

Australian/New Zealand Standard™

Training and certification of occupational divers

Part 5: Dive supervisor



AS/NZS 2815.5:2013

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-017, Occupational Diving. It was approved on behalf of the Council of Standards Australia on 23 October 2013 and on behalf of the Council of Standards New Zealand on 20 September 2013.

This Standard was published on 3 December 2013.

The following are represented on Committee SF-017:

Association of Diving Contractors, New Zealand
Australian Council of Trade Unions
Australian Diver Accreditation Scheme
Australian Diving Contractors Association
Australian Marine Sciences Association
Australian Medical Association
CSIRO Marine and Atmospheric Research
Department of Defence, Australia
International Marine Contractors Association
Maritime Union of Australia
National Association of Occupational Diver Training Establishments
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This Standard was issued in draft form for comment as DR2 AS/NZS 2815.5.

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Part 5: Dive supervisor

Originated in Australia as AS 2815.5—2006.
Jointly revised and designated as AS/NZS 2815.5:2013.

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Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 978 1 74342 624 1

PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee SF-017, Occupational Diving, to supersede AS 2815.5—2006.

The Standard is Part 5 of a series of Standards relevant to the training and certification of underwater divers, where the requirements of regulatory authorities and industry demand a prescribed degree of training and competence to ensure an adequate degree of safety, performance and economy.

The objective of this Standard is to provide regulatory authorities, training providers and trainees with a summary of the minimum competencies for an occupational dive supervisor, the minimum content of a training course for imparting these competencies to trainee occupational dive supervisor and assessment procedures.

The objective of this revision is to update selection criteria for candidates and to include provisions for training in the use of enriched air nitrox (EAN).

This Standard also provides guidance and allows for certified supervisors to undertake EAN training as a stand-alone addition to supervisor training which was previously undertaken.

This Standard sets out requirements for the training and competencies of personnel who will be engaged to supervise underwater diving operations. It is particularly related to diving operations as described in AS/NZS 2299.1, *Occupational diving operations*, Part 1: *Standard operational practice*.

Persons who successfully complete the training course specified in this Standard are eligible for certification under the Australian Diver Accreditation Scheme (ADAS) subject to ADAS approval of the diver training establishment.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	4
1.2 APPLICATION	4
1.3 NORMATIVE REFERENCES	5
1.4 DEFINITIONS.....	5
1.5 PURPOSE.....	6
1.6 SAFETY AND HEALTH	6
1.7 RECORD KEEPING	6
1.8 TRAINEE APPLICATION.....	6
SECTION 2 TRAINING COURSE CONTENT.....	8
SECTION 3 UNITS OF COMPETENCY	
3.1 ROLE OF THE DIVE SUPERVISOR	9
3.2 IMPLEMENT AND MONITOR WORK HEALTH AND SAFETY PROGRAMS ...	10
3.3 DIVING PHYSICS, PHYSIOLOGY AND ASSOCIATED CALCULATIONS	11
3.4 MANAGE DIVING ILLNESSES AND MEDICAL EMERGENCIES.....	12
3.5 MANAGE RISK ASSOCIATED WITH DIVE OPERATIONS	14
3.6 PLAN DIVE OPERATIONS	15
3.7 CONDUCT DIVE OPERATIONS.....	18
3.8 PLANT, EQUIPMENT AND MAINTENANCE PROCEDURES	19
3.9 MANAGE PEOPLE	20
3.10 SUPERVISE USE OF TOOLS IN A DIVE OPERATION	22
3.11 SUPERVISE ON-SITE CHAMBER OPERATIONS.....	23
3.12 SUPERVISE STAGE-ASSISTED DIVING	24
3.13 SUPERVISE ENRICHED AIR NITROX (EAN) DIVING.....	25
SECTION 4 TRAINING PLANS, ASSESSMENT AND PLANNED EXPERIENCE	
4.1 DEVELOPING THE TRAINING PLAN.....	27
4.2 METHODS OF TRAINEE ASSESSMENT.....	28
4.3 STAFFING, EQUIPMENT AND FACILITIES.....	30
BIBLIOGRAPHY	33

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Australian/New Zealand Standard**Training and certification of occupational divers****Part 5: Dive supervisor**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the training activities and competencies required for the training and certification of dive supervisors for occupational diving operations using self-contained underwater breathing apparatus (SCUBA) and surface-supplied underwater breathing apparatus (SSBA).

This Standard specifies the training and competencies required for the following three levels of supervisor qualifications:

- (a) Occupational dive supervisor for SCUBA diving.
- (b) Occupational dive supervisor for surface supplied diving to 30 m.
- (c) Occupational dive supervisor for surface supplied diving to 50 m.

NOTES:

- 1 This Standard does not apply to supervision of diving operations conducted under the Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009 or state Petroleum (Submerged Land) Acts and associated regulations.
- 2 This Standard may be used to train and assess dive supervisors for any type of diving operation, however, for certification, it is necessary for the dive supervisor to be capable of effectively supervising the range of common general diving operations.
- 3 This Standard is not intended to apply to the training of dive coordinators who supervise and coordinate scientific diving conducted in accordance with AS/NZS 2299.2. The training activities and competencies set out in this Standard may be useful as guidance for such training.

1.2 APPLICATION**1.2.1 General**

This Standard comprises requirements and guidance for use by the trainee, trainee's employer, training establishment or certification agency. Specifically, it is intended to—

- (a) prescribe to a trainee the level of competency that a qualified diver is expected to achieve;
- (b) provided a basis for a supervisor or employer to evaluate the current competence of divers;
- (c) provide minimum requirements for a school or training establishment in the development of a course of training;
- (d) be used by certification agencies to assess training provided to trainee divers; and
- (e) be used to assess and certify diver training establishments delivering the training.

1.2.2 Certification

Persons requiring occupational certification to this Standard shall meet all elements of competency and performance criteria specified in this Standard for the particular level of certification being sought.

NOTE: See also AS/NZS 2299.1 for requirements for certification bodies.

A diver trained in accordance with this Standard may receive certification through—

- (a) the relevant regulatory authority; or
- (b) an occupational diver training establishment that is a registered training organization (RTO) such as the Australian Diver Accreditation Scheme (ADAS).

Training establishments delivering the training course specified in this Standard may be eligible for approval as an Australian Diver Accreditation Scheme (ADAS) accredited training establishment. Trainees deemed competent and recommended by that establishment would then be eligible for certification under ADAS.

1.3 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard.

NOTE: Documents referenced for informative purposes, including a list of bibliographical material, are listed in the Bibliography.

AS

- 2815 Training and certification of occupational divers
- 2815.1 Part 1: SCUBA diving to 30 m
- 2815.3 Part 3: Air diving to 50 m
- 2815.4 Part 4: Bell diving

AS/NZS

- 2299 Occupational diving operations
- 2299.1 Part 1: Standard operational practice
- 2299.2 Part 2: Scientific diving
- 2815 Training and certification of occupational divers
- 2815.2 Part 2: Surface supplied diving to 30 m

1.4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

1.4.1 Element of competency

A discretely identifiable action or knowledge that can be demonstrated or assessed and contributes to a unit of competency.

1.4.2 Enriched air nitrox (EAN)

A breathable mixture of nitrogen and oxygen with more than 21% oxygen content, which may contain trace gases at levels no higher than breathable air.

1.4.3 Instructor

An individual certified by a recognized certifying organization to teach the appropriate supervisors course and authorize and recommend the issue of the same level of certification (see Clause 4.3 for instructor requirements).

NOTE: The terms 'instructor' and 'trainer' are synonymous.

1.4.4 Performance criteria

Evaluative statements that specify the required level of performance for the element of competency.

1.4.5 Regulatory authority

A person or body appointed by any act or regulation to enforce regulations pertaining to this Standard.

1.4.6 Shall

Indicates that a statement is mandatory.

1.4.7 Should

Indicates a recommendation.

1.4.8 Trainee

The individual who is subject to the training and assessment described within this Standard.

NOTE: The terms 'trainee' and 'student' are synonymous.

1.4.9 Unit of competency

A broad aspect of the knowledge or ability the trainee needs to acquire before being considered competent.

1.5 PURPOSE

The purpose of this Standard is to describe the organizational and syllabus requirements for the following:

- (a) The training of dive supervisors to safely and competently plan and supervise diving operations involving self-contained breathing apparatus, surface-supplied breathing apparatus and stage/wet bells.
- (b) Imparting knowledge of the underwater skills required by the industry and the application of basic skills in order to be competent to plan and supervise a range of underwater tasks safely and efficiently.

NOTE: Team training, particularly in practical diving and underwater work, should be directed towards helping the trainee to think and act as the supervisor of the dive team.

1.6 SAFETY AND HEALTH

The safety and health of the diver and the development of safe working practices shall be integrated into all aspects of the training course.

1.7 RECORD KEEPING

Maintenance of effective training records of the individual assessment of trainee dive supervisors including dive/supervisor log books and employer/training establishment dive records in accordance with AS/NZS 2299.1 shall be maintained.

1.8 TRAINEE APPLICATION CRITERIA

Prior to the commencement of training the trainee shall fulfil the following criteria:

- (a) Be in possession of a valid workplace first aid certificate.
- (b) Be trained as a diver to a level equal to or exceeding that specified in the relevant part of the AS and AS/NZS 2815 series, as appropriate, and shall have documentary evidence of satisfactory past training, such as a certificate to that effect issued by—
 - (i) the relevant regulatory authority; or
 - (ii) an occupational diver training establishment that is a registered training organization (RTO) such as the Australian Diver Accreditation Scheme (ADAS).

Where a trainee holds certification of a restricted qualification, as specified in the relevant parts of AS 2815.3 and AS/NZS 2815.2, that trainee shall be deemed to meet the selection criteria for the relevant level of qualification as described in Clause 1.1.

NOTE: For example, a restricted diver in accordance with AS/NZS 2815.2 meets the selection criteria for the qualification of occupational dive supervisor for surface supplied diving to 30 m.

- (c) Have held certification as a diver as specified in relevant part of AS or AS/NZS 2815 for a minimum period of 12 months.
- (d) Provide evidence of operational experience over a range of diving operations, environments, tasks and equipment.
- (e) Provide evidence of the attributes required to supervise, including ability to lead and provide support to groups of other workers.
- (f) Present one or more letters of suitability for training as a dive supervisor provided by a recognized diving employer.

The prospective assessor shall assess the suitability of the candidate according to the above criteria. In the case of the Australian or New Zealand Defence Forces, or Police, the internal procedures of that organization may be used to assess suitability.

Divers with other backgrounds shall have gained experience that includes a minimum of 100 dives and 75 hours of underwater time with sufficient variety and relevance to assure the assessor that the diver is a suitable candidate for supervisor training.

NOTES:

- 1 It is desirable that the trainee's experience include experience in supervisory tasks, such as panel operation, gained under the oversight of a qualified dive supervisor.
- 2 A certificate of medical fitness to dive in accordance with AS/NZS 2299.1 is preferable but not essential.
- 3 Experience should be demonstrated by presentation of a diver's log book.

Persons certified as occupational dive supervisors for SCUBA diving or for surface supplied diving to 30 m who wish to upgrade their qualification to a higher level, may be eligible to do so if—

- (i) they fulfil the requirements regarding diver certification for the higher level;
- (ii) can demonstrate the appropriate occupational diving and diving workplace experience; and
- (iii) complete relevant modules at an occupational diver training establishment that is a registered training organization (RTO) under the Australian Quality Training Framework.

SECTION 2 TRAINING COURSE CONTENT

The units of competency describe what the trainee needs to be able to do on completion of training and are classified broadly into two groups as follows:

- (a) Units that develop competence to plan dives and work safely.
- (b) Units that are limited to developing an appreciation of, or acquaintance with, a piece of equipment or a procedure.

Clauses 3.1 to 3.13 set out the units of competency, elements of competency and performance criteria for the training courses for all levels of diver supervisor.

The units of competency in Clauses 3.1 to 3.9 shall be completed by all trainees. The unit of competency in Clause 3.10 concerning the use of tools shall be completed by all trainees except those training for restricted supervisor qualifications in specific industry sectors not involving the use of tools or construction (e.g. some police search and rescue operations).

Additionally, trainees for the occupational dive supervisor for surface supplied diving to 50 m course shall complete the units of competency in Clause 3.11 and, where relevant, Clause 3.12.

The unit of competency in Clause 3.13 [Supervise enriched air nitrox (EAN) diving] is an elective unit for those trainees wishing to supervise the use of enriched air nitrox (EAN) in diving operations and is available to supervisors at all levels.

In addressing competencies, the training delivered and the assessments undertaken shall be commensurate with the level of qualification being sought.

The units of competency are shown as follows:

Unit of competency	Clause reference
Role of the dive supervisor	3.1
Implement and monitor work health and safety programs	3.2
Diving physics, physiology and associated calculations	3.3
Manage diving illnesses and medical emergencies	3.4
Manage risk associated with dive operations	3.5
Plan dive operations	3.6
Conduct dive operations	3.7
Plant, equipment and maintenance procedures	3.8
Manage people	3.9
Supervise use of tools in a dive operation	3.10
Supervise on-site chamber operations	3.11
Supervise stage-assisted diving	3.12
Supervise enriched air nitrox (EAN) diving	3.13

SECTION 3 UNITS OF COMPETENCY

3.1 ROLE OF THE DIVE SUPERVISOR

3.1.1 General

The purpose of this unit of competency is to enable the trainee to describe the role and responsibilities of the dive supervisor and the regulatory framework for occupational diving within Australia and demonstrate a commitment and ability to abide by legal requirements in all activities associated with working as a supervisor in the diving industry.

The elements of competency are to—

- (a) describe the role and responsibilities of the dive supervisor;
- (b) describe the regulatory framework for occupational diving within Australia and New Zealand; and
- (c) abide by legal requirements in all activities associated with working as a supervisor in the diving industry.

3.1.2 Performance criteria for elements of competency

The competency of the trainee with respect to the elements shall be assessed using the criteria set out in Table 3.1. The assessment method and conditions of assessment shall be as set out in Clause 4.2.

TABLE 3.1
ROLE OF THE DIVE SUPERVISOR

Element of competency	Performance criteria
3.1.1 Describe the role and responsibilities of the dive supervisor	(a) Explain the fundamental difference between the role of the dive supervisor and that of the dive team members (b) List the primary responsibilities of the dive supervisor (c) Identify common problems and outline possible solutions in making the transition from being a dive team member to a newly-certified dive supervisor
3.1.2 Describe the regulatory framework for occupational diving within Australia and New Zealand	(a) List the authorities and regulators relevant to diving (b) Describe the relationship between the various authorities and regulators that are directly applicable to diving
3.1.3 Abide by legal requirements in all activities associated with working as a supervisor in the diving industry	(a) Demonstrate awareness of relevant legal obligations in all dealings with people both internal and external to the diving organization (b) Follow organizational policies and procedures and demonstrate an awareness of employment issues in relation to selection of dive team members, disciplinary procedures and handling grievances (c) Ensure all members of the team involved in a dive operation strictly adhere to legal requirements

3.2 IMPLEMENT AND MONITOR WORK HEALTH AND SAFETY PROGRAMS

3.2.1 General

The purpose of this unit of competency is to enable the trainee to implement and monitor work health and safety policies, procedures and programs within the context of an established organizational work health and safety system.

NOTE: The training module for this unit should be delivered early in the course so that trainees can apply this knowledge in subsequent practical components of the course.

The elements of competency are to—

- (a) provide information to the workgroup about the organization's work health and safety policies, procedures and programs;
- (b) implement and monitor the organization's procedures for identifying hazards, assessing risks and controlling risks;
- (c) implement the organization's procedures for dealing with hazardous events and equipment; and
- (d) implement and monitor the organization's procedures for maintaining work health and safety records.

3.2.2 Performance criteria for elements of competency

The competency of the trainee with respect to the elements shall be assessed using the criteria set out in Table 3.2. The assessment method and conditions of assessment shall be as set out in Clause 4.2.

TABLE 3.2
IMPLEMENT AND MONITOR WORK HEALTH AND SAFETY PROGRAMS

Element of competency	Performance criteria
3.2.1 Provide information to the workgroup about the organization's work health and safety policies, procedures and programs	(a) Explain the relevant provisions of the work health and safety legislation and codes of practice to the work group (b) Provide and explain information on the organization's work health and safety policies, procedures and programs to the work group (c) Provide and explain information on identified hazards and the outcomes of risk assessment and risk control procedures to the work group (d) Address personal, peer and staff attitudes towards occupational safety and risk management practices, in accordance with organizational policy
3.2.2 Implement and monitor the organization's procedures for identifying hazards, assessing risks and controlling risks	(a) Identify and report existing and potential hazards in the work area (b) Undertake a risk assessment following appropriate procedures (c) Implement work procedures to control risk and ensure adherence by the work group (d) Monitor existing risk control measures and identify and report any inadequacies in accordance with workplace procedures
3.2.3 Implement the organization's procedures for dealing with hazardous events and equipment	(a) Implement the organization's procedures for dealing with hazardous events in the workplace (b) Investigate hazardous events to identify their cause in accordance with investigation procedures (c) Implement control measures to prevent recurrence and minimize risks of hazardous events if within scope of responsibilities, or refer to designated personnel for implementation (d) Handle and store hazardous goods and equipment in accordance with organization's policy and work health and safety regulations
3.2.4 Implement and monitor the organization's procedures for maintaining work health and safety records	(a) Complete work health and safety records for the work area accurately and legibly in accordance with workplace and legal requirements (b) Use aggregate information from the work health and safety records to identify hazards and monitor risk control procedures

3.3 DIVING PHYSICS, PHYSIOLOGY AND ASSOCIATED CALCULATIONS

3.3.1 General

The purpose of this unit of competency is to enable the trainee to ensure the safety of others in diving by applying diving physics and physiology knowledge and applying mathematical concepts accurately to all diving-related calculations and to enable the trainee to describe risk control measures used to minimize the risks to the diver of working underwater.