

Guidance on Competence Assurance and Assessment

Diving Division



The International Marine Contractors Association (IMCA) is the international trade association representing offshore, marine and underwater engineering companies.

IMCA promotes improvements in quality, health, safety, environmental and technical standards through the publication of information notes, codes of practice and by other appropriate means.

Members are self-regulating through the adoption of IMCA guidelines as appropriate. They commit to act as responsible members by following relevant guidelines and being willing to be audited against compliance with them by their clients.

There are two core activities that relate to all members:

- ◆ Competence & Training
- ◆ Safety, Environment & Legislation

The Association is organised through four distinct divisions, each covering a specific area of members' interests: Diving, Marine, Offshore Survey, Remote Systems & ROV.

There are also five regional sections which facilitate work on issues affecting members in their local geographic area – Asia-Pacific, Central & North America, Europe & Africa, Middle East & India and South America.

IMCA C 003 Rev. 3

This guidance was produced under the direction of the IMCA Competence & Training committee.

Separate volumes exist for each of the IMCA technical divisions: [IMCA C 002](#) (Marine) [IMCA C 003](#) (Diving) [IMCA C 004](#) (Offshore Survey) and [IMCA C 005](#) (Remote Systems & ROV).

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Date	Reason	Revision
January 1999	Initial publication	
July 2003	Extended to include further positions	Rev. 1
December 2012	Technical updates; streamlining and consistency of language	Rev. 2
April 2016	Optional nitrox competences added to D03 and D05	Rev. 3

The information contained herein is given for guidance only and endeavours to reflect best industry practice. For the avoidance of doubt no legal liability shall attach to any guidance and/or recommendation and/or statement herein contained.

Guidance on Competence Assurance and Assessment

IMCA C 003 Rev. 3 – March 2016

I	Introduction	I
1.1	Aims and Objectives	I
1.2	Scope	I
2	Overview.....	2
2.1	Background	2
2.2	Implementation Guidance	2
2.3	Recording Progress.....	2
2.4	Auditing.....	2
2.5	Review of the IMCA Competence Assurance and Assessment Framework.....	3
3	Competence Assurance.....	4
4	Competence Assessment	5
4.1	‘Core’ or ‘Common’ Competences	5
4.2	‘Key’ Competences.....	5
4.3	Logbooks and Competence Records	5
4.4	Assessment and Review.....	6
5	Assessors and Verifiers	7
6	Competence Tables – Diving Division.....	8
6.1	Contents.....	8
6.2	Glossary of Terms and Abbreviations in the Diving Competence Tables	8
6.3	Changes in this Revision	9

I Introduction

I.1 Aims and Objectives

IMCA's guidance on competence assurance and assessment has been developed to provide offshore contractors with a framework on which to build their own competence schemes, thereby giving the offshore industry in general confidence that all personnel appointed to safety-critical and other relevant positions can carry out their jobs in an effective manner.

A competent workforce is more productive, operating with reduced risks, shorter downtime and fewer injuries. At the same time, all those involved know a rigorous assessment procedure is in place against which their skills, experience and knowledge will be measured. A competence framework also enables personnel to plan their career development, as it outlines to them the steps required in order to attain the required levels of competence for their current job function and future career path development.

This guidance therefore aims to:

- ◆ specify minimum standards for qualifications and, where applicable, minimum experience required to ensure that personnel are competent to fulfil their safety-critical and other relevant responsibilities and fulfil their roles;
- ◆ specify a competence assurance framework showing how proficiency can be developed, demonstrated, accepted and maintained;
- ◆ provide a reference document detailing the procedures, criteria and recording system to be applied when assessing the competence of personnel engaged in all positions but especially safety-critical positions.

I.2 Scope

This guidance document details a framework of competence assurance and assessment for personnel working for IMCA contractor (GCo/ICo/Co) members.

This guidance has been compiled by the IMCA Competence & Training committee using reports and recommendations provided by a series of specialist working groups.

When first published, the guidance covered a range of safety-critical positions within the offshore, marine and underwater engineering industry serving the oil and gas sector. In this context the term 'safety critical' is taken as describing a job or function where an individual's judgement, decision or action including a command, instruction or direction can influence the safety of other persons, property or the environment.

The IMCA competence framework is now being expanded to cover a wider range of non-safety-critical job functions, including client representatives, safety advisers, and medics. It is envisaged that the framework will be developed to include further categories of job functions – both safety-critical and non-safety-critical. The expansion of the framework in this manner underpins the overall desire to be able to demonstrate competence for all job functions – not just safety critical ones.

2 Overview

2.1 Background

IMCA's competence assurance and assessment guidance was launched in January 1999. When launched, it set out an ambitious timetable for implementation, which included the allocation of all existing personnel into the scheme by January 2001 and the setting-up of ongoing assessment arrangements.

2.2 Implementation Guidance

The process for all new personnel entering the industry has been and is for them to enter at the basic grade for that job function. Existing personnel are subject to the ongoing assessment arrangements set out in this guidance.

Where appropriate, candidates may work towards demonstrating competence at a higher grade than their current competence grade – for example, a Surveyor Grade II may be permitted in appropriate circumstances to demonstrate competency in an aspect of the work of a Senior Surveyor before he or she is actually employed as such. This principle is designed to enable the 'fast tracking' of exceptionally able personnel who consistently perform at a level higher than their current grade.

It is essential that member companies also implement an appraisal system for their workforce. Performance appraisal and competence assessment are the main elements of the process whereby skills are assessed and personnel can develop their career in a systematic manner. Training needs are identified and opportunities for future roles are facilitated when an appraisal system and competence scheme operate in an integrated manner. IMCA does not currently provide guidance on an appraisal system as it is recognised that many member companies already have this in place for their onshore workforce and it is a relatively straightforward step to adopt the general principles for use in an offshore workplace.

2.3 Recording Progress

2.3.1 General Guidance

As people receive training, broaden their skill base, gain experience or attain more knowledge their ability to demonstrate their competence will be reviewed and assessed against specified criteria. Progress could be recorded in an *IMCA Record of Competence*. Each company's scheme would be expected to improve operational practice throughout the industry while encouraging both upward and lateral career progression.

2.3.2 Training Received in Simulators

It should be noted that special care may be required in recording progress where simulators, particularly ROV and dive panel simulators, have been used in the training process. There is a complex relationship in value terms between hours of experience gained in a simulator and hours of experience gained offshore. This relationship is currently being charted in work conducted by IMCA's Simulator Workgroup.

2.4 Auditing

As part of its scheme each company should have internal auditing arrangements in place to check compliance with these guidelines and ensure that all assessors apply the criteria in a consistent and appropriate manner. The internal auditing arrangements will usually be the same as those required by any external auditing programmes to which a member company subscribes. For example, the International Standards Organization (ISO) 9000, the International Safety Management Code (ISM), the Occupational Safety & Health Administration (OSHA) 188001 and BS 8800 are bodies, codes and standards which provide guidance on such subjects.

2.5 Review of the IMCA Competence Assurance and Assessment Framework

The specifications for particular competences are reviewed and updated regularly and the tables within this guidance updated accordingly. This updated release of the guidance documentation includes the revision of reference tables carried out in 2002 by the TCPC (now Competence & Training) committee and the subsequent comprehensive review conducted between 2007 and 2009.

3 Competence Assurance

IMCA's competence assurance and assessment guidance offers a range of criteria including academic and vocational qualifications, demonstrable experience, technical skills, medical certification and appropriate training.

Competence assurance is the process of collecting together the results of competence assessments and ensuring that these are consistent and auditable through internal and/or external verification.

Please see the front of each divisional volume for a list of identified job functions and for full details of all criteria to be applied in different operational sectors covered by the IMCA divisions: Marine, Diving, Remote Systems & ROV and Offshore Survey, as well as those competences in areas that do not fall under the remit of any one of the above IMCA technical divisions, such as those for catering or medical staff.

4 Competence Assessment

Competence assessment is the process of collecting evidence of an individual's performance, knowledge and attitude and reviewing this against specified competences.

4.1 'Core' or 'Common' Competences

Certain 'core' competences are considered essential to all personnel working at any level in the oil and gas industry and, as such, may be considered common to all job functions. These are: safety awareness; emergency situations; communication and interpersonal skills; and work-related activities. Knowledge and demonstrable skill levels in these competences will also vary with a person's seniority and level of operational responsibility.

4.2 'Key' Competences

For each job function there may be additional job-specific competences. These may be considered key competences, and as such, central to the job involved. To assess these competences assessors apply specified criteria to determine whether a person has the required knowledge and can demonstrate their ability to complete the task. It is essential that an assessor undertakes to determine the level of competence of a candidate under the full range of circumstances which the candidate may face. Whilst in normal operations a candidate may appear to demonstrate the required competence for that role, an assessor should introduce other realistic and relevant measures to the process in order to ensure the full operating range of the role is assessed in an objective manner.

4.3 Logbooks and Competence Records

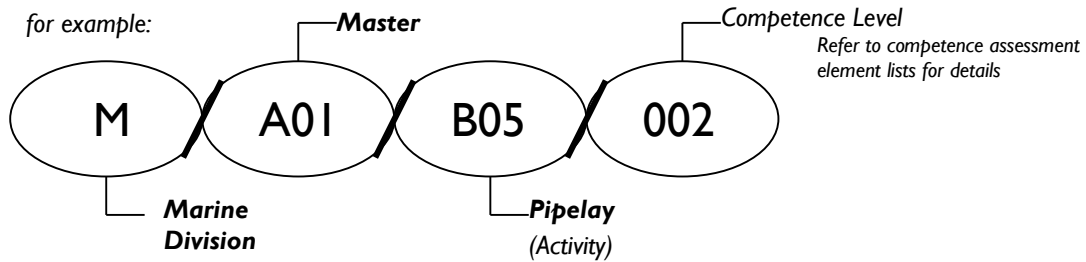
The *IMCA Record of Competence* covers personal details, qualifications, certificates, training, specialist experience and details of all competence assessments.

IMCA personnel logbooks include the *IMCA Record of Competence* pages:

- ◆ Auditor/Inspector's logbook
- ◆ Crane logbook
- ◆ Crane operator's logbook
- ◆ Diving inspection personnel logbook
- ◆ Diving supervisor's logbook
- ◆ Diving technician's logbook
- ◆ Dynamic positioning (DP) logbook
- ◆ Life support technician's logbook
- ◆ Offshore engineer's logbook
- ◆ Offshore manager's logbook
- ◆ Offshore safety adviser's logbook
- ◆ Offshore mariner's logbook
- ◆ Professional diver's logbook
- ◆ ROV personnel logbook
- ◆ Survey personnel logbook
- ◆ Workboat crew logbook

Every competence element carries a unique identifier or code (see below) which can be used in the *IMCA Record of Competence* by assessors when they 'sign off' the achievement of a specified competence.

for example:



In some cases specific training courses may be recommended or considered essential for the achievement of certain competences. Likewise, in other cases e.g. diving supervision, there are minimum work experience requirements to be logged before competence can be assessed or recorded.

4.4 Assessment and Review

Assessors need to be satisfied that personnel have demonstrated their competence on the job. Generally such assessments are made with reference to 'in house' or industry-developed approved assessment or performance criteria. Section 5 provides additional guidance for assessors.

Assessors may be any supervisor or manager with the necessary knowledge and training to apply the criteria in a fair, consistent and objective manner. As part of their scheme every IMCA company should identify its own assessors and train them where required. They should also put in place an adequate grievance procedure. Guidance on assessor training is available ([IMCA C 007](#)).

In most cases competences will be reviewed automatically in the course of standard management evaluations and where job responsibilities, work sites, tasks or roles change.

To maintain client confidence in their in-house competence assurance and assessment schemes, contractors should audit their schemes to check the appropriate procedures are in place and work effectively.

Where personnel move employment to another IMCA member company, it may be appropriate for competences to be reviewed and reassessed by the new employer.

5 Assessors and Verifiers

The guidance proposes that all personnel demonstrate that they have the required competences for their specific job function. This is usually done by workplace assessors.

Assessors should be competent to carry out assessments of the personnel being assessed. They should be supervisors or managers with the necessary knowledge and experience to judge the competence being assessed. They should be a skilled, knowledgeable and objective judge of the competence of personnel and should also have been provided with suitable training on assessment.

Training for assessors should usually cover the following aspects:

- ◆ Identifying evidence and criteria against which to judge competence;
- ◆ How to plan assessments using different sources of evidence;
- ◆ Collecting and recording evidence;
- ◆ Making assessment decisions and recording assessment outcome;
- ◆ Providing feedback on assessment.

To carry out assessments successfully both the person being assessed and the assessor need to be fully familiar with the assessment process.

The following points are normally considered to be good practice in conducting assessments:

- ◆ The assessor should provide a list showing both the elements of competence being assessed and the criteria against which they are to be assessed;
- ◆ The person being assessed should be able to demonstrate on a number of separate occasions that he/she can satisfactorily perform the task being assessed;
- ◆ The person being assessed should be observed, where appropriate, demonstrating the attainment of the competence by the assessor;
- ◆ The assessor should gather and record evidence (e.g. noting date and time observing candidate performing task);
- ◆ The person being assessed should receive prompt, accurate and constructive feedback on any assessment conducted.

A verifier may be used as part of a company's in-house audit arrangements. The role of the verifiers is quality control (QC) and quality assurance (QA) of assessments that have been completed offshore. QC is undertaken by checking the final assessment and ensuring compliance with the required criteria. QA is undertaken by checking that the way the final assessment was conducted was itself authentic and correct.

A verifier should:

- ◆ ensure that there is a uniform and consistent approach to and application of the assessment process;
- ◆ ensure that all assessors are assessing and applying competence guidelines to the same standard;
- ◆ provide support, advice and guidance to assessors;
- ◆ ensure that all assessments and records are accurate and complete;
- ◆ resolve problems with interpretation of performance criteria, range statements or underpinning knowledge;
- ◆ make recommendations as required for appropriate improvements to the company's competence programme.

Further guidance on the training of assessors is available in [IMCA C 007 – Guidance on assessor training](#).

6 Competence Tables – Diving Division

6.1 Contents

Code	Job Function	Assurance Tables (page)	Assessment Tables (page)
D01	Diving Superintendent*	10	22
D02	Bell Diving Supervisor	11	28
D03	Air (Surface Supplied) Diving Supervisor	12	36
D04	Bell (Saturation) Diver	13	44
D05	Air (Surface Supplied) Diver	14	49
D06	Life Support Supervisor	15	55
D07	Life Support Technician	16	61
D08	Assistant Life Support Technician	17	65
D09	Tender	18	69
D10	Senior Dive Technician	19	72
D11	Senior Dive Technician (Surface Supplied Only)	20	77
D12	Dive Technician	21	82

* May also be termed Offshore Manager Ref. *IMCA D 014 – IMCA international code of practice for offshore diving*

6.2 Glossary of Terms and Abbreviations in the Diving Competence Tables

BIBS	Built-in breathing system
CPR/EAR	Cardiopulmonary resuscitation/expired air resuscitation
DCI	Decompression illness
DESIGN	Diving Equipment Systems Inspection Guidance Note
DMAC	The Diving Medical Advisory Committee
DP	Dynamic positioning
DSV	Dive support vessel
EAD	Equivalent air depth
HES	Hyperbaric evacuation system
HP	High pressure
HRC	Hyperbaric rescue chamber
HSE	Health, safety and environment
IMO	International Maritime Organization
LSP	Life support package
LST	Life support technician
Nitrox	A breathing mixture of nitrogen and oxygen
OCM	Offshore construction manager
PMS	Planned maintenance system
ppO ₂	Partial pressure of oxygen
PTW	Permit to work
ROV	Remotely operated vehicle
SPHLB	Self-propelled hyperbaric lifeboat
TUP	Transfer under pressure
VHF/UHF	Very high frequency/ultra high frequency

6.3 Changes in this Revision

The IMCA guidance on competence assurance and assessment is regularly reviewed, by sector-specific workgroups, at IMCA seminars and workshops and through the association's technical committees.

This revision includes optional nitrox competences for both the air diving supervisor (D03 – page 43) and the air diver (D05 – page 54).

Diving Superintendent**D01**

Entry Level Qualifications	Acceptance Criteria
Completed diver training to IMCA-recognised closed bell or surface-supplied diver qualification*	Valid training/competence certificate
Demonstrated competence as a bell or air supplied dive supervisor*	Competence certificate
Has received training in aspects of leadership	Signed logbook confirming experience
Passed offshore medical suitable for geographical area of work	Current valid certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Passed introductory dynamic positioning course [#]	Course certificate
Completed employer company familiarisation	Signed logbook confirming completion

* Requirements apply if the dive superintendent acts as a supervisor whilst in the role of dive superintendent and is required to be in charge of the panel. If qualified as an air diving supervisor, then the dive superintendent cannot act as a bell diving supervisor

If applicable – required for working on a DP DSV

Bell (Saturation) Diving Supervisor**D02**

Entry Level Qualifications	Acceptance Criteria
Completed diver training to IMCA-recognised bell (saturation) diving qualification	Valid training/competence certificate
Demonstrated competence as an offshore bell (saturation) diver (in accordance with IMCA C 003) and has completed 400 lockout hours as a bell diver	Signed logbook confirming experience
Completed and passed air diving supervisor training course	Valid certificate
Completed and passed bell (saturation) diving supervisor training course	Valid certificate
Logged at least 350 panel hours (under direct supervision) offshore on a minimum of 50 bell runs over a minimum period of 90 days working as a 'trainee' bell diving supervisor	Signed logbook confirming experience
Demonstrated competence as a bell (saturation) diving supervisor (in accordance with IMCA C 003) by the end of their period as a 'trainee' bell diving supervisor	Satisfactory offshore reports
Acted as 'trainee' air diving supervisor on 10 offshore commercial air dives	Signed logbook confirming experience
Logged a minimum of 360 hours as an assistant life support technician (ALST)	Signed logbook confirming experience
Passed IMCA bell (saturation) diving supervisor examination	Current valid certificate
Passed offshore medical suitable for geographical area of work	Current valid certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Has received training in aspects of leadership	Signed logbook confirming experience
Completed employer company familiarisation	Signed logbook confirming completion

Air (Surface Supplied) Diving Supervisor**D03**

Entry Level Qualifications	Acceptance Criteria
Completed diver training to IMCA-recognised air (surface supplied) diver qualification	Valid training/competence certificate
Demonstrated competence as an offshore air (surface supplied) diver (in accordance with IMCA C 003) and has completed 200 offshore commercial dives	Signed logbook confirming experience
Completed and passed air (surface supplied) diving supervisor training course	Valid certificate
Completed 200 hours as 'trainee' air supplied supervisor on air control panel on a minimum of 100 surface dives over a minimum period of 60 days	Signed logbook confirming experience
Demonstrated competence as an air (surface supplied) diving supervisor (in accordance with IMCA C 003) by the end of the period as a 'trainee' supervisor	Satisfactory offshore reports
Passed IMCA air diving supervisor examination	Current valid certificate
Passed offshore medical suitable for geographical area of work	Current valid certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Has received training in aspects of leadership	Signed log book confirming experience
Completed employer company familiarisation	Signed log book confirming completion

Bell (Saturation) Diver**D04**

Entry Level Qualifications	Acceptance Criteria
Completed diver training to IMCA-recognised closed bell diver qualification	Valid training/competence certificate
Passed medical examination for fitness to dive	Current valid medical certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Completed employer company familiarisation	Signed log book confirming completion
Completed first aid training to required standard	Current valid certificate
<u>OR</u>	
Completed diver medic training	
<i>For inspection work only:</i> Holds qualification following examination for the appropriate level of inspection	Current valid certificate for appropriate level

Air (Surface Supplied) Diver**D05**

Entry Level Qualifications	Acceptance Criteria
Completed diver training to IMCA-recognised air diver qualification	Valid training/competence certificate
Passed medical examination for fitness to dive	Current valid medical certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Completed first aid training to required standard	Current valid certificate
<u>OR</u>	
Completed diver medic training	
Completed employer company familiarisation	Signed logbook confirming completion
<i>For inspection work only:</i> Holds qualification following examination for the appropriate level of inspection	Current valid certificate for appropriate level

Life Support Supervisor (LSS)**D06**

Entry Level Qualifications	Acceptance Criteria
Completed a minimum 2,400 logged hours as LST after passing examination	Signed logbook confirming experience
Passed offshore medical suitable for geographical area of work	Current valid certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Passed IMCA LST examination	Current valid certificate
Demonstrated competence as a life support technician in accordance with IMCA C 003	Valid certificate of competence
Has received training in aspects of leadership	Signed logbook confirming experience
Completed employer company familiarisation	Signed logbook confirming completion

Life Support Technician (LST)**D07**

Entry Level Qualifications	Acceptance Criteria
<p>Completed minimum 2,400 logged hours as a trainee ALST</p> <p>Demonstrated competence as an assistant LST in accordance with IMCA C 003</p> <p><u>OR</u></p> <p>Completed 360 logged hours as an assistant LST and possesses IMCA-recognised closed bell diver qualification</p>	<p>Signed logbook confirming experience</p> <p><u>OR</u></p> <p>Valid diving certificate AND signed logbook confirming experience</p>
<p>Passed offshore medical suitable for geographical area of work</p>	<p>Current valid certificate</p>
<p>Current survival course suitable for geographical area of work</p>	<p>Current valid certificate</p>
<p>Passed IMCA LST examination</p>	<p>Current valid certificate</p>
<p>Completed employer company familiarisation</p>	<p>Signed logbook confirming completion</p>

Assistant Life Support Technician (ALST)**D08**

Entry Level Qualifications	Acceptance Criteria
Undertaken IMCA approved training course completed on IMCA approved ALST training course <u>OR</u> Possesses IMCA-recognised bell diver qualification pre 2006	Valid certificate of training <u>OR</u> Valid diving certificate
Passed offshore medical suitable for geographical area of work	Current valid medical
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Completed employer company familiarisation	Signed logbook confirming completion

Job Function:

Job Category:

Tender

D09

Entry Level Qualifications	Acceptance Criteria
Passed offshore medical suitable for geographical area of work	Current valid medical
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Completed employer company familiarisation	Approved and documented in service experience

Senior Dive Technician (All Systems)**DI0**

Entry Level Qualifications	Acceptance Criteria
<p>Detailed knowledge of one or more of the following: electrical, electronic, mechanical or hydraulic engineering, to be obtained: Through a trade qualification</p> <p><u>OR</u></p> <p>Through advanced academic education</p> <p><u>OR</u></p> <p>Through experience and qualification in a military environment</p>	<p>Valid training/competence certificate</p> <p><u>OR</u></p> <p>Documentary proof of qualification(s)</p> <p><u>OR</u></p> <p>Military service qualification</p>
<p>Has demonstrated competence as a dive technician in accordance with IMCA C 003</p>	<p>Signed logbook confirming experience</p>
<p>Offshore medical suitable for geographical area of work</p>	<p>Current valid certificate</p>
<p>Offshore survival course suitable for geographical area of work</p>	<p>Current valid certificate</p>
<p>Completed employer company familiarisation</p>	<p>Signed logbook confirming completion</p>

Senior Dive Technician (Surface Supplied Only)**DII**

Entry Level Qualifications	Acceptance Criteria
<p>Detailed knowledge of one or more of the following: electrical, electronic, mechanical or hydraulic engineering, to be obtained: Through a trade qualification</p> <p><u>OR</u></p> <p>Through advanced academic education</p> <p><u>OR</u></p> <p>Through experience and qualification in a military environment</p>	<p>Valid training/competence certificate</p> <p><u>OR</u></p> <p>Documentary proof of qualification(s)</p> <p><u>OR</u></p> <p>Military service qualification</p>
<p>Demonstrated competence as a dive technician in accordance with IMCA C 003 D12</p>	<p>Signed logbook confirming experience</p>
<p>Passed offshore medical suitable for geographical area of work</p>	<p>Current valid certificate</p>
<p>Passed offshore survival course suitable for geographical area of work</p>	<p>Current valid certificate</p>
<p>Completed employer company familiarisation</p>	<p>Signed logbook confirming completion</p>

Dive Technician**D12**

Entry Level Qualifications	Acceptance Criteria
Possesses detailed knowledge of one or more of the following: electrical, electronic, mechanical or hydraulic engineering, to be obtained: Through a trade qualification <u>OR</u> Through advanced academic education <u>OR</u> Through experience and qualification in a military environment	Valid training/competence certificate <u>OR</u> Documentary proof of qualification(s) <u>OR</u> Military service qualification
Passed offshore medical suitable for geographical area of work	Current valid certificate
Passed offshore survival course suitable for geographical area of work	Current valid certificate
Completed employer company familiarisation	Signed logbook confirming completion

Diving Superintendent**D01**

Code	Competence	Knowledge	Ability	Demonstration
D01/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems including incident reporting and investigation procedures ◆ Factors which affect the safety and security of the dive team ◆ Dive system and operation ◆ All emergency procedures ◆ Risk assessment and management of change procedures ◆ Permit to work procedures ◆ Operations and maintenance activities management to minimise HSE risks and impacts ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Maintain a culture supportive of HSE matters, demonstrating visible and active HSE leadership and defining and understanding HSE accountabilities and responsibilities ◆ Oversee implementation of company safety management system ◆ Maintain safety of dive team ◆ Prepare for and carry out emergency procedures ◆ Lead and promote safety briefings ◆ Plan and perform risk assessments for all safety critical areas in a work environment ◆ Manage safety aspects of work and appropriate onsite project related input ensuring the continued safety of the work ◆ Oversee the operation of the hazard observation system 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment by approved company assessor ◆ Assessment of documentary evidence of operating company safety management systems

Diving Superintendent

D01

Code	Competence	Knowledge	Ability	Demonstration
D01/000/02	Bell and air operations	<ul style="list-style-type: none"> ◆ Overall dive system configuration ◆ Company procedures ◆ Project/operational procedures and plans ◆ Operation of the dive control panel ◆ Deployment and recovery of the bell/basket ◆ Transfer under pressure procedures and hazards ◆ Dive plans ◆ Dive tables ◆ Gas analysis system including analyser calibration procedures ◆ Gas resources and mixtures ◆ Bell diver hot water system ◆ Reclaim system ◆ Planned maintenance system (PMS) ◆ IMCA guidelines including DESIGN ◆ Workplace and environment conditions ◆ Diving operations from dynamic positioning (DP) vessels ◆ Lost/trapped bell/basket procedures ◆ HES evacuation and launch procedures 	<ul style="list-style-type: none"> ◆ Oversee safe bell and air supplied diving operations ◆ Implement dive plans and diving related company procedures ◆ Manage, operate and maintain activities to minimise HSE risks and impacts 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D01/000/03	Life support system operations	<ul style="list-style-type: none"> ◆ Operation and hazards of life support and gas reclaim systems 	<ul style="list-style-type: none"> ◆ Oversee the safe operation of life support and gas reclaim systems 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Diving Superintendent**D01**

Code	Competence	Knowledge	Ability	Demonstration
D01/000/04	Dysbaric diving diseases and therapeutic treatments	<ul style="list-style-type: none"> ◆ Human anatomy and physiology ◆ Types of dysbaric diving diseases ◆ Causes, signs and symptoms of decompression sickness and other types of dysbaric diving diseases ◆ Flowcharts used to select initial treatment options/standard therapeutic treatment tables for decompression sickness and other types of dysbaric diving diseases ◆ Standard therapeutic treatment tables used to treat decompression sickness and other types of dysbaric diving diseases 	<ul style="list-style-type: none"> ◆ Accurately diagnose types of dysbaric diving diseases ◆ Follow relevant flowcharts to select initial treatment options/standard therapeutic treatment tables ◆ Communicate with hyperbaric medical physician for essential specialist assistance ◆ Oversee therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with standard treatment tables ◆ Oversee therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with non-standard treatments as specified by hyperbaric medical physicians 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D01/000/05	Diving emergency	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Procedures for: <ul style="list-style-type: none"> - loss of pressure in a saturation system/bell/DDC - loss of communications/bell power/hot water supply - loss of bell wire/umbilical/guide wire - lost/trapped bell - fire hazards/incidents - loss of air/gas - system failures, e.g. winch/ compressor - trapped/incapacitated diver procedures - loss of dive platform position - hyperbaric evacuation 	<ul style="list-style-type: none"> ◆ Oversee the implementation of project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Respond to and manage a diving emergency appropriately ◆ Oversee supervision and operation of emergency and back-up systems ◆ Deliver dive system emergency familiarisation training 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Diving Superintendent

D01

Code	Competence	Knowledge	Ability	Demonstration
D01/000/06	Umbilical management and tending	<ul style="list-style-type: none"> ◆ Principles of safe umbilical management including active tending ◆ Identification of hazards ◆ Maximum diver umbilical lengths ◆ Excursion umbilical safety and excursion limits 	<ul style="list-style-type: none"> ◆ Oversee safe management of bell and divers' umbilicals 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D01/000/07	Marine activities	<ul style="list-style-type: none"> ◆ DP systems and diving from DP vessels, including: <ul style="list-style-type: none"> - surface orientated diving from DP vessels (ref. IMCA D 010 – Diving operations from vessels operating in dynamically positioned mode) - pre-dive briefing - umbilical safety - diving in anchor patterns as outlined in IMCA D 010 - DP operations with reference to shallow water diving ◆ Conventional mooring systems and diving from conventionally moored vessels, including: <ul style="list-style-type: none"> - isolation of thrusters and other dangerous parts of ships - station keeping and moored systems ◆ Marine safety principles ◆ Permit to work ◆ Minimum operating clearances ◆ Position references ◆ Mooring line adjustments and identification 	<ul style="list-style-type: none"> ◆ Oversee dive operations safely within vessel-specific manoeuvring/positioning restrictions ◆ Oversee safe diving operations from large vessels and small boats 	<ul style="list-style-type: none"> ◆ Valid introductory DP course certificate ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Diving Superintendent**D01**

Code	Competence	Knowledge	Ability	Demonstration
D01/000/08	Project activities	<ul style="list-style-type: none"> ◆ Diving project plan and work procedures ◆ Dive plans ◆ Project equipment operating procedures ◆ Progress reporting process 	<ul style="list-style-type: none"> ◆ Manage project performance requirements in accordance with the diving project plan 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D01/000/09	Tools and equipment	<ul style="list-style-type: none"> ◆ Safe operation of the following tools and equipment: <ul style="list-style-type: none"> - lifting equipment (cranes, slings, shackles, tirsors and chain hoists) - oxy-arc/thermal cutting equipment - HP water jetting equipment - grit blasting equipment - bolt tensioning equipment - hydraulic impact guns - hydraulic grinders - air lift bags - air lift/dredging equipment - mattress handling equipment - metrology equipment ◆ Lift planning/rigging/slinging 	<ul style="list-style-type: none"> ◆ Oversee effective maintenance of all tools and subsea project equipment ◆ Oversee the safe operation of all tools and subsea project equipment 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Documented in-service experience

Diving Superintendent**D01**

Code	Competence	Knowledge	Ability	Demonstration
D01/000/10	Management	<ul style="list-style-type: none"> ◆ People management principles, approaches and techniques ◆ Operations and project management ◆ Company management of change procedures ◆ Dive management systems ◆ Legal requirements ◆ Planned maintenance systems (PMS) ◆ Diving project plans ◆ Project emergency response plans ◆ HSE performance (daily progress reports) ◆ Training and competence assessment techniques to ensure team is able to perform activities in accordance with HSE and company requirements 	<ul style="list-style-type: none"> ◆ Show effective use and management of information, resources and personnel ◆ Oversee implementation of company change management procedures ◆ Motivate personnel by effective communications, involving them in decisions, and by the delegation of work appropriate to the level of responsibility ◆ Adapt leadership style to take into account task needs, team and individual member needs ◆ Develop and review dive plans ◆ Engage effectively with client ◆ Provide ongoing competence assessment of personnel under supervision ◆ Properly apply company quality management systems ◆ Complete appropriate company documentation and maintain records 	<ul style="list-style-type: none"> ◆ People management training course certificate ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D01/000/11	Personal skills and communication	<ul style="list-style-type: none"> ◆ Safety leadership behaviours and impacts on individual and team performance ◆ Effective communication for individual and team safety covering dive, bridge, ROV and life support teams ◆ Principles relating to engagement in company safety culture ◆ Principles underpinning team working and interdepartmental co-operation ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture 	<ul style="list-style-type: none"> ◆ Manage a culture supportive of HSE matters, demonstrating visible and active HSE leadership ◆ Communicate effectively with dive team, marine personnel and deck crew ◆ Direct individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Encourage personnel to raise issues of concern calmly and assertively, and to deal with matters promptly and appropriately 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Bell Diving Supervisor**D02**

Code	Competence	Knowledge	Ability	Demonstration
D02/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems including incident reporting and investigation procedures ◆ Factors which affect the safety and security of the dive team ◆ Dive system and operation ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Safety planning related to the preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Permit to work procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Apply HSE accountabilities and responsibilities ◆ Manage operations and maintenance activities to minimise HSE risks and impacts ◆ Manage functions in ways which maintain the safety and security of the dive team ◆ Promote and ensure implementation of company safety management system ◆ Manage emergency procedures ◆ Lead and promote safety briefings ◆ Lead the planning and preparation of risk assessments for all safety critical areas ◆ Manage all activities to ensure safe continuity of work ◆ Manage the operation of the hazard observation system ◆ Manage: <ul style="list-style-type: none"> - HSE, project and vessel inductions including familiarisation training - HSE meetings - provision for training (HSE) 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment of documentary evidence of operating company safety management systems ◆ Assessment by approved company assessor

Bell Diving Supervisor

D02

Code	Competence	Knowledge	Ability	Demonstration
D02/000/02	Bell operations	<ul style="list-style-type: none"> ◆ Overall dive system configuration ◆ Company procedures ◆ Project/operational procedures and plans ◆ Operation of the dive control panel ◆ Deployment and recovery of the bell ◆ Transfer under pressure procedures and hazards ◆ Dive plans ◆ Dive tables ◆ Gas analysis system including analyser calibration procedures ◆ Gas resources and mixtures ◆ Bell diver hot water system ◆ Reclaim system ◆ Planned maintenance system (PMS) ◆ IMCA guidelines including DESIGN ◆ Workplace and environment conditions ◆ Diving operations from dynamic positioning (DP) vessels ◆ Lost/trapped bell procedures 	<ul style="list-style-type: none"> ◆ Manage safe bell diving operations ◆ Manage the safe operation of the dive control panel ◆ Manage the safe deployment and recovery of bell ◆ Manage the deployment and recovery of bell diver to and from the bell ◆ Manage safe diving operations from DP vessels ◆ Manage lost/trapped bell emergencies ◆ Manage HES launch and evacuation ◆ Manage diving and decompression operations in accordance with dive tables ◆ Manage the implementation of dive plans ◆ Maintain accurate logs of operations and incidents 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Bell Diving Supervisor**D02**

Code	Competence	Knowledge	Ability	Demonstration
D02/000/03	HES operations	<ul style="list-style-type: none"> ◆ Relevant IMCA HES guidance including information contained in DESIGN documents ◆ Relevant DMAC guidance ◆ Hyperbaric evacuation system (HES) procedures including: <ul style="list-style-type: none"> – preparation of the HES for evacuation and launch – TUP and pre-launch procedures – launch procedures – post launch procedures, including recovery of SPHLB/HRC, LSP operation, transport arrangements, and HRF transfer procedures – emergency decompression from saturation 	<ul style="list-style-type: none"> ◆ Prepare hyperbaric evacuation and rescue plan ◆ Manage hyperbaric evacuation, launch, post launch procedures and decompression ◆ Implement HES procedures ◆ Manage hyperbaric evacuation life support systems following launch of SPHLB/HRC ◆ Implement relevant IMCA and DMAC HES guidance 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D02/000/04	Life support system operations	<ul style="list-style-type: none"> ◆ Operation and hazards of life support and gas reclaim systems 	<ul style="list-style-type: none"> ◆ Manage the safe operation of life support and gas reclaim systems 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Bell Diving Supervisor**D02**

Code	Competence	Knowledge	Ability	Demonstration
D02/000/05	Dysbaric diving diseases and therapeutic treatments	<ul style="list-style-type: none"> ◆ Human anatomy and physiology ◆ Types of dysbaric diving diseases ◆ Causes, signs and symptoms of decompression sickness and other types of dysbaric diving diseases ◆ Flowcharts used to select initial treatment options/standard therapeutic treatment tables for decompression sickness and other types of dysbaric diving diseases ◆ Standard therapeutic treatment tables used to treat decompression sickness and other types of dysbaric diving diseases 	<ul style="list-style-type: none"> ◆ Accurately diagnose types of dysbaric diving diseases ◆ Follow relevant flowcharts to select initial treatment options/standard therapeutic treatment tables ◆ Communicate with hyperbaric medical physician for essential specialist assistance ◆ Supervise therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with standard treatment tables ◆ Supervise therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with non-standard treatments as specified by hyperbaric medical physicians 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D02/000/06	Diving emergency	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Procedures for: <ul style="list-style-type: none"> - loss of pressure in a saturation system/bell/DDC - emergency chamber abort - loss of communications/bell power/hot water supply - loss of bell wire/umbilical/guide wire - lost/trapped bell - fire hazards/incidents - loss of air/gas - system failures, e.g. winch/ compressor - trapped/incapacitated diver procedures - loss of dive platform position - hyperbaric evacuation 	<ul style="list-style-type: none"> ◆ Implement project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Manage a diving emergency ◆ Supervise and operate emergency and back-up systems ◆ Manage a diving emergency ◆ Oversee operation of emergency and back-up systems ◆ Respond appropriately to a diving emergency ◆ Deliver dive system emergency familiarisation training 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Bell Diving Supervisor**D02**

Code	Competence	Knowledge	Ability	Demonstration
D02/000/07	Umbilical management and tending	<ul style="list-style-type: none"> ◆ Principles of safe umbilical management including active tending ◆ Identification of hazards ◆ Maximum diver umbilical lengths ◆ Excursion umbilical safety and excursion limits 	<ul style="list-style-type: none"> ◆ Identify hazards to umbilical safety ◆ Ensure safe management of bell and divers' umbilicals 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D02/000/08	Marine activities	<ul style="list-style-type: none"> ◆ DP systems and diving from DP vessels, including: <ul style="list-style-type: none"> – surface orientated diving from DP vessels (ref. IMCA D 010 – Diving operations from vessels operating in dynamically positioned mode) – pre-dive briefing – umbilical safety – diving in anchor patterns as outlined in IMCA D 010 – DP operations with reference to shallow water diving ◆ Conventional mooring systems and diving from conventionally moored vessels, including: <ul style="list-style-type: none"> – isolation of thrusters and other dangerous parts of ships – station keeping and moored systems ◆ Marine safety principles ◆ Permit to work ◆ Minimum operating clearances ◆ Position references ◆ Mooring line adjustments and identification 	<ul style="list-style-type: none"> ◆ Manage dive operations safely within vessel-specific manoeuvring/positioning restrictions ◆ Manage safe diving operations from vessels 	<ul style="list-style-type: none"> ◆ Valid introductory DP course certificate ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Bell Diving Supervisor

D02

Code	Competence	Knowledge	Ability	Demonstration
D02/000/09	Project activities	<ul style="list-style-type: none"> ◆ Dive project plan and work procedures ◆ Dive plans ◆ Project equipment operating procedures 	<ul style="list-style-type: none"> ◆ Deliver project performance requirements in accordance with the diving project plan 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D02/000/10	Tools and equipment	<ul style="list-style-type: none"> ◆ Safe operation of the following tools: <ul style="list-style-type: none"> - lifting equipment (cranes, slings, shackles, tirsors and chain hoists) - oxy-arc/thermal cutting equipment - HP water jetting equipment - grit blasting equipment - bolt tensioning equipment - hydraulic impact guns - hydraulic grinders - air lift bags - air lift/dredging equipment - mattress handling equipment - metrology equipment ◆ Lift planning/rigging/slinging 	<ul style="list-style-type: none"> ◆ Ensure that all tools and subsea project equipment are maintained, stored and used in accordance with company requirements ◆ Manage the safe operation of all tools and subsea project equipment 	<ul style="list-style-type: none"> ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Bell Diving Supervisor

D02

Code	Competence	Knowledge	Ability	Demonstration
D02/000/11	Supervision	<ul style="list-style-type: none"> ◆ People management principles, approaches and techniques ◆ Company HR policies and procedures affecting personnel being supervised ◆ Operational and project management principles, approaches and tasks ◆ Company competence management system ◆ Company safety and quality management systems ◆ Company management of change procedures ◆ Impact of training, supervision, support and coaching on the safety performance of personnel ◆ Principles and techniques of competence assessment 	<ul style="list-style-type: none"> ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Manage information, resources and personnel safely and effectively ◆ Promote and implement company safety and quality management systems ◆ Complete appropriate company documentation ◆ Assign clear objectives and tasks to personnel in ways which ensure understanding ◆ Facilitate and control daily meetings, project and safety meetings ◆ Deliver effective handovers ◆ Implement company management of change procedures ◆ Provide opportunities for learning and practice ◆ Develop personnel, and encourage peer mentoring to promote good practice and safe working for individuals and the team ◆ Provide ongoing competence assessment of personnel under supervision 	<ul style="list-style-type: none"> ◆ People management training course certificate ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Bell Diving Supervisor**D02**

Code	Competence	Knowledge	Ability	Demonstration
D02/000/12	Personal skills and communication	<ul style="list-style-type: none"> ◆ Safety leadership behaviours and impacts on individual and team performance ◆ Effective communication for individual and team safety covering dive, bridge, ROV and life support teams ◆ Principles relating to engagement in company safety culture ◆ Principles underpinning team working and interdepartmental co-operation ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture 	<ul style="list-style-type: none"> ◆ Promote a culture supportive of HSE matters, demonstrating visible and active HSE leadership ◆ Communicate effectively with dive team, marine personnel and deck crew ◆ Encourage personnel to raise issues or concerns calmly and to deal with matters promptly and appropriately ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors 	<ul style="list-style-type: none"> ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor

D03

Code	Competence	Knowledge	Ability	Demonstration
D03/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety and management systems including incident reporting and investigation procedures ◆ Factors which affect the safety and security of the dive team ◆ Dive system and operation ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Safety planning related to the preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Permit to work procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Apply HSE accountabilities and responsibilities ◆ Manage operations and maintenance activities to minimise HSE risks and impacts ◆ Manage functions in ways which maintain the safety and security of the dive team ◆ Promote and ensure implementation of company safety management system ◆ Manage emergency procedures ◆ Lead and promote safety briefings ◆ Lead the planning and preparation of risk assessments for all safety critical areas ◆ Manage all activities to ensure safe continuity of work ◆ Manage the operation of the hazard operation system ◆ Manage: <ul style="list-style-type: none"> - HSE, project and vessel inductions - HSE meetings - provision for training (HSE) 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment of documentary evidence of operating company safety management systems ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor

D03

Code	Competence	Knowledge	Ability	Demonstration
D03/000/02	Surface supplied operations	<ul style="list-style-type: none"> ◆ Overall dive system configuration ◆ Company procedures ◆ Project/operational procedures and plans ◆ Operation of the dive control panel ◆ Deployment and recovery of the wet bell/basket ◆ Deployment and recovery of divers ◆ Transfer under pressure procedures and hazards (if applicable) ◆ Dive plans ◆ Dive tables, including surface decompression procedures (if applicable) ◆ Analyser calibration procedures ◆ Gas resources and mixtures ◆ Wet bell diver hot water system ◆ Diver hot water system ◆ Planned maintenance system (PMS) ◆ IMCA guidelines including DESIGN ◆ Workplace and environment conditions ◆ Diving operations from dynamic positioning (DP) vessels ◆ Lost diver/wet bell/basket procedures ◆ Operations of launch and recovery systems (LARS) 	<ul style="list-style-type: none"> ◆ Manage the safe operation of the dive control panel ◆ Manage the implementation of dive plans ◆ Manage the deployment and recovery of a diver/wet bell/basket ◆ Maintain accurate logs of operations and incidents ◆ Manage diving and decompression operations in accordance with dive tables ◆ Manage surface supplied diving emergencies ◆ Manage safe surface supplied diving operations from DP vessels 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience, including: ◆ Assessment by approved company assessor
D03/000/03	Wet bell operations	<ul style="list-style-type: none"> ◆ Operation of the dive control panel ◆ Deployment and recovery of divers from and to a wet bell 	<ul style="list-style-type: none"> ◆ Manage and implement dive plans in wet bell operations 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor**D03**

Code	Competence	Knowledge	Ability	Demonstration
D03/000/04	Dysbaric diving diseases and therapeutic treatments	<ul style="list-style-type: none"> ◆ Human anatomy and physiology ◆ Types of dysbaric diving diseases ◆ Causes, signs and symptoms of decompression sickness and other types of dysbaric diving diseases ◆ Flowcharts used to select initial treatment options/standard therapeutic treatment tables for decompression sickness and other types of dysbaric diving diseases ◆ Standard therapeutic treatment tables used to treat decompression sickness and other types of dysbaric diving diseases 	<ul style="list-style-type: none"> ◆ Accurately diagnose types of dysbaric diving diseases ◆ Follow relevant flowcharts to select initial treatment options/standard therapeutic treatment tables ◆ Communicate with hyperbaric medical physician for essential specialist assistance ◆ Supervise therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with standard treatment tables ◆ Supervise therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with non-standard treatments as specified by hyperbaric medical physicians 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D03/000/05	Diving emergency	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Procedures for: <ul style="list-style-type: none"> - loss of pressure in a diving decompression chamber (DDC) - emergency chamber abort - loss of communications/wet bell power/hot water supply - loss of wet bell wire/umbilical/guide wire - loss of basket wire/guide wire - lost/trapped wet bell - fire hazards/incidents - loss of air/gas - system failures, i.e. winch/compressor - trapped/incapacitated diver procedures - loss of dive platform position 	<ul style="list-style-type: none"> ◆ Implement project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Manage a diving emergency ◆ Oversee operation of emergency and back-up systems ◆ Respond appropriately to a diving emergency ◆ Supervise and operate emergency and back-up systems ◆ Deliver dive system emergency familiarisation training 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor

D03

Code	Competence	Knowledge	Ability	Demonstration
D03/000/06	Umbilical management and tending	<ul style="list-style-type: none"> ◆ Principles of safe umbilical management including active tending ◆ Identification of hazards ◆ Maximum diver umbilical lengths ◆ Excursion umbilical safety 	<ul style="list-style-type: none"> ◆ Identify and describe hazards to umbilical safety ◆ Oversee safe management of bell and divers' umbilicals 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D03/000/07	Marine activities	<ul style="list-style-type: none"> ◆ DP systems and diving from DP vessels, including: <ul style="list-style-type: none"> - surface orientated diving from DP vessels (ref. IMCA D 010 – Diving operations from vessels operating in dynamically positioned mode) - pre-dive briefing - umbilical safety - diving in anchor patterns as outlined in IMCA D 010 - DP operations with reference to shallow water diving ◆ Conventional mooring systems and diving from conventionally moored vessels, including: <ul style="list-style-type: none"> - isolation of thrusters and other dangerous parts of ships - station keeping and moored systems ◆ Marine safety principles ◆ Permit to work ◆ Minimum operating clearances ◆ Position references ◆ Mooring line adjustments and identification ◆ Small boat handling 	<ul style="list-style-type: none"> ◆ Dive safely within vessel-specific manoeuvring/positioning restrictions ◆ Dive safely from large vessels and small boats 	<ul style="list-style-type: none"> ◆ Valid introductory DP course certificate ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor

D03

Code	Competence	Knowledge	Ability	Demonstration
D03/000/08	Project activities	<ul style="list-style-type: none"> ◆ Dive project plan and work procedures ◆ Dive plans ◆ Project equipment operating procedures 	<ul style="list-style-type: none"> ◆ Deliver project performance requirements in accordance with diving project plan 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D03/000/09	Tools and equipment	<ul style="list-style-type: none"> ◆ Safe operation of the following tools: <ul style="list-style-type: none"> - lifting equipment (cranes, slings, shackles, tirsors and chain hoists) - oxy-arc/thermal cutting equipment - HP water jetting equipment - grit blasting equipment - bolt tensioning equipment - hydraulic impact guns - hydraulic grinders - air lift bags - air lift/dredging equipment - mattress handling equipment - metrology equipment ◆ Lift planning/rigging/slinging 	<ul style="list-style-type: none"> ◆ Ensure that all tools and subsea project equipment are maintained, stored and used in accordance with company requirements ◆ Manage the safe operation of all tools and subsea project equipment 	<ul style="list-style-type: none"> ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor

D03

Code	Competence	Knowledge	Ability	Demonstration
D03/000/10	Supervision	<ul style="list-style-type: none"> ◆ People management principles, approaches and techniques ◆ Company HR policies and procedures affecting personnel being supervised ◆ Operational and project management principles, approaches and tasks ◆ Company competence management system ◆ Company safety and quality management systems ◆ Company management of change procedures ◆ Impact of training, supervision, support and coaching on the safety performance of personnel ◆ Principles and techniques of competence assessment 	<ul style="list-style-type: none"> ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Manage information, resources and personnel safely and effectively ◆ Promote and implement company safety and quality management systems ◆ Complete appropriate company documentation ◆ Assign clear objectives and tasks to personnel in ways which ensure understanding ◆ Facilitate and control daily meetings, project and safety meetings ◆ Deliver effective handovers ◆ Implement company management of change procedures ◆ Provide opportunities for learning and practice ◆ Develop personnel, and encourage peer mentoring to promote good practice and safe working for individuals and the team ◆ Provide ongoing competence assessment of personnel under supervision 	<ul style="list-style-type: none"> ◆ People management training course certificate ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor

D03

Code	Competence	Knowledge	Ability	Demonstration
D03/000/11	Personal skills and communication	<ul style="list-style-type: none"> ◆ Safety leadership behaviours and impacts on individual and team performance ◆ Effective communication for individual and team safety covering dive, bridge, ROV and life support teams ◆ Principles relating to engagement in company safety culture ◆ Principles underpinning team working and interdepartmental co-operation ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture 	<ul style="list-style-type: none"> ◆ Promote a culture supportive of HSE matters, demonstrating visible and active HSE leadership ◆ Communicate effectively with dive team, marine personnel and deck crew ◆ Encourage personnel to raise issues or concerns calmly and to deal with matters promptly and appropriately ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors 	<ul style="list-style-type: none"> ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Air (Surface Supplied) Diving Supervisor – Nitrox Competences (optional)**D03**

Code	Competence	Knowledge	Ability	Demonstration
D03/000/12	Nitrox related safety	<ul style="list-style-type: none"> ◆ Relevant legislation and guidance ◆ Safe handling of nitrox and oxygen ◆ Effects of oxygen toxicity ◆ Maximum ppO₂ limits ◆ Oxygen exposure limits ◆ The importance of oxygen cleaning ◆ Importance of maintaining oxygen clean systems ◆ Charging nitrox cylinders ◆ Cylinder marking for nitrox 	<ul style="list-style-type: none"> ◆ Perform functions in ways which maintain the safety and security of the dive team and other when undertaking nitrox diving operations ◆ Apply company procedures in support of surface supplied nitrox diving operations ◆ Manage operations and maintenance activities to minimise risks during nitrox diving operations 	<ul style="list-style-type: none"> ◆ Completion of nitrox dive system familiarisation training by company ◆ Approved and documented in-service nitrox experience, including assessment by approved company assessor
D03/000/13	Nitrox diving operations	<ul style="list-style-type: none"> ◆ Benefits of using oxygen enriched air (nitrox) ◆ Gas monitoring ◆ Calculation of equivalent air depth (EAD) ◆ Table selection ◆ Importance of depth monitoring ◆ Bail-out gas ◆ Gas switching ◆ Operational limits 	<ul style="list-style-type: none"> ◆ Operate hardware systems and follow company procedures in support of surface supplied nitrox diving operations ◆ Complete risk assessment for nitrox diving 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service nitrox experience, including assessment by approved company assessor
D03/000/14	Nitrox related diving emergency	<ul style="list-style-type: none"> ◆ Recognition of symptoms of oxygen poisoning ◆ Action in the event of oxygen poisoning (no convulsions) ◆ Action in the event of oxygen poisoning (with convulsions) ◆ Action in the event of a diver exceeding maximum operating depth ◆ Changing gas mixes – implications to decompression ◆ Nitrox specific emergency drills ◆ Action in the event of a fire ◆ Decompression treatment in the event of a diving emergency 	<ul style="list-style-type: none"> ◆ Follow nitrox emergency and contingency plans ◆ Participate in nitrox diving emergency drills ◆ Respond appropriately to a nitrox diving emergency ◆ Safely operate emergency and back-up systems 	<ul style="list-style-type: none"> ◆ Completion of nitrox dive system familiarisation training by company ◆ Approved and documented in-service experience, including assessment by approved company assessor ◆ Satisfactory complete nitrox emergency drills in accordance with company requirements

Bell (Saturation) Diver

D04

Code	Competence	Knowledge	Ability	Demonstration
D04/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management system ◆ Factors which affect the safety and security of the dive team ◆ Dive system operation ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Permit to work procedures ◆ Safety planning related to the preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Perform functions in ways which maintain the safety and security of the dive team and others ◆ Work in accordance with company safety management systems ◆ Prepare for and carry out emergency procedures and drills ◆ Participate actively in safety briefings ◆ Contribute to risk assessments for all safety critical areas ◆ Perform all activities so as to ensure safe continuity of work ◆ Participate in: <ul style="list-style-type: none"> ◆ HSE, project and vessel inductions ◆ HSE meetings ◆ training courses, briefings, etc. 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Bell (Saturation) Diver**D04**

Code	Competence	Knowledge	Ability	Demonstration
D04/000/02	Bell operations	<ul style="list-style-type: none"> ◆ Overall dive system configuration ◆ Internal/external bell checks ◆ Transfer under pressure (TUP) procedures and hazards ◆ Operation of the bell panel ◆ Dive tables ◆ Gas analysis system ◆ Environmental control system ◆ Gas resources and mixtures available ◆ Launch and recovery system operation ◆ Deployment from and recovery to the bell ◆ Diver rescue procedures ◆ Lost/trapped bell emergency procedures ◆ Umbilical handling procedures ◆ Bail-out systems and resources ◆ Hyperbaric evacuation and launch procedures 	<ul style="list-style-type: none"> ◆ Operate hardware systems and follow company procedures in support of closed bell diving operations 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D04/000/03	Life support system operation	<ul style="list-style-type: none"> ◆ Functioning of saturation diving life support systems including gas reclaim equipment 	<ul style="list-style-type: none"> ◆ Operate the main components of saturation diving life support systems ◆ Identify and respond to deviations from normal operating conditions 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D04/000/04	Decompression	<ul style="list-style-type: none"> ◆ Function and operations of a decompression chamber ◆ Internal/external chamber checks ◆ Operational and therapeutic decompression tables 	<ul style="list-style-type: none"> ◆ Operate a decompression chamber ◆ Undertake internal/external chamber checks ◆ Use operational and therapeutic decompression tables 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Bell (Saturation) Diver**D04**

Code	Competence	Knowledge	Ability	Demonstration
D04/000/05	Diver recovery	<ul style="list-style-type: none"> ◆ Procedures for recovery of the diver to the bell and bell to the system ◆ CPR/EAR procedures and techniques 	<ul style="list-style-type: none"> ◆ Participate in diving drills ◆ Perform recovery procedures ◆ Perform CPR/EAR ◆ Prepare diving bell for leaving bottom 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience ◆ Satisfactory completion of drills
D04/000/06	Diving emergency	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Procedures for: <ul style="list-style-type: none"> - loss of pressure in a saturation system/bell/DDC - emergency chamber abort - loss of communications/bell power/hot water supply - loss of bell wire/umbilical/guide wire - lost/trapped bell - fire hazards/incidents - loss of air/gas - system failures, e.g. winch/ compressor - trapped diver procedures - loss of dive platform position - hyperbaric evacuation 	<ul style="list-style-type: none"> ◆ Follow emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Respond appropriately to a diving emergency ◆ Operate emergency and back-up systems including hyperbaric evacuation system ◆ Operate emergency and back-up systems 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D04/000/07	Umbilical management and tending	<ul style="list-style-type: none"> ◆ Principles of safe umbilical management including active tending ◆ Identification of hazards ◆ Maximum diver umbilical lengths ◆ Excursion umbilical safety 	<ul style="list-style-type: none"> ◆ Identify hazards to umbilical safety ◆ Manage divers' umbilicals 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Bell (Saturation) Diver**D04**

Code	Competence	Knowledge	Ability	Demonstration
D04/000/08	Marine activities	<ul style="list-style-type: none"> ◆ DP systems and diving from DP vessels, including: <ul style="list-style-type: none"> – surface orientated diving from DP vessels (ref. IMCA D 010 – Diving operations from vessels operating in dynamically positioned mode) – pre-dive briefing – umbilical safety – diving in anchor patterns as outlined in IMCA D 010 – DP operations with reference to shallow water diving ◆ Conventional mooring systems and diving from conventionally moored vessels, including: <ul style="list-style-type: none"> – isolation of thrusters and other dangerous parts of ships – station keeping and moored systems ◆ Marine safety principles ◆ Permit to work ◆ Minimum operating clearances ◆ Position references ◆ Mooring line adjustments and identification 	<ul style="list-style-type: none"> ◆ Dive safely within vessel-specific manoeuvring/positioning restrictions ◆ Carry out safe diving operations from vessels 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D04/000/09	Project activities	<ul style="list-style-type: none"> ◆ Dive project plan and work procedures ◆ Dive plans ◆ Project equipment operating procedures 	<ul style="list-style-type: none"> ◆ Deliver project performance requirements in accordance with diving project plan ◆ Execute dive plan activities safely and effectively 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Bell (Saturation) Diver**D04**

Code	Competence	Knowledge	Ability	Demonstration
D04/000/10	Tools and equipment	<ul style="list-style-type: none"> ◆ Safe operation of the following tools: <ul style="list-style-type: none"> - lifting equipment (cranes, slings, shackles, tirlors and chain hoists) - oxy-arc/thermal cutting equipment - HP water jetting equipment - grit blasting equipment - bolt tensioning equipment - hydraulic impact guns - hydraulic grinders - air lift bags - air lift/dredging equipment - mattress handling equipment - metrology equipment ◆ Lift planning/rigging/slinging 	<ul style="list-style-type: none"> ◆ Ensure that all tools and subsea project equipment are maintained, stored and used in accordance with company requirements ◆ Safely operate all tools and subsea project equipment in accordance with company requirements 	<ul style="list-style-type: none"> ◆ Assessment by approved company official ◆ Documented in-service experience
D04/000/11	Personal skills and communication	<ul style="list-style-type: none"> ◆ Principles relating to engagement in company safety culture ◆ Principles of team working, co-operation and co-ordination ◆ Communication protocols required for individual and team safety ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture ◆ Adverse consequences of inappropriate behaviours in hazardous working environments 	<ul style="list-style-type: none"> ◆ Engage personally with safety principles and culture ◆ Communicate effectively with dive supervisor, divers, marine personnel and deck crew ◆ Engage actively in handovers, safety briefings, improvement projects coaching, etc. ◆ Perform job functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Identify and raise issues of concern calmly and assertively 	<ul style="list-style-type: none"> ◆ Assessment by approved company official ◆ Approved and documented in-service experience

Surface Supplied Diver**D05**

Code	Competence	Knowledge	Ability	Demonstration
D05/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management system ◆ Factors which affect the safety and security of the dive team ◆ Dive system operation ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Permit to work procedures ◆ Safety planning related to the preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Perform functions in ways which maintain the safety and security of the dive team and others ◆ Work in accordance with company safety management systems ◆ Prepare for and carry out emergency procedures and drills ◆ Participate actively in safety briefings ◆ Contribute to risk assessments for all safety critical areas ◆ Perform all activities so as to ensure safe continuity of work ◆ Participate in: <ul style="list-style-type: none"> – HSE, project and vessel inductions – HSE meetings – training courses, briefings, etc. 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment by approved company official ◆ Approved and documented in-service experience

Surface Supplied Diver**D05**

Code	Competence	Knowledge	Ability	Demonstration
D05/000/02	Surface supplied operations	<ul style="list-style-type: none"> ◆ Overall dive system configuration ◆ Gas resources and mixtures ◆ Company procedures ◆ Project/operational procedures and plans ◆ Diving operations from dynamic positioning (DP) vessels ◆ Workplace and environment conditions ◆ Charging cylinders and awareness of associated hazards ◆ Dive plans ◆ Dive tables, including surface decompression procedures (if applicable) ◆ Analyser calibration procedures ◆ Operation of launch and recovery systems (LARS) ◆ Wet bell diver hot water system ◆ Diver hot water system ◆ Dress in divers ◆ Deployment and recovery of divers ◆ Transfer under pressure procedures and hazards (if applicable) ◆ Lost diver/wet bell/basket procedures ◆ Active tending of surface divers' lines ◆ Dive tables 	<ul style="list-style-type: none"> ◆ Operate hardware systems and follow company procedures in support of surface supplied diving operations 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company official ◆ Approved and documented in-service experience
D05/000/03	Wet bell operations	<ul style="list-style-type: none"> ◆ Deployment and recovery from and to a wet bell ◆ Wet bell panel operation ◆ Emergency onboard air/gas access procedures ◆ IMCA guidelines contained in IMCA D 030 – <i>Surface supplied mixed gas diving operations</i> – and IMCA D 037 – <i>DESIGN for surface supplied mixed gas diving systems</i> 	<ul style="list-style-type: none"> ◆ Deploy from and recover to a wet bell ◆ Operate wet bell panel ◆ Access emergency on-board air/gas 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company official ◆ Approved and documented in-service experience

Surface Supplied Diver**D05**

Code	Competence	Knowledge	Ability	Demonstration
D05/000/04	Decompression	<ul style="list-style-type: none"> ◆ Function and operations of a decompression chamber ◆ Internal/external chamber checks ◆ Dive tables, including surface decompression procedures ◆ Therapeutic decompression tables 	<ul style="list-style-type: none"> ◆ Operate a decompression chamber ◆ Carry out internal/external chamber checks ◆ Use dive tables ◆ Carry out surface decompression ◆ Follow therapeutic decompression tables 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company official ◆ Approved and documented in-service experience
D05/000/05	Diver recovery	<ul style="list-style-type: none"> ◆ Recovery procedures to recover diver to the dive basket or wet bell ◆ CPR/EAR procedures and techniques 	<ul style="list-style-type: none"> ◆ Participate in diving drills ◆ Perform recovery procedures ◆ Perform CPR/EAR in wet bell ◆ Prepare basket/wet bell for leaving bottom 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company official ◆ Approved and documented in-service experience ◆ Satisfactory completion of drills
D05/000/06	Diving emergency	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Procedures for: <ul style="list-style-type: none"> – loss of pressure in a diving decompression chamber (DDC) – emergency chamber abort – loss of communications/wet bell power/hot water supply – loss of wet bell wire/umbilical/guide wire – loss of basket wire/guide wire – lost/trapped wet bell – fire hazards/incidents – loss of air/gas – system failures, i.e. winch/compressor – trapped/incapacitated diver procedures – loss of dive platform position 	<ul style="list-style-type: none"> ◆ Follow project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Respond appropriately to a diving emergency ◆ Operate emergency and back-up systems 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Surface Supplied Diver

D05

Code	Competence	Knowledge	Ability	Demonstration
D05/000/07	Umbilical management and tending	<ul style="list-style-type: none"> ◆ Principles of safe umbilical management including active tending ◆ Identification of hazards ◆ Maximum diver umbilical lengths ◆ Excursion umbilical safety 	<ul style="list-style-type: none"> ◆ Identify hazards to umbilical safety ◆ Manage divers' umbilicals 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D05/000/08	Marine activities	<ul style="list-style-type: none"> ◆ DP systems and diving from DP vessels, including: <ul style="list-style-type: none"> - surface orientated diving from DP vessels (ref. IMCA D 010 – Diving operations from vessels operating in dynamically positioned mode) - pre-dive briefing - umbilical safety - diving in anchor patterns as outlined in IMCA D 010 - DP operations with reference to shallow water diving ◆ Conventional mooring systems and diving from conventionally moored vessels, including: <ul style="list-style-type: none"> - isolation of thrusters and other dangerous parts of ships - station keeping and moored systems ◆ Marine safety principles ◆ Permit to work ◆ Minimum operating clearances ◆ Position references ◆ Mooring line adjustments and identification ◆ Small boat handling 	<ul style="list-style-type: none"> ◆ Dive safely within vessel-specific manoeuvring/positioning restrictions ◆ Dive safely from large vessels and small boats 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Surface Supplied Diver**D05**

Code	Competence	Knowledge	Ability	Demonstration
D05/000/09	Project activities	<ul style="list-style-type: none"> ◆ Dive project plan and work procedures ◆ Dive plans ◆ Project equipment operating procedures 	<ul style="list-style-type: none"> ◆ Deliver project performance requirements in accordance with diving project plan ◆ Execute dive plan activities safely and effectively 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D05/000/10	Tools and equipment	<ul style="list-style-type: none"> ◆ Safe operation of the following tools: <ul style="list-style-type: none"> – lifting equipment (cranes, slings, shackles, tirsors and chain hoists) – oxy-arc/thermal cutting equipment – HP water jetting equipment – grit blasting equipment – bolt tensioning equipment – hydraulic impact guns – hydraulic grinders – air lift bags – air lift/dredging equipment – mattress handling equipment – metrology equipment ◆ Lift planning/rigging/slinging 	<ul style="list-style-type: none"> ◆ Ensure that all tools and subsea project equipment are maintained, stored and used in accordance with company requirements ◆ Safely operate all tools and subsea project equipment in accordance with company requirements 	<ul style="list-style-type: none"> ◆ Assessment by approved company official ◆ Approved and documented in-service experience
D05/000/11	Personal skills and communication	<ul style="list-style-type: none"> ◆ Principles relating to engagement in company safety culture ◆ Principles of team working, co-operation and co-ordination ◆ Communication protocols required for individual and team safety ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture ◆ Adverse consequences of inappropriate behaviours in hazardous working environments 	<ul style="list-style-type: none"> ◆ Engage personally with safety principles and culture ◆ Communicate effectively with dive supervisor, divers, marine personnel and deck crew ◆ Engage actively in handovers, safety briefings, improvement projects coaching, etc. ◆ Perform job functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Identify and raise issues of concern calmly and assertively 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Surface Supplied Diver – Nitrox Competences (optional)**D05**

Code	Competence	Knowledge	Ability	Demonstration
D05/000/12	Nitrox related safety	<ul style="list-style-type: none"> ◆ Relevant legislation and guidance ◆ Safe handling of nitrox and oxygen ◆ Maximum ppO₂ limits ◆ Effects of oxygen toxicity ◆ Importance of oxygen cleaning ◆ Importance of maintaining oxygen clean systems ◆ Charging nitrox cylinders 	<ul style="list-style-type: none"> ◆ Perform functions in ways which maintain the safety and security of the dive team and others ◆ Work in accordance with company nitrox operating procedures ◆ Prepare for and carry out emergency procedures and drills ◆ Participate in nitrox safety briefings ◆ Perform all activities so as to ensure safe continuity of work 	<ul style="list-style-type: none"> ◆ Completion of nitrox dive system familiarisation training by company ◆ Approved and documented in-service nitrox experience, including assessment by approved company assessor
D05/000/13	Nitrox diving operations	<ul style="list-style-type: none"> ◆ Benefits of using oxygen enriched air (nitrox) ◆ Importance of maximum operating depth ◆ Bail-out gas ◆ Oxygen exposure limits ◆ Operational limits 	<ul style="list-style-type: none"> ◆ Operate hardware systems and follow company procedures in support of surface supplied nitrox diving operations ◆ Participate in risk assessment for nitrox diving 	<ul style="list-style-type: none"> ◆ Completion of nitrox dive system familiarisation training by company ◆ Approved and documented in-service nitrox experience, including assessment by approved company assessor
D05/000/14	Nitrox related diving emergency	<ul style="list-style-type: none"> ◆ Oxygen convulsions ◆ Action in the event of exceeding maximum depth ◆ Changing gas mixes implications to decompression ◆ Recognition of symptoms of oxygen poisoning ◆ As a diver action in the event of an oxygen poisoning ◆ As a standby diver action in the event of a diving emergency involving nitrox ◆ Action in the event of a fire 	<ul style="list-style-type: none"> ◆ Follow nitrox emergency and contingency plans ◆ Participate in all nitrox diving emergency drills and in-house familiarisation ◆ Respond appropriately to a nitrox diving emergency ◆ Safely operate nitrox emergency and back-up systems 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service nitrox experience, including assessment by approved company assessor ◆ Satisfactory completion of nitrox emergency drills in accordance with company requirements

Life Support Supervisor (LSS)**D06**

Code	Competence	Knowledge	Ability	Demonstration
D06/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems including incident reporting and investigation procedures ◆ Factors which affect the safety and security of the dive team ◆ Safe dive system and life support system operation including safe gas transfer procedures ◆ Relevant emergency procedures ◆ Risk assessment s ◆ Preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Permit to work procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Apply HSE accountabilities and responsibilities ◆ Manage dive system and life support system operations and maintenance activities to minimise HSE risks and impacts ◆ Manage functions in ways which maintain the safety and security of the dive team ◆ Promote and ensure implementation of company safety management system ◆ Manage emergency procedures ◆ Lead and promote safety briefings ◆ Lead the planning and preparation of risk assessments for all safety critical areas ◆ Manage all activities to ensure safe continuity of work ◆ Contribute to the operation of the hazard observation system ◆ Manage: <ul style="list-style-type: none"> - HSE, project and vessel inductions including familiarisation training - HSE meetings - provision for training (HSE) 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment of documentary evidence of operating company safety management systems ◆ Assessment by approved company assessor
D06/000/02	Life support system operations	<ul style="list-style-type: none"> ◆ Minimum quantities of gas required for commencement and continuation of saturation diving operations ◆ Diving operations from dynamic positioning (DP) vessels ◆ Life support system operation including: <ul style="list-style-type: none"> - system blow-down procedures - selection of storage depth - gas supply, analysis, mixing and storage - gas pumps, compressors and reclaim systems 	<ul style="list-style-type: none"> ◆ Ensure adequate supplies of gas for saturation diving operations ◆ Manage safe life support system operations on DP vessels ◆ Manage safe life support system operations for saturation diving in accordance with company procedures: <ul style="list-style-type: none"> - execute system blow-down procedures - establish and maintain storage depth - select, analyse, mix and supply gases 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Supervisor (LSS)

D06

Code	Competence	Knowledge	Ability	Demonstration
		<ul style="list-style-type: none"> - replenishment of gas supplies - safe operation of gas pumping/transport systems - chamber atmosphere control - chamber environmental control - chamber fire hazard considerations - fire suppression system - chamber and occupant hygiene - food preparation and handling - saturation decompression procedures - therapeutic treatment procedures - therapeutic gas supplies - safe operation of system locks - sanitary systems operation - TUP operation - BIBS supply and operation - emergency abort procedures 	<ul style="list-style-type: none"> - operate gas pumping/transport equipment in accordance with company procedures - replenish gas supplies - keep accurate records for replenishing gas supplies - operate compressors and reclaim systems - monitor and control chamber atmosphere and environment - manage chamber fire hazards and suppression system - manage chamber, occupant and food hygiene - carry out saturation decompressions as per company schedules - carry out therapeutic treatment procedures - manage therapeutic gas supplies - operate medical locks and sanitary systems - manage TUP operations and associated hazards - manage BIBS supplies and operation - manage system internal pressures in accordance with operational requirements and dive tables - manage emergency abort procedures 	

Life Support Supervisor (LSS)**D06**

Code	Competence	Knowledge	Ability	Demonstration
D06/000/03	HES operations	<ul style="list-style-type: none"> ◆ Relevant IMCA HES guidance including information contained in DESIGN documents ◆ Relevant DMAC guidance ◆ Hyperbaric evacuation system (HES) plan and procedures including: <ul style="list-style-type: none"> – preparation of the HES for evacuation and launch – TUP and pre-launch procedures – launch procedures – post launch procedures, including recovery of SPHLB/HRC, LSP operation, transport arrangements, and HRF transfer procedures – emergency decompression from saturation 	<ul style="list-style-type: none"> ◆ Assist with preparation of hyperbaric evacuation and rescue plan ◆ Manage hyperbaric evacuation, launch, post launch procedures and decompression ◆ Implement HES procedures ◆ Manage hyperbaric evacuation life support systems following launch of SPHLB/HRC ◆ Implement relevant IMCA and DMAC HES guidance 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D06/000/04	Emergency procedures	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Medical supplies and equipment ◆ Consequences of a failure in the chamber complex life support system and the effects on occupants ◆ Procedures for: <ul style="list-style-type: none"> – management/emergency recovery of failed life support systems – loss of pressure in a saturation system – emergency chamber abort – loss of communications – loss of chamber atmosphere control – hyperbaric evacuation plan 	<ul style="list-style-type: none"> ◆ Implement project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Identify life support failure modes and the consequences of a loss of life support equipment, and the actions to be taken for reinstatement ◆ Diagnose and treat decompression illness (DCI) ◆ Respond and manage as required appropriately to a diving emergency ◆ Supervise or operate appropriate emergency back-up systems ◆ Deliver dive system emergency familiarisation training 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Supervisor (LSS)

D06

Code	Competence	Knowledge	Ability	Demonstration
D06/000/05	Dysbaric diving diseases and therapeutic treatments	<ul style="list-style-type: none"> ◆ Human anatomy and physiology ◆ Types of dysbaric diving diseases ◆ Causes, signs and symptoms of decompression sickness and other types of dysbaric diving diseases ◆ Flowcharts used to select initial treatment options/standard therapeutic treatment tables for decompression sickness and other types of dysbaric diving diseases ◆ Standard therapeutic treatment tables used to treat decompression sickness and other types of dysbaric diving diseases 	<ul style="list-style-type: none"> ◆ Accurately diagnose types of dysbaric diving diseases ◆ Follow relevant flowcharts to select initial treatment options/standard therapeutic treatment tables ◆ Communicate with hyperbaric medical physician for essential specialist assistance ◆ Supervise therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with standard treatment tables ◆ Supervise therapeutic treatments of decompression sickness and other types of dysbaric diving diseases in accordance with non-standard treatments as specified by hyperbaric medical physicians 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Supervisor (LSS)

D06

Code	Competence	Knowledge	Ability	Demonstration
D06/000/06	Supervision	<ul style="list-style-type: none"> ◆ People management principles, approaches and techniques ◆ Company HR policies and procedures affecting personnel being supervised ◆ Operational and project management principles, approaches and tasks ◆ Company competence management system ◆ Company safety and quality management systems ◆ Company management of change procedures ◆ Impact of training, supervision, support and coaching on the safety performance of personnel ◆ Principles and techniques of competence assessment 	<ul style="list-style-type: none"> ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Manage information, resources and personnel safely and effectively ◆ Promote and implement company safety and quality management systems ◆ Complete appropriate company documentation ◆ Assign clear objectives to personnel in ways which ensure understanding ◆ Facilitate and control daily meetings, project and safety meetings ◆ Deliver effective handovers ◆ Implement company management of change procedures ◆ Provide opportunities for learning and practice ◆ Develop personnel, and encourage peer mentoring to promote good practice and safe working for individuals and the team ◆ Provide ongoing competence assessment of personnel under supervision ◆ Delegate work assignments and tasks to appropriate members of staff ◆ Oversee activities of assistant life support technicians 	<ul style="list-style-type: none"> ◆ People management training course certificate ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Supervisor (LSS)

D06

Code	Competence	Knowledge	Ability	Demonstration
D06/000/07	Personal skills and communication	<ul style="list-style-type: none"> ◆ Safety leadership behaviours and impacts on individual and team performance ◆ Effective communication for individual and team safety covering dive, bridge, ROV and life support teams ◆ Principles relating to engagement in company safety culture ◆ Principles underpinning team working and interdepartmental co-operation ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture 	<ul style="list-style-type: none"> ◆ Promote a culture supportive of HSE matters, demonstrating visible and active HSE leadership ◆ Communicate effectively with dive team, marine personnel and deck crew ◆ Encourage personnel to raise issues or concerns calmly and to deal with matters promptly and appropriately ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors 	<ul style="list-style-type: none"> ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Technician**D07**

Code	Competence	Knowledge	Ability	Demonstration
D07/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems ◆ Factors which affect the safety and security of the dive team ◆ Safe dive system and life support system operation including safe gas transfer procedures ◆ Relevant emergency procedures ◆ Risk assessment ◆ Preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Permit to work procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Apply HSE accountabilities and responsibilities ◆ Assist in the operation of dive system and life support system operations and maintenance activities to minimise HSE risks and impacts ◆ Operate functions in ways which maintain the safety and security of the dive team ◆ Adhere to company safety management system ◆ Follow emergency procedures ◆ Participate in and promote safety briefings ◆ Contribute to risk assessments for all safety critical areas ◆ Carry out activities ensuring safe continuity of work ◆ Contribute to the operation of the hazard observation system 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D07/000/02	Life support system operations	<ul style="list-style-type: none"> ◆ Minimum quantities of gas required for commencement and continuation of saturation diving operations ◆ Diving operations from dynamic positioning (DP) vessels ◆ Life support system operation including: <ul style="list-style-type: none"> – system blow-down procedures – selection of storage depth – gas supply, analysis, mixing and storage – gas pumps, compressors and reclaim systems – replenishment of gas supplies – safe operation of gas pumping/transport systems – chamber atmosphere control 	<ul style="list-style-type: none"> ◆ Ensure adequate supplies of gas for saturation diving operations ◆ Carry out safe life support system operations on DP vessels ◆ Carry out safe life support system operations for saturation diving in accordance with company procedures: <ul style="list-style-type: none"> – execute system blow-down procedures – establish and maintain storage depth – select, analyse, mix and supply gases – operate gas pumping/transport equipment in accordance with company procedures – replenish gas supplies 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Technician

D07

Code	Competence	Knowledge	Ability	Demonstration
		<ul style="list-style-type: none"> - chamber environmental control - chamber fire hazard considerations - fire suppression system - chamber and occupant hygiene - food preparation and handling - saturation decompression procedures - therapeutic treatment procedures - therapeutic gas supplies - safe operation of system locks - sanitary systems operation - TUP operation - BIBS supply and operation - emergency abort procedures 	<ul style="list-style-type: none"> - keep accurate records for replenishing gas supplies - operate compressors and reclaim systems - monitor and control chamber atmosphere and environment - manage chamber fire hazards and suppression system - maintain chamber, occupant and food hygiene - carry out saturation decompressions as per company schedules - carry out therapeutic treatment procedures - operate therapeutic gas supplies - operate medical locks and sanitary systems - manage TUP operations and associated hazards - manage BIBS supplies and operation - manage system internal pressures in accordance with operational requirements and dive tables - manage emergency abort procedures 	
D07/000/03	HES operations	<ul style="list-style-type: none"> ◆ Relevant IMCA HES guidance including information contained in DESIGN documents ◆ Relevant DMAC guidance ◆ Hyperbaric evacuation system (HES) plan and procedures including: <ul style="list-style-type: none"> - preparation of the HES for evacuation and launch - TUP and pre-launch procedures - launch procedures 	<ul style="list-style-type: none"> ◆ Operate hyperbaric evacuation, launch, post launch procedures and decompression ◆ Implement HES procedures ◆ Operate hyperbaric evacuation life support systems following launch of SPHLB/HRC ◆ Implement relevant IMCA and DMAC HES guidance 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Technician**D07**

Code	Competence	Knowledge	Ability	Demonstration
		<ul style="list-style-type: none"> - post launch procedures, including recovery of SPHLB/HRC, LSP operation, transport arrangements, and HRF transfer procedures - emergency decompression from saturation 		
D07/000/04	Emergency procedures	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Medical supplies and equipment ◆ Consequences of a failure in the chamber complex life support system and the effects on occupants ◆ Procedures for: <ul style="list-style-type: none"> - management/emergency recovery of failed life support systems - loss of pressure in a saturation system - emergency chamber abort - loss of communications - loss of chamber atmosphere control - hyperbaric evacuation plan 	<ul style="list-style-type: none"> ◆ Follow project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Identify life support failure modes and the consequences of a loss of life support equipment, and the actions to be taken for reinstatement ◆ Diagnose and treat decompression illness (DCI) ◆ Follow back-up and emergency procedures ◆ Respond appropriately to a diving emergency 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D07/000/05	Dysbaric diving diseases and therapeutic treatments	<ul style="list-style-type: none"> ◆ Human anatomy and physiology ◆ Types of dysbaric diving diseases ◆ Causes, signs and symptoms of decompression sickness and other types of dysbaric diving diseases ◆ Flowcharts used to select initial treatment options/standard therapeutic treatment tables for decompression sickness and other types of dysbaric diving diseases ◆ Standard therapeutic treatment tables used to treat decompression sickness and other types of dysbaric diving diseases 	<ul style="list-style-type: none"> ◆ Accurately diagnose types of dysbaric diving diseases ◆ Follow relevant flowcharts to select initial treatment options/standard therapeutic treatment tables ◆ Communicate with hyperbaric medical physician for essential specialist assistance ◆ Apply therapeutic treatments for decompression sickness and other types of dysbaric diving diseases in accordance with standard treatment tables ◆ Apply therapeutic treatments for decompression sickness and other types of dysbaric diving diseases in accordance 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Life Support Technician

D07

Code	Competence	Knowledge	Ability	Demonstration
			with non-standard treatments as specified by hyperbaric medical physicians	
D07/000/06	Personal skills and communication	<ul style="list-style-type: none"> ◆ Principles relating to engagement in company safety culture ◆ Principles of team working, co-operation and co-ordination ◆ Communication protocols required for individual and team safety ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture ◆ Adverse consequences of inappropriate behaviours in hazardous working environments 	<ul style="list-style-type: none"> ◆ Engage personally with safety principles and culture ◆ Communicate effectively with dive supervisor, divers, marine personnel and deck crew ◆ Engage actively in handovers, safety briefings, improvement projects coaching, etc. ◆ Perform job functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Identify and raise issues of concern calmly and assertively 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Assessment by approved company assessor

Assistant Life Support Technician**D08**

Code	Competence	Knowledge	Ability	Demonstration
D08/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems ◆ Factors which affect the safety and security of the dive team ◆ Safe dive system and life support system operation including safe gas transfer procedures ◆ Relevant emergency procedures ◆ Risk assessment and permit to work procedures ◆ Preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Management of change procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Apply HSE accountabilities and responsibilities ◆ Assist in the operation of dive system and life support system operations and maintenance activities to minimise HSE risks and impacts ◆ Operate functions in ways which maintain the safety and security of the dive team ◆ Adhere to company safety management system ◆ Follow emergency procedures ◆ Participate in and promote safety briefings ◆ Contribute to risk assessments for all safety critical areas ◆ Carry out activities ensuring safe continuity of work ◆ Contribute to the operation of the hazard observation system 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D08/000/02	Life support system operations	<ul style="list-style-type: none"> ◆ Minimum quantities of gas required for commencement and continuation of saturation diving operations ◆ Diving operations from dynamic positioning (DP) vessels ◆ Life support system operation including: <ul style="list-style-type: none"> – system blow-down procedures – selection of storage depth – gas supply, analysis, mixing and storage – gas pumps, compressors and reclaim systems – replenishment of gas supplies – Safe operation of gas pumping/transport systems – chamber atmosphere control 	<ul style="list-style-type: none"> ◆ Assist life support technician in operation of systems ensuring adequate supplies of gas for saturation diving operations ◆ Carry out safe life support system operations on DP vessels ◆ Carry out safe life support system operations autonomously for saturation diving in accordance with company procedures: <ul style="list-style-type: none"> – execute system blow-down procedures – establish and maintain storage depth – select, analyse, mix and supply gases – operate gas pumping/transport equipment in accordance with company procedures 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Assistant Life Support Technician

D08

Code	Competence	Knowledge	Ability	Demonstration
		<ul style="list-style-type: none"> - chamber environmental control - chamber fire hazard considerations - fire suppression system - chamber and occupant hygiene - food preparation and handling - saturation decompression procedures - therapeutic treatment procedures - therapeutic gas supplies - safe operation of system locks - sanitary systems operation - TUP operation - BIBS supply and operation - emergency abort procedures 	<ul style="list-style-type: none"> - replenish gas supplies - keep accurate records for replenishing gas supplies - operate compressors and reclaim systems - monitor and control chamber atmosphere and environment - manage chamber fire hazards and suppression system - maintain chamber, occupant and food hygiene - carry out saturation decompressions as per company schedules - carry out therapeutic treatment procedures - operate therapeutic gas supplies - operate medical locks and sanitary systems - manage TUP operations and associated hazards - manage BIBS supplies and operation - manage system internal pressures in accordance with operational requirements and dive tables 	

Assistant Life Support Technician**D08**

Code	Competence	Knowledge	Ability	Demonstration
D08/000/03	HES operations	<ul style="list-style-type: none"> ◆ Relevant IMCA HES guidance including information contained in DESIGN documents ◆ Relevant DMAC guidance ◆ Hyperbaric evacuation system (HES) plan and procedures including: <ul style="list-style-type: none"> – preparation of the HES for evacuation and launch – TUP and pre-launch procedures – launch procedures – post launch procedures, including recovery of SPHLB/HRC, LSP operation, transport arrangements, and HRF transfer procedures – emergency decompression from saturation 	<ul style="list-style-type: none"> ◆ Assist life support technician in operating hyperbaric evacuation, launch, post launch procedures and decompression ◆ Follow HES procedures ◆ Assist life support technician in operating hyperbaric evacuation life support systems following launch of SPHLB/HRC ◆ Follow relevant IMCA and DMAC HES guidance 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D08/000/04	Emergency procedures	<ul style="list-style-type: none"> ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Medical supplies and equipment ◆ Consequences of a failure in the chamber complex life support system and the effects on occupants ◆ Procedures for: <ul style="list-style-type: none"> – management/emergency recovery of failed life support systems – loss of pressure in a saturation system – emergency chamber abort – loss of communications – loss of chamber atmosphere control – hyperbaric evacuation plan 	<ul style="list-style-type: none"> ◆ Follow project emergency and contingency plans ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Identify life support failure modes and the consequences of a loss of life support equipment, and the actions to be taken for reinstatement ◆ Diagnose and treat decompression illness (DCI) ◆ Follow back-up and emergency procedures ◆ Respond appropriately to a diving emergency 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of dive system familiarisation training by company ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor

Assistant Life Support Technician**D08**

Code	Competence	Knowledge	Ability	Demonstration
D08/000/05	Dysbaric diving diseases and therapeutic treatments	<ul style="list-style-type: none"> ◆ Human anatomy and physiology ◆ Types of dysbaric diving diseases ◆ Causes, signs and symptoms of decompression sickness and other types of dysbaric diving diseases ◆ Flowcharts used to select initial treatment options/standard therapeutic treatment tables for decompression sickness and other types of dysbaric diving diseases ◆ Standard therapeutic treatment tables used to treat decompression sickness and other types of dysbaric diving diseases 	<ul style="list-style-type: none"> ◆ Accurately diagnose types of dysbaric diving diseases ◆ Follow relevant flowcharts to select initial treatment options/standard therapeutic treatment tables ◆ Communicate with hyperbaric medical physician for essential specialist assistance ◆ Assist in therapeutic treatments for decompression sickness and other types of dysbaric diving diseases in accordance with standard treatment tables ◆ Assist in therapeutic treatments for decompression sickness and other types of dysbaric diving diseases in accordance with non-standard treatments as specified by hyperbaric medical physicians 	<ul style="list-style-type: none"> ◆ Completion of company and dive system familiarisation training ◆ Approved and documented in-service experience ◆ Assessment by approved company assessor
D08/000/06	Personal skills and communication	<ul style="list-style-type: none"> ◆ Principles relating to engagement in company safety culture ◆ Principles of team working, co-operation and co-ordination ◆ Communication protocols required for individual and team safety ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture ◆ Adverse consequences of inappropriate behaviours in hazardous working environments 	<ul style="list-style-type: none"> ◆ Engage personally with safety principles and culture ◆ Communicate effectively with dive supervisor, divers, marine personnel and deck crew ◆ Engage actively in handovers, safety briefings, improvement projects coaching, etc. ◆ Perform job functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Identify and raise issues of concern calmly and assertively 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Tender**D09**

Code	Competence	Knowledge	Ability	Demonstration
D09/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems ◆ Factors which affect the safety and security of the dive team ◆ Safe dive system and life support system operation including safe gas transfer procedures ◆ Relevant emergency procedures ◆ Risk assessment and permit to work procedures ◆ Preparation of diving project plans and project emergency response plans ◆ HSE inductions, meetings and training procedures ◆ Company hazard observation system 	<ul style="list-style-type: none"> ◆ Apply HSE accountabilities and responsibilities ◆ Support the operation of dive system and life support system operations and maintenance activities to minimise HSE risks and impacts ◆ Operate functions in ways which maintain the safety and security of the dive team ◆ Adhere to company safety management system ◆ Follow emergency procedures ◆ Participate in and promote safety briefings ◆ Contribute to risk assessments for all safety critical areas ◆ Carry out activities ensuring safe continuity of work ◆ Contribute to the operation of the hazard observation system 	<ul style="list-style-type: none"> ◆ Completion of familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D09/000/02	Supply of divers' equipment and consumables	<ul style="list-style-type: none"> ◆ Divers' requirements for correctly prepared tools and equipment at depth ◆ Rigging and crane operations ◆ Knots used in diving operations ◆ Basic load handling procedures 	<ul style="list-style-type: none"> ◆ Assist in the dispatch of tools and equipment to and from depth ◆ Tie knots used in diving operations correctly ◆ Co-ordinate rigging and crane operations taking basic load handling procedures into account 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Tender**D09**

Code	Competence	Knowledge	Ability	Demonstration
D09/000/03	Diving operations and equipment	<ul style="list-style-type: none"> ◆ Diving operations from dynamic positioning (DP) vessels or other suitable platforms ◆ Divers' systems and procedures ◆ Diver operated tools ◆ Hygiene in the cleaning suits, helmets and other equipment ◆ Standard rope signals 	<ul style="list-style-type: none"> ◆ Act as a tender to diving operations on DP vessels or other suitable platforms ◆ Assemble, operate and work with a variety of diving systems ◆ Safely and correctly dress and undress a diver ◆ Tend a diver safely during diving operations and use divers' rope signals ◆ Keep dive suits clean and to company hygiene requirements ◆ Use and maintain diver operated tools ◆ Operate compressors ◆ Application of standard rope signals when required 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D09/000/04	Emergency procedures	<ul style="list-style-type: none"> ◆ General diving emergency procedures ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Diving emergency functions assigned to a dive tender 	<ul style="list-style-type: none"> ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Follow project emergency and contingency plans ◆ Respond appropriately to a diving emergency ◆ Operate appropriate emergency back-up systems 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Tender**D09**

Code	Competence	Knowledge	Ability	Demonstration
D09/000/05	Life support system operations	<ul style="list-style-type: none"> ◆ Diver laundry equipment ◆ Cleaning of divers' suits and personal equipment ◆ Basic food handling and hygiene procedures on-board ◆ Life support system operation including: <ul style="list-style-type: none"> – chamber fire hazard considerations – fire suppression system – chamber hygiene – safe operation of system locks and chamber drains – sanitary systems operation – TUP operations – BIBS operation 	<ul style="list-style-type: none"> ◆ Operate diver laundry equipment ◆ Clean divers' suits and personal equipment ◆ Follow basic food handling procedure on-board ◆ Operate equipment, medical locks and chamber drain ◆ Operate chamber sanitary system ◆ Carry out safe life support system operations autonomously for saturation diving in accordance with company procedures: <ul style="list-style-type: none"> – clean chamber system following diving operations – assist with TUP operations – assist with BIBS supplies and operations 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D09/000/06	Personal skills and communication	<ul style="list-style-type: none"> ◆ Principles relating to engagement in company safety culture ◆ Principles of team working, co-operation and co-ordination ◆ Communication protocols required for individual and team safety ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture ◆ Adverse consequences of inappropriate behaviours in hazardous working environments 	<ul style="list-style-type: none"> ◆ Engage personally with safety principles and culture ◆ Communicate effectively with dive supervisor, divers, marine personnel and deck crew ◆ Engage actively in handovers, safety briefings, improvement projects coaching, etc. ◆ Perform job functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Identify and raise issues of concern calmly and assertively 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (All Systems)**D10**

Code	Competence	Knowledge	Ability	Demonstration
D10/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems including incident reporting and investigation procedures ◆ Factors which affect the safety and security of the dive team and technical staff ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Permit to work procedures ◆ Role/responsibilities during normal operations and within emergency response plans ◆ Management of change procedures ◆ HSE inductions, meetings and training procedures 	<ul style="list-style-type: none"> ◆ Promote and ensure implementation of company safety management system ◆ Follow and manage emergency procedures relevant to the role and responsibilities ◆ Lead and promote safety briefings ◆ Lead the planning and preparation of risk assessments for all safety critical tasks ◆ Co-ordinate permit to work systems for all relevant maintenance tasks ◆ Manage relevant: <ul style="list-style-type: none"> - HSE, project and vessel inductions including familiarisation training where appropriate for staff - HSE meetings - provision for training (HSE) ◆ Safely operate as a diving technician in accordance with company safety management system, legislation and guidance ◆ Apply HSE accountabilities and responsibilities 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D10/000/02	Emergency procedures	<ul style="list-style-type: none"> ◆ General diving emergency procedures ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Diving emergency functions assigned to a senior dive technician 	<ul style="list-style-type: none"> ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Implement project emergency and contingency plans ◆ Respond to and manage a diving emergency as required ◆ Supervise or operate appropriate emergency back-up systems ◆ Deliver dive system emergency familiarisation training 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (All Systems)**D10**

Code	Competence	Knowledge	Ability	Demonstration
D10/000/03	Preventative maintenance	<ul style="list-style-type: none"> ◆ Features and operation of the diving project plant and equipment planned maintenance system ◆ Role of the senior dive technician in operating the planned maintenance system ◆ Functioning, purpose and correct use of all diving project plant and equipment ◆ Maintenance requirements for all diving project plant and equipment ◆ Legislation, standards and guidance relevant to the maintenance and use of diving project plant and equipment ◆ PTW system ◆ Certification requirements 	<ul style="list-style-type: none"> ◆ Manage the maintenance of all plant and equipment provided for diving projects in accordance with: <ul style="list-style-type: none"> – local regulatory requirements – national and international standards – manufacturer requirements – IMCA guidance c.f. IMCA D 018 – <i>Code of practice on the initial and periodic examination, testing and certification of diving plant and equipment</i> – and DESIGN – company designated schedules ◆ When required carry out planned maintenance to company's designated schedules ◆ Work to systems and procedures established, implemented and maintained to ensure that operations and maintenance activities are managed to minimise HSE risk and impacts ◆ Manage and utilise PTW systems ◆ Manage certification systems to ensure compliance with certification requirements 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D10/000/04	Breakdown situations	<ul style="list-style-type: none"> ◆ Company and manufacturer systems and procedures relating to breakdown situations 	<ul style="list-style-type: none"> ◆ Manage and respond effectively in breakdown situations ◆ Follow company and manufacturer procedures in breakdown situations 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (All Systems)

D10

Code	Competence	Knowledge	Ability	Demonstration
D10/000/05	Administration	<ul style="list-style-type: none"> ◆ Work assessment/reporting of less experienced staff ◆ Planned maintenance schedules (IMCA D 018) ◆ Record keeping procedures and systems, including: <ul style="list-style-type: none"> - certification system - purchasing system - specification and verification of goods received - purchasing procedure - management and materials manifest ◆ Company and government requirements and guidance material for the geographical area of work: <ul style="list-style-type: none"> - IMCA - The Diving Medical Advisory Committee (DMAC) - classification societies - company record keeping requirements including DESIGN 	<ul style="list-style-type: none"> ◆ Manage and oversee the completion of documentation to record work undertaken ◆ Follow relevant legislation and maintenance procedures ◆ Supervise the specification of purchasing of spares and equipment together with the return of defective equipment 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor (including assessment of documentary evidence of efficiently managing planned maintenance and manifest systems) ◆ Approved and documented in-service experience

Senior Dive Technician (All Systems)

D10

Code	Competence	Knowledge	Ability	Demonstration
D10/000/06	Supervisory skills	<ul style="list-style-type: none"> ◆ People management principles, approaches and techniques ◆ Company HR policies and procedures affecting personnel being supervised ◆ Operational and project management principles, approaches and tasks ◆ Company competence management system ◆ Company safety and quality management systems ◆ Company management of change procedures ◆ Impact of training, supervision, support and coaching on the safety performance of personnel ◆ Principles and techniques of competence assessment 	<ul style="list-style-type: none"> ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Manage information, resources and personnel safely and effectively ◆ Promote and implement company safety and quality management systems ◆ Complete appropriate company documentation ◆ Assign objectives to personnel in ways which ensure clear understanding ◆ Facilitate and control daily meetings, project and safety meetings ◆ Deliver effective handovers ◆ Implement company management of change procedures ◆ Provide opportunities for learning and practice ◆ Develop personnel, encourage peer mentoring to promote good practice and a safe working environment for individuals and the team ◆ Assess the competence of personnel and support them in achieving competence ◆ Provide ongoing performance assessment of diving team members onshore and offshore ◆ Delegate work assignments and tasks to appropriate members of staff 	<ul style="list-style-type: none"> ◆ People management training course certificate ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (All Systems)**D10**

Code	Competence	Knowledge	Ability	Demonstration
D10/000/07	Personal skills and communication	<ul style="list-style-type: none"> ◆ Safety leadership behaviours and impacts on individual and team performance ◆ Effective communication for individual and team safety covering dive, bridge, ROV and life support teams ◆ Principles relating to engagement in company safety culture ◆ Principles underpinning team working and interdepartmental co-operation ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture 	<ul style="list-style-type: none"> ◆ Promote a culture supportive of HSE matters, demonstrating visible and active HSE leadership ◆ Communicate effectively with dive team, marine personnel and deck crew ◆ Encourage personnel to raise issues or concerns calmly and to deal with matters promptly and appropriately ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (Surface Supplied Only)**DII**

Code	Competence	Knowledge	Ability	Demonstration
DII/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems including incident reporting and investigation procedures ◆ Factors which affect the safety and security of the dive team and technical staff ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Permit to work procedures ◆ Role/responsibilities during normal operations and within emergency response plans ◆ Management of change procedures ◆ HSE inductions, meetings and training procedures 	<ul style="list-style-type: none"> ◆ Promote and ensure implementation of company safety management system ◆ Follow and manage emergency procedures relevant to the role and responsibilities ◆ Lead and promote safety briefings ◆ Lead the planning and preparation of risk assessments for all safety critical tasks ◆ Co-ordinate permit to work systems for all relevant maintenance tasks ◆ Manage relevant: <ul style="list-style-type: none"> - HSE, project and vessel inductions including familiarisation training where appropriate for staff - HSE meetings - provision for training (HSE) ◆ Safely operate as a diving technician in accordance with company safety management system, legislation and guidance ◆ Apply HSE accountabilities and responsibilities 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
DII/000/02	Emergency procedures	<ul style="list-style-type: none"> ◆ General diving emergency procedures ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Diving emergency functions assigned to a senior dive technician 	<ul style="list-style-type: none"> ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Implement project emergency and contingency plans ◆ Respond to and manage a diving emergency as required ◆ Supervise or operate appropriate emergency back-up systems ◆ Deliver dive system emergency familiarisation training 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (Surface Supplied Only)**DII**

Code	Competence	Knowledge	Ability	Demonstration
DI I/000/03	Preventative maintenance	<ul style="list-style-type: none"> ◆ Features and operation of the diving project plant and equipment planned maintenance system ◆ Role of the senior dive technician in operating the planned maintenance system ◆ Functioning, purpose and correct use of all diving project plant and equipment ◆ Maintenance requirements for all diving project plant and equipment ◆ Legislation, standards and guidance relevant to the maintenance and use of diving project plant and equipment ◆ PTW system ◆ Certification requirements 	<ul style="list-style-type: none"> ◆ Manage the maintenance of all plant and equipment provided for diving projects in accordance with: <ul style="list-style-type: none"> – local regulatory requirements – national and international standards – manufacturer requirements – IMCA guidance c.f. IMCA D 018 – Code of practice on the initial and periodic examination, testing and certification of diving plant and equipment – and DESIGN – company designated schedules ◆ When required carry out planned maintenance to company's designated schedules ◆ Work to systems and procedures established, implemented and maintained to ensure that operations and maintenance activities are managed to minimise HSE risk and impacts ◆ Manage and utilise PTW systems ◆ Manage certification systems to ensure compliance with certification requirements 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
DI I/000/04	Breakdown situations	<ul style="list-style-type: none"> ◆ Company and manufacturer systems and procedures relating to breakdown situations 	<ul style="list-style-type: none"> ◆ Manage and respond effectively in breakdown situations ◆ Follow company and manufacturer procedures in breakdown situations 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (Surface Supplied Only)



Code	Competence	Knowledge	Ability	Demonstration
DII/000/05	Administration	<ul style="list-style-type: none"> ◆ Work assessment/reporting of less experienced staff ◆ Planned maintenance schedules (IMCA D 018 – Code of practice on the initial and periodic examination, testing and certification of diving plant and equipment) ◆ Record keeping procedures and systems, including: <ul style="list-style-type: none"> - certification system - purchasing system - specification and verification of goods received - purchasing procedure - management and materials manifest ◆ Company and government requirements and guidance material for the geographical area of work: <ul style="list-style-type: none"> - IMCA - The Diving Medical Advisory Committee (DMAC) - classification societies - company record keeping requirements including DESIGN 	<ul style="list-style-type: none"> ◆ Manage and oversee the completion of documentation to record work undertaken ◆ Follow relevant legislation and maintenance procedures ◆ Supervise the specification of purchasing of spares and equipment together with the return of defective equipment 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor (including assessment of documentary evidence of efficiently managing planned maintenance and manifest systems) ◆ Approved and documented in-service experience

Senior Dive Technician (Surface Supplied Only)



Code	Competence	Knowledge	Ability	Demonstration
DII/000/06	Supervisory skills	<ul style="list-style-type: none"> ◆ People management principles, approaches and techniques ◆ Company HR policies and procedures affecting personnel being supervised ◆ Operational and project management principles, approaches and tasks ◆ Company competence management system ◆ Company safety and quality management systems ◆ Company management of change procedures ◆ Impact of training, supervision, support and coaching on the safety performance of personnel ◆ Principles and techniques of competence assessment 	<ul style="list-style-type: none"> ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Manage information, resources and personnel safely and effectively ◆ Promote and implement company safety and quality management systems ◆ Complete appropriate company documentation ◆ Assign objectives to personnel in ways which ensure clear understanding ◆ Facilitate and control daily meetings, project and safety meetings ◆ Deliver effective handovers ◆ Implement company management of change procedures ◆ Provide opportunities for learning and practice ◆ Develop personnel, encourage peer mentoring to promote good practice and a safe working environment for individuals and the team ◆ Assess the competence of personnel and support them in achieving competence ◆ Provide ongoing performance assessment of diving team members onshore and offshore ◆ Delegate work assignments and tasks to appropriate members of staff 	<ul style="list-style-type: none"> ◆ People management training course certificate ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Senior Dive Technician (Surface Supplied Only)**DII**

Code	Competence	Knowledge	Ability	Demonstration
DII/000/07	Personal skills and communication	<ul style="list-style-type: none"> ◆ Safety leadership behaviours and impacts on individual and team performance ◆ Effective communication for individual and team safety covering dive, bridge, ROV and life support teams ◆ Principles relating to engagement in company safety culture ◆ Principles underpinning team working and interdepartmental co-operation ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture 	<ul style="list-style-type: none"> ◆ Promote a culture supportive of HSE matters, demonstrating visible and active HSE leadership ◆ Communicate effectively with dive team, marine personnel and deck crew ◆ Encourage personnel to raise issues or concerns calmly and to deal with matters promptly and appropriately ◆ Support individual and team functions in ways which promote team working, trust and co-operation with colleagues and supervisors 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Dive Technician**D12**

Code	Competence	Knowledge	Ability	Demonstration
D12/000/01	Safety	<ul style="list-style-type: none"> ◆ Personal safe working practices and safety procedures on-board the vessel and/or installation ◆ All relevant legislation and guidance ◆ Company safety management systems ◆ Factors which affect the safety and security of the dive team ◆ Relevant emergency procedures ◆ Risk assessment principles and procedures ◆ Permit to work procedures ◆ Role/responsibilities during normal operations and within emergency response plans ◆ Management of change procedures 	<ul style="list-style-type: none"> ◆ Safely operate as a diving technician in accordance with company safety management system, legislation and guidance ◆ Follow emergency procedures ◆ Contribute to risk assessments for all safety critical areas ◆ Follow permit to work procedures for all relevant maintenance tasks 	<ul style="list-style-type: none"> ◆ Completion of dive system familiarisation training by company ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D12/000/02	Emergency procedures	<ul style="list-style-type: none"> ◆ General diving emergency procedures ◆ Project emergency and contingency plans ◆ Fire and emergency drills relating to vessel-installation/systems/chambers ◆ Diving emergency functions assigned to a dive technician 	<ul style="list-style-type: none"> ◆ Participate in all diving emergency drills and in-house familiarisation ◆ Follow project emergency and contingency plans ◆ Respond appropriately to a diving emergency as required ◆ Operate appropriate emergency back-up systems 	<ul style="list-style-type: none"> ◆ Satisfactory completion of drills in accordance with company requirements ◆ Completion of company and dive system familiarisation training ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Dive Technician**D12**

Code	Competence	Knowledge	Ability	Demonstration
D12/000/03	Preventative maintenance	<ul style="list-style-type: none"> ◆ Features and operation of the diving project plant and equipment planned maintenance system ◆ Role of the dive technician in operating the planned maintenance system ◆ Functioning, purpose and correct use of all diving project plant and equipment ◆ Maintenance requirements for all diving project plant and equipment ◆ Legislation, standards and guidance relevant to the maintenance and use of diving project plant and equipment ◆ PTW system ◆ Certification requirements 	<ul style="list-style-type: none"> ◆ Carry out the maintenance of all plant and equipment provided for diving projects in accordance with: <ul style="list-style-type: none"> – local regulatory requirements – national and international standards – manufacturer requirements – IMCA guidance c.f. IMCA D 018 – <i>Code of practice on the initial and periodic examination, testing and certification of diving plant and equipment</i> – and DESIGN – company designated schedules ◆ Work to systems and procedures established, implemented and maintained to ensure that operations and maintenance activities are managed to minimise HSE risk and impacts ◆ Follow permit to work procedures for all relevant maintenance tasks ◆ Follow certification systems procedures to ensure compliance with certification requirements 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience
D12/000/04	Breakdown situations	<ul style="list-style-type: none"> ◆ Company and manufacturer systems and procedures relating to breakdown situations 	<ul style="list-style-type: none"> ◆ Respond effectively in breakdown situations ◆ Follow company and manufacturer procedures in breakdown situations 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience

Dive Technician**D12**

Code	Competence	Knowledge	Ability	Demonstration
D12/000/05	Administration	<ul style="list-style-type: none"> ◆ Planned maintenance schedules (<i>IMCA D 018 – Code of practice on the initial and periodic examination, testing and certification of diving plant and equipment</i>) ◆ Record keeping systems and procedures, including: <ul style="list-style-type: none"> – certification system – purchasing system – purchasing procedure – manifest procedure ◆ Company and government requirements and guidance material for the geographical area of work: <ul style="list-style-type: none"> – IMCA – The Diving Medical Advisory Committee (DMAC) – classification societies – company record keeping requirements including DESIGN 	<ul style="list-style-type: none"> ◆ Work to company's planned maintenance schedule ◆ Accurately complete documentation to record work undertaken ◆ Specify and order spares and equipment as required 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor (including assessment of documentary evidence of accurately operating planned maintenance and manifest systems) ◆ Approved and documented in-service experience
D12/000/06	Personal skills and communication	<ul style="list-style-type: none"> ◆ Principles relating to engagement in company safety culture ◆ Principles of team working, co-operation and co-ordination ◆ Communication protocols required for individual and team safety ◆ Importance of personnel identifying and speaking out about safety concerns ◆ Principles of an open reporting culture ◆ Adverse consequences of inappropriate behaviours in hazardous working environments 	<ul style="list-style-type: none"> ◆ Engage personally with safety principles and culture ◆ Communicate effectively with dive supervisor, divers, marine personnel and deck crew ◆ Engage actively in handovers, safety briefings, improvement projects coaching, etc. ◆ Perform job functions in ways which promote team working, trust and co-operation with colleagues and supervisors ◆ Identify and raise issues of concern calmly and assertively 	<ul style="list-style-type: none"> ◆ Assessment by approved company assessor ◆ Approved and documented in-service experience