

# Survey Engineer/Technician

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Water and electricity are not ideal ingredients to mix, but this is one of the many challenging issues that face the offshore survey engineer. Electronic engineering is normally associated with equipment operating in dry and natural atmospheric environments. This changes completely when equipment is taken offshore and submerged, sometimes to depths in excess of 3000 metres. Today's survey engineer is faced with continual rapid advance in equipment technology, driven by the commercial and technical demands of the offshore industry.

Specific disciplines and activities survey engineers are involved with include:

- ◆ fault finding, repair and maintenance of electronic, computer and electromechanical equipment
- ◆ installation and interfacing of equipment and data communications networks on board ships
- ◆ installation and interfacing of equipment on remotely operated vehicles (ROVs)
- ◆ calibration and verification of measuring devices
- ◆ operating surface and underwater positioning systems
- ◆ operating geophysical survey systems
- ◆ development of existing survey systems to fulfil specific project requirements.

Survey engineers are often pioneers involved in the trial and test of new equipment. A sound theoretical background is a must and most companies have a training schedule in place to ensure that their workforce keeps up with emerging technology.



## Education and Qualifications Required

In general, survey engineers enter the profession with either a minimum college qualification gained in an electrical and electronic engineering discipline, or through relevant qualifications gained in military service. However, relevant industrial experience would also be considered.

## Skills and Training Required

The survey engineer requires many skills - the key academic skills are acquired through specialist courses while others, such as seamanship and instrument handling, are acquired 'on the job' or from in-house training courses. Ongoing training and assessment of offshore personnel has been enhanced with the introduction of the IMCA guidance on competence assurance and assessment that was launched in January 1999. The framework sets out competence criteria for specific survey roles in the offshore construction industry. These roles include:

- ◆ Survey Engineer Grade II
- ◆ Survey Engineer Grade I
- ◆ Senior Survey Engineer
- ◆ Party Chief

To work offshore in any capacity it is usually necessary to complete a basic offshore safety induction and emergency training (BOSIET) course. This generally includes first aid, safety at sea, the basics of fire and fire fighting and helicopter underwater escape training (HUET). In many regions, someone who has not successfully completed a course of this nature will not be permitted to work offshore.



## Medical Fitness

In many areas of the world, potential offshore workers must undergo and pass a special medical examination. These requirements may vary from country to country, but usually involve a medical leading to a certificate which may be valid for one or more years. The requirements are not unduly onerous for fit and active people but certain common conditions, or previous injuries, can be a cause for failure. If in any doubt, interested persons should seek out a doctor knowledgeable about offshore standards before they seek work or embark on a course of training.

## Working Conditions and Prospects

Survey engineers can expect to travel overseas. They have to be resourceful, resilient and be able to work in a team environment. Due to the nature of the Survey engineer's role within the industry they also have to be self-motivated and good communicators. Survey engineering is not a profession for the introverted or the faint hearted, but it is a job providing much personal satisfaction as well as good companionship.

After 5-7 years field experience it is possible for a survey engineer to become a party chief (supervisor of a multi-disciplined offshore team). After several years offshore experience, many move into managerial and technical support roles onshore. Prospects for moving up through the ranks are good and, for the ambitious, there is no limit to what can be achieved.

## Further Information

For further information and contact details of offshore survey contractors in IMCA membership contact IMCA, or visit <http://www.imca-int.com/divisions/survey>