

ROV Pilot Technician Grade II

R04

The following should be read and used in conjunction with the information pack 'Competence Assurance & Assessment: Introduction for Experienced Freelance Personnel'.

Evidence Required

- Competence appraisal:** ♦ at Pilot Technician Grade II level
- Work records:** ♦ one proof of attendance at an offshore safety induction
♦ copy of one dive log completed by the candidate
- Witness testimonies:** ♦ one example of the candidate following safety instructions
♦ one example of the candidate using the appropriate safety equipment
♦ three examples of the candidate piloting the ROV to the worksite
♦ one example of the candidate assisting with a repair on the ROV or associated equipment
- Essential knowledge:** ♦ written answers to Pilot Technician Grade II questions
- Curriculum Vitae** ♦ Detailing offshore trips, work scope, ROV systems, clients, regions etc
- Piloting Hours Log** ♦ Record of Piloting Hours detailing ROV system, work scope etc

IMCA Framework Requirements

The competence assurance and assessment framework developed by IMCA (the International Marine Contractors Association) sets out a number of elements for each safety-critical position. The following table shows how competence can be demonstrated against each element.

Code	Demonstration	Covered by
R/R04/000/01/01 Safety Awareness	Basic understanding of regulations Ability to locate all relevant health, safety and quality procedures at the worksite Participated in an offshore safety induction Has read and demonstrated an understanding of company safety management system Ability to follow safety instructions and use appropriate safety equipment for deck and worksite operations Ability to identify different areas in the workplace and the hazards associated with each	Q 1,2 Q 1,2,7 R Q 1,2,7,8,9 WT CA
R/R04/000/01/02 Teamwork and Co-operation	Establishment and maintenance of good working relationships Ability to recognise personal limitations and request assistance from others when necessary without undue disruption and willing to offer assistance when needed Use of clear, concise and correct verbal communications with supervisor	CA Q 6 & CA (f) CA
R/R04/000/01/03 Emergency Procedures	Read and demonstrated an understanding of company emergency procedure documents and where to find them Ability to raise alarm and to alert others Ability to describe own role in emergency situations and that of colleagues	Q 7 Q 9 Q 8

R/R04/000/01/04 Piloting Skills	Demonstrates ability to navigate an ROV to the work site, demonstrating spatial awareness of umbilical positions, turns and loads on at least three different occasions Is able to describe the function of standard ROV controls to demonstrate their use in navigating the ROV	WT Q 10
R/R04/000/01/05 ROV Systems	Understands power up / power down safety sequence Assistance with the completion of pre-dive checks of an ROV Assistance with the launch of an ROV in normal environmental conditions Assistance with completion of post-dive checks of an ROV	Q 11 CA (g) CA (h) CA (g)
R/R04/000/01/06 Preventative Maintenance	Ability to describe why and when planned maintenance is needed Assistance in preparing work area Ability to determine what system isolations are required at the work area Ability to determine relevant tools for work to be undertaken, under supervision	Q 13 CA Q 12 CA (b,c)
R/R04/000/01/07 Safe Operating Techniques	Ability to describe correct / safe operation of launching system Ability to describe roles of ROV team members during launch and recovery operations Ability of describe environmental effect of and limitations to launch and recovery operations	Q 15 Q 14 Q 16
R/R04/000/01/08 Navigational Ability	Ability to utilise navigational aids in order to direct and assist in piloting ROV Ability to describe how sonar is used in navigation Ability to describe how acoustic positioning systems are used in ROV systems Ability to change range./scale to suit operation taking place	CA (d) Q 18 Q 17 CA
R/R04/000/01/09 Administration	Records ROV dive information onto dive logs Records video information onto video tape in the required format Audio dubs video material in real time utilising correct terminology and specified procedures	R R & CA (j) CA (j)
R/R04/000/01/10 Technical Ability	Ability to identify all components on a typical hydraulic system and describe their function Ability to identify all components on a typical ROV electrical system and describe their functions Ability to identify the correct component for change out Ability to assemble tools needed in change out, including personal protective equipment	Q 21, 22 Q 19, 20 WT WT

Q Question (written answer required)

R Record of work; document or product

CA Competence Appraisal Form

WT Witness Testimony

Sample Achievement Record

Candidate name:

First assessor name:

	Assessment Decision	Approval of Internal Verifier/ Competence Focal Point
Safety Awareness		
Teamwork & Co-operation		
Emergency Procedures		
Piloting Skills		
ROV Systems		
Preventative Maintenance		
Safe Operating Techniques		
Navigational Ability		
Administration		
Technical Ability		

Comments:

First assessor signature: Date:

Verifier signature: Date:

Sample Competence Appraisal

The appraiser must have observed the appraisee completing the task before completing the relevant section. Where necessary a number of different appraisers may be used to complete the form fully.

Appraisee name:

Task	Feedback to Appraisee	Appraiser <i>(Print name, sign and date)</i>
<p>a) Demonstrate general safety awareness, familiarisation with worksite and ability to identify hazards</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>b) Assist with maintenance activities on electrical / electronic systems.</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>c) Assist with maintenance activities on mechanical / hydraulic systems.</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>d) Act as Co Pilot / Observer, demonstrating ability to provide navigational information and operate sonar functions</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>e) Maintain effective teamwork and communication.</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>f) Recognise personal limitations and seek assistance from others</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		

Task	Feedback to Appraisee	Appraiser <i>(Print name, sign and date)</i>
<p>g) Assist with pre and post dive checks of an ROV.</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>h) Assist with launch and recovery of an ROV</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>i) Assist with planned maintenance activities</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		
<p>j) Record video, add titles and narrate audio in real time.</p> <p>Performance is exceptional <input type="checkbox"/></p> <p>Performance is competent and dependable <input type="checkbox"/></p> <p>Additional skills or experience required <input type="checkbox"/></p>		

Appraisee comments:

Appraisee signature: Date:

Essential Knowledge – Sample Questionnaire

1. List two places where can you find the company health, safety, environment and quality policy at your worksite.
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2. List three regulations that apply to your worksite and state the name of the body which is responsible for the regulation.
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3. What is your responsibility with regard to your worksites permit to work system?
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4. List the equipment available for containing environmentally hazardous spills and how the equipment should be used.
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5. What basic body positions should you adopt to reduce the risk of injury from manual handling?
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6. If you ever feel uncomfortable with the safety of task being conducted what should you do?
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7. Where can you find the company emergency procedure documents for your worksite?
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8. Upon hearing a vessel/installation muster alarm, describe the actions that should be taken by the ROV team if the ROV is conducting operations at a subsea worksite.
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9. If you notice an emergency situation whilst located at the ROV work area what options do you have for raising the an alarm?
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10. List all the controls on your ROVs main pilot console and describe their functionality.
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11. For your ROV describe, in detail, the sequence for power-up and power-down. Include all switches and visual checks.
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12. At your worksite, describe in detail the electrical isolation process and how it is managed?

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13. What is the purpose of a planned maintenance system?

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14. Describe the roles and responsibilities of each team member when launching the ROV

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15. List all the hazards present during a recovery of the ROV at your worksite, and for each hazard describe the mitigating measures that are in place to prevent injury or equipment damage.

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16. Which environmental factors can limit launch and recovery operations and why?

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17. What are the main differences between LBL, SBL and USBL positioning systems?

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18. Describe how a sonar is used in navigation of the ROV.

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19. For your ROV system produce a block diagram of a lighting control circuit.

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20. For your ROV system list and explain the function of all the printed circuit boards in the main subsea bottles/pods.

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21. What measures can be taken to avoid the risk of contamination in a hydraulic system?

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22. For your ROV system produce a block diagram of the main hydraulic system and describe the function of each component.

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