the protection of electrical equipment in hazardous atmospheres.
Ignition sources and principles of gas detection at lower explosive limits (LEL %)
Explanation of zoning and gas groups
Inspection and maintenance requirements for electrical equipment installed in hazardous atmospheres as per IEC 60079 /17.
Depending on what concepts are used on the facility the following will be explained and demonstrated.
EExd, EExe, EExn EExi (a and b) EExp
Requirements for Visual, Close, and Detailed maintenance of electrical equipment explained.

Depending on company requirements the following can be included or run as a separate course.

ATEX – NEC 500-505

There is confusion between the ATEX directives and the National Electrical Council (NEC) for the certification of electrical equipment in hazardous areas. Simmonds Equipment's courses will provide guidance on the harmonization of these standards. The course will clarify the differences and assist attendees understanding the requirements and their responsibilities.

Additional courses available:

- Introduction to: Permit to work requirements
- Isolation certificates
- Task risk assessments
- Tool box talks
- Provision and Use of Work Equipment Regulations (PUWER)
- In-Service testing of portable appliances (PAT)

Simmonds Equipment/PGS offers a consultancy service to identify and correct areas of non compliance of work control documentation. Assist in the writing and implementation of permit to work systems, isolation control certificates and the writing of safe working procedures specific to your operation and equipment.

We Have Provided Training Services To The Following Clients:

