



International Marine Contractors Association

IMCA's Competence Guidance for Diving Personnel

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Competence



- There has been an increasing global emphasis, from regulators and clients, on the importance of using people with **proven** and **demonstrated** competence
 - Often part of bid process
 - In regulatory requirements
- Increased emphasis by contractors to have in place competence schemes for their personnel

- **A Competent workforce means**
 - Less incidents, fewer injuries
 - More production, less downtime
 - Lower costs

Competence – a safety tool



- Competence is an important tool amongst others in the modern safety toolkit
 - JRA/JSA/HARC/HIRA
 - Toolbox talks
 - Permit to work
 - PPE
 - People
- People may be seen as part of the problem...
- ...but they are also part of the solution

■ **The IMCA competence guidelines:**

- Provides a *framework* for member companies to develop their in-house typical competence assurance and assessment scheme
- Specifies *minimum requirements* for qualifications and, where applicable, minimum experience required
- Aims to ensure that personnel are *competent to fulfil* their safety-critical and other relevant roles and responsibilities
- Provides details of procedures, criteria and recording systems for *assessing the competence* of personnel engaged in all positions covered
- Over 50 offshore positions covered by the guidelines in the 4 IMCA technical divisions
- 12 diving positions covered under the Diving Division

Diving Positions covered:



- Diving superintendent
- Bell diving supervisor
- Air diving supervisor
- Bell diver
- Air diver
- Life support supervisor
- Life support technician
- Assistant life support technician
- Tender
- Senior dive technician
- Senior dive technician (surface supplied only)
- Dive technician

■ Background and history

- 1987 – AODC Offshore Diving Supervisor & LST scheme
- 1991 – AODC produced *Basic Induction for ROV Personnel*
- 1994 – DPVOA produced *Guidelines for Training, Competence & Experience for Key DP Personnel*
- 1996 – AODC and DPVOA merge to become IMCA
- 1999 – IMCA Competence assurance and assurance scheme launched
- 2003 – guidelines reviewed, revised and extended
- 2008 to present – 2nd review – with more detail in competence tables and task related competences

Competence tables



- Competence **assurance** – academic and vocational qualifications, experience, technical skills, medical certification and appropriate training
- Competence **assessment** – detailed tables setting out knowledge and ability for a range of competences, some common to all, and some specific just to certain technical roles

- **Knowledge**

- What an employee needs to *know*

- **Ability**

- What an employee needs to be able to *do*

- **Demonstration** – *prove it*

- Establishing that an employee actually *does have* the required knowledge and ability

- Through *assessment and verification*

Core competences



- Essential to all personnel working at any level
 - Can be considered common to all job functions
 - IMCA considers these to be:
 - Safety
 - Emergency response
 - Communication and personnel skills
 - Some work-related activities
 - Knowledge and demonstrable skill levels in these competences will also vary with a person's seniority and level of operational responsibility

Competence



- Key competences – job specific
- Core competences – common to all
- Brief focus on two **core** competences for diving personnel:
 - Safety
 - Diving emergency

■ Knowledge of

- safety legislation and regulations
- Company safety management systems
- roles and responsibilities
- Anticipation of unsafe work conditions
- Thorough knowledge of dive system, ops and emergency procedures
- More senior roles need to know how to:
 - Understand and implement risk assessment and management of change procedures
 - Maintaining the safety of the diving team
 - Operations and maintenance activities management to minimise HSE risks and impacts

- **Abilities** required also vary with seniority:
 - Maintaining a culture supportive of HSE matters, demonstrating visible and active HSE leadership and defining and understanding HSE accountabilities and responsibilities
 - Using company safety management system
 - Preparing for and carrying out emergency procedures
 - Leading and promoting safety briefings
 - Planning and performing risk assessments for safety critical areas in a work environment
 - Managing safety aspects of work appropriate onsite project related input ensuring the continued safety of work

Diving emergency



■ Knowledge:

- Roles and responsibilities
- Emergency procedures and emergency situations
- Knowledge of diving operations and ability to work with other members of the dive team
- More senior roles need to understand how to deal with:
 - Loss of communications/bell power/hot water supply
 - Loss of bell wire/umbilical/guide wire
 - Fire hazards and incidents
 - To operate emergency and back-up systems
 - Loss of position hazards

■ **Abilities**

- Participate in diving drills
- To understand and apply emergency procedure including HES procedures

With more senior roles

- Managing a diver emergency and unexpected loss of position
- Ensuring teams understand their own roles and reviewing those roles appropriately
- Producing concise reports after the fact

Diving emergency



- Specific competences for certain positions e.g. LSS/LST/ALST
 - Knowledge of:
 - Managing/dealing with life support system failure
 - HES launch and recovery procedures
 - Ability to:
 - Manage/assess life support failure modes and carry actions needed
 - To explain actions needed to reinstate system

Competence



- Key competences – job specific
- Core competences – common to all
- Brief focus on two ***job specific*** competences:
 - Managerial skills (for supervisor and superintendents)
 - Tools (for divers and diving supervisors)

Managerial / supervisory skills



- Knowledge of:
 - Personnel supervisory skills
 - Operational and project supervisory skills
 - Assess competence to ensure team is able to perform activities in accordance with company procedures
 - Development of and review of dive plans
- Ability to:
 - Show effective use and management of info, resources and personnel
 - Interface effectively with client
 - Provide ongoing assessment of diving team members
 - Complete appropriate documentation and maintain records

Tools



- Knowledge and understanding of safe operation of the following tools:
 - oxy-arc/thermal cutting eqmt
 - HP water equipment
 - grit blaster
 - bolt tensioning eqmt
 - hydraulic impact gun
 - air lifting bags
 - air lift/dredging
 - mattress handling
 - metrology
- Rigging/slinging/tirfor/chain hoists
- Ability to:
 - Carry out maintenance on all tools and diving equipment
 - Effectively use and explain the operation, safety procedures and hazards associated with subsea project equipment

Competence assurance



- Example: an air diving supervisor competence assurance table

Entry Level Criteria	Acceptance Criteria
Has completed diver training to IMCA-recognised surface supplied diver qualification	Valid training/competence certificate
Has demonstrated competence as an offshore air diver and completed 200 offshore commercial dives	Signed logbook confirming experience
Has completed and passed air diving supervisor training course	Current valid certificate
Has completed 200 hrs as a trainee supervisor on an air panel on a minimum of 100 surface dives over a minimum period of 60 days	Signed logbook confirming experience
Has demonstrated competence as a trainee air diving supervisor	Signed logbook confirming experience
Has passed IMCA air diving supervisor examination	Current valid certificate
Offshore medical suitable for geographical region	Current valid certificate
Offshore survival suitable for geographical region	Current valid certificate

Competence assessment



Competence	Knowledge	Ability	Demonstration
Safety	<ul style="list-style-type: none"> ◆ Current legislation and guidance ◆ Company safety and management systems ◆ Anticipation of unsafe work conditions ◆ Thorough knowledge of dive system, operation and all emergency procedures ◆ Understand and implement risk assessment and management of change procedures ◆ Maintaining safety of dive team ◆ Operations and maintenance activities management to minimise HSE risks and impacts 	<ul style="list-style-type: none"> ◆ To maintain a culture supportive of HSE matters, demonstrating visible and active HSE leadership and defining and understanding HSE accountabilities and responsibilities ◆ To use company safety management system ◆ To prepare for and carry out emergency procedures ◆ To lead and promote safety briefings ◆ To plan and perform risk assessments for all safety critical areas in a work environment ◆ To manage safety aspects of work and appropriate onsite project related input ensuring the continued safety of work 	<ul style="list-style-type: none"> ◆ Familiarisation by dive superintendent or HSE adviser ◆ Approved assessment by dive superintendent ◆ Sets example of safety issues by demonstrating safety leadership ◆ Company approved assessment on work-site- specific procedures
Air Operations	<ul style="list-style-type: none"> ◆ Full understanding of operation of the dive control panel ◆ etc 	<ul style="list-style-type: none"> ◆ To understand and implement dive plans ◆ To fully understand and operate dive control panel 	<ul style="list-style-type: none"> ◆ Valid IMCA offshore Diving Scheme certificates – module I ◆ etc

Use of dive panel simulators



- Time on an appropriate simulator can be used to count panel time
- IMCA guidance on simulators (C 014) allows time on a simulator to count towards panel time for trainee air and bell diving supervisors and ALSTs
 - 1:1 logged hrs for trainee air /bell diving supervisors
 - 5:1 logged hrs for ALSTs
 - %max of hours (30% /20%) counting depending on type of simulator
- An industry workgroup is now generating a list of scenarios considered appropriate for competence assessment/panel time on a dive panel simulator

Assessing competence



- Competence needs to be checked
- **Workplace assessors** need to be:
 - Competent to carry out assessments of the personnel being assessed
 - Supervisors or managers with the necessary knowledge and experience to judge the competence being assessed
 - Skilled, knowledgeable and an objective judge of the competence of personnel
 - **Suitably trained in competence assessment**

Verifying competence



- Competence assessment should be verified
- A **verifier's** role is:
 - quality control (QC) and
 - quality assurance (QA) of assessments already completed offshore
 - QC – checking the final assessment and ensuring compliance with the required criteria
 - QA – checking that the way the final assessment was conducted was itself authentic and correct

Recording competence



- Personnel competence is reviewed and assessed against specified criteria and a formal record should be made
 - e.g. in IMCA C 006 *Record of Competence*
- Diving specific logbooks
 - Contains pages to record competence as well as work recording sections
 - Diver's logbook
 - Diving supervisor's logbook
 - Life support technician's logbook
 - Auditor's/Inspector's logbook

Revisions



- The IMCA competence framework has been expanded to cover a range of non-safety critical job functions including client representatives
- The diving competence tables are being updated to provide more detail
- Currently being updated to reflect technical and operational practices

Freelance packs



- IMCA has developed competence packs for freelance/agency personnel
 - Freelance/agency personnel can then assemble a portfolio of evidence – work records, details on assessments – which can be provided to potential employers in a common format recognised and understood by IMCA member contractors
- The freelance packs are under review at the current time
 - Updated format, content and wider range of technical disciplines

- **Information notes**

- Covering transferability of competence, validity periods, case studies

- **FAQs**

- www.imca-int.com/core/ct/profile/competence/faqs.html

- **IMCA Competence workshops**

- The IMCA competence tables are available for free download from the IMCA website

- www.imca-int.com/documents/competence/

Competence - conclusions



- **Competence is a vital part of safety**
 - Competence reduces numbers of incidents and injuries
 - Competence saves money
 - Competent people are safe people
- **The IMCA competence guidance framework**
 - Minimum requirements for qualifications and experience
 - Basis for assessing and proving competence
 - Configurable and adaptable to members' needs
 - Not detailed or prescriptive

- Thank you and any questions?