



IALA RECOMMENDATION

R0103(V-103)

STANDARDS FOR TRAINING AND CERTIFICATION OF VTS PERSONNEL

Edition 2.2

June 2017



DOCUMENT HISTORY

Date	Details	Approval
1998	1 st issue	Council
7 December 2005	Edition 1.1 - Entire document Reformatting to meet IALA documentation standards	Council session 37
9 December 2009	Edition 2 - Entire document Major revision and updating	Council session 46
13 December 2013	Edition 2.1 - Sections 1.1 and 1.2 Minor revisions	Council session 56
16 June 2017	Edition 2.2 - Entire document Update to include Model Course V-103/5, IALA Guidelines 1014 and 1103.	Council session 64



THE IALA COUNCIL

RECALLING:

- 1 The function of IALA with respect to Safety of Navigation, the efficiency of maritime transport and the protection of the environment.
- 2 Article 8 of the IALA Constitution regarding the authority, duties and functions of the Council.

NOTING:

- 1 that the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995 (STCW Convention) contain regulations concerning training of ships' personnel and the Seafarer's Training, Certification and Watchkeeping Code (STCW Code) contains specifications of minimum standard of competence for ships' personnel.
- 2 that STCW 95 adopted Resolution 10 concerning Training of maritime pilots, vessel traffic personnel and maritime personnel employed on mobile offshore units.
- 3 that the International Maritime Organisation in Assembly Resolution A.857(20) on Guidelines for Vessel Traffic Services:
 - a recommend that VTS Authorities be provided with sufficient staff, appropriately qualified, suitably trained and capable of performing the tasks required, taking into consideration the type and level of services to be provided.
 - b describe the skill and knowledge qualifications required by VTS Operators to provide vessel traffic services.

RECOGNISING:

- 1 that the 8th International Symposium on VTS (Rotterdam 1996) concluded that VTS Authorities should set standards for VTS Operators, in accordance with international guidelines and other relevant material.
- 2 that VTS Authorities should provide facilities for training to those standards and institute measures to maintain those standards.
- 3 that following a request from the 8th International Symposium on VTS, IALA undertook to develop suitable training and certification standards for VTS Personnel.

CONSIDERING the proposals of the IALA Vessel Traffic Services Committee,

ADOPTS the revised Standards for Training and Certification of VTS Personnel set out in the annex of this recommendation,

INVITES Members and marine aids to navigation authorities worldwide to implement the provisions of the Recommendation,



REQUESTS that National Members and other appropriate Authorities, providing or intending to provide Vessel Traffic Services, use the IALA standard of training and the related Model Courses as the basis for the training and certification of VTS personnel.

REQUESTS the Vessel Traffic Service Committee or such other Committee as the Council may direct to keep the Recommendation under review and to propose amendments as necessary.



ANNEX

TO

IALA RECOMMENDATION R0103(V-103)

ON

**THE STANDARDS FOR TRAINING AND
CERTIFICATION OF VTS PERSONNEL**



ANNEX CONTENTS

1	INTRODUCTION.....	8
1.1	General	8
1.2	Objectives	8
2	GENERAL PROVISIONS	8
2.1	Responsibilities	8
2.2	Principles.....	9
2.3	IALA Model Courses.....	9
2.4	Accreditation and Approval process for VTS Training	10
2.5	Recognition of Certificates	10
3	VTS PERSONNEL.....	10
3.1	VTS Operators and Supervisors	10
3.1.1	Operational Job Descriptions	10
3.2	VTS Manager.....	10
3.3	VTS Career Progression.....	11
3.4	Instructors.....	11
4	SELECTION AND RECRUITMENT.....	13
4.1	Entry requirements.....	13
4.2	Selection Process	13
4.2.1	Aptitude Assessment	13
4.3	Assessment of Prior Learning (APL).....	14
4.4	Medical/Physical Requirements	14
4.5	Personal Attributes	14
5	QUALIFICATION AND CERTIFICATION.....	14
5.1	Qualification.....	14
5.1.1	Validity	15
5.2	Certification	15
5.2.1	VTS Course Certificate.....	15
5.2.2	VTS Certification Log	15
5.3	Maintaining Qualification	16
5.3.1	Regular Assessment of performance	16
5.3.2	Refresher training	16
5.3.3	Revalidation of VTS qualifications.....	17
6	QUALIFICATIONS OF INSTRUCTORS AND ASSESSORS.....	17
6.1	Instructors.....	17



ANNEX CONTENTS

6.2	Assessors.....	17
7	TRAINING.....	17
7.1	Introduction.....	17
7.2	Model Courses.....	18
7.2.1	VTS Operator Model Course V-103/1.....	18
7.2.2	VTS Supervisor Model Course V-103/2.....	18
7.2.3	On-the-Job Training (OJT) Model Course V-103/3.....	19
7.2.4	On-the-Job Training Instructor Model Course V-103/4.....	19
7.2.5	Revalidation process of VTS Qualification and Certification V-103/5.....	19
8	ACRONYMS.....	20
9	DEFINITIONS AND CLARIFICATIONS.....	20
10	REFERENCES.....	21
	APPENDIX 1 VTS Operator job description	23
	APPENDIX 2 VTS SUPERVISOR JOB DESCRIPTION	24
	APPENDIX 3 VTS MANAGER JOB DESCRIPTION	25
	APPENDIX 4 APTITUDE TESTING	26

List of Figures

Figure 1	Career progression	12
----------	--------------------	----

1 INTRODUCTION

1.1 GENERAL

International shipping operations need a common approach and universally agreed professional standards and competence for the delivery of Vessel Traffic Services (VTS). The successful delivery of such services depends upon competent and experienced personnel to discharge the responsibilities of a VTS Authority. Recognising that VTS personnel are members of a profession whose principle interaction is with mariners and maritime pilots for the safe management of maritime traffic, their competence needs to reflect that professional responsibility.

The recruitment, selection and training of suitable personnel is a pre-requisite to the provision of professionally qualified personnel capable of contributing to safe and efficient marine operations. Such personnel will help to ensure that full and due regard is given to the diverse tasks inherent in VTS activities.

This Recommendation sets out the training requirements and certification standards for VTS personnel. These should be implemented by National Members and other appropriate Authorities to ensure that uniform standards of procedures, practices and professional standards are applied by Vessel Traffic Services world-wide.

1.2 OBJECTIVES

Competent and / or VTS authorities are encouraged to adopt this Recommendation together with the associated model courses as the basis for mandatory training in a manner consistent with their domestic legal framework

The objectives of this Recommendation are to provide a basis:

- for VTS Authorities when recruiting VTS personnel;
- for Model Courses to establish a training programme on the specific knowledge, skills and attitude requirements necessary to qualify VTS personnel;
- to ensure that VTS personnel are trained and qualified to enable them to perform the tasks required;
- for maintaining a satisfactory level of operational performance through the systematic provision of a revalidation process for VTS personnel;
- to regularly assess the ability of VTS personnel to perform to established and recognised standards and;
- for a structured career progression for VTS Personnel.

2 GENERAL PROVISIONS

2.1 RESPONSIBILITIES

The following excerpts from IMO Resolution A.857(20) Guidelines for Vessel Traffic Services are relevant to training:

In planning and establishing a VTS, the Government or the Competent Authority should:

- *determine the services and level to which the services are to be provided by the VTS, having regard to the objectives of the VTS;*
- *ensure that the VTS Authority is provided with sufficient staff, appropriately qualified, suitably trained and capable of performing the tasks required, taking into consideration the type and level of services to be provided;*
- *establish appropriate qualifications and training requirements for VTS operators, taking into consideration the type and level of services to be provided; and*
- *ensure that provisions for the training of VTS operators are available.*



In operating a VTS the VTS Authority should:

- *ensure that the standards set by the Competent Authority for types of service and operator qualifications and equipment are met; and*
- *ensure that the VTS operations are harmonised with, where appropriate, ship reporting and routing measures, aids to navigation, pilotage and port operations.*

2.2 PRINCIPLES

A major factor in the efficient operation of a VTS centre is the standard of competence of its personnel. Recognising that VTS personnel are members of a profession whose principle interaction is with mariners and maritime pilots for the safe management of maritime traffic, their competence needs to reflect that professional responsibility.

VTS personnel should be capable of interacting with vessel traffic in a VTS area. All VTS personnel should be appropriately trained before they undertake the duties associated with the type of services provided such as, Information Service (INS), Navigational Assistance Service (NAS) and / or Traffic Organisation Service (TOS).

In order to carry out the duties required by a VTS Authority, VTS personnel should be appropriately trained and qualified to IALA V-103 standards. This means that VTS training is performed according to the Model Courses developed by IALA. It is for the VTS Authority to ensure that appropriately trained personnel are available to undertake these commitments.

In order to ensure that IALA standards for VTS training meet the appropriate level, the VTS training courses should be accredited by the Competent Authority. This should help to ensure the competence of personnel that occupy operational positions in a VTS Centre.

It is therefore considered that a member of VTS personnel should be competent when in possession of the appropriate IALA V-103 Model Course certificate(s) and endorsements.

2.3 IALA MODEL COURSES

The basis of VTS training is set out in the following IALA Model Courses:

- 1 V-103/1 VTS Operator Training.
- 2 V-103/2 VTS Supervisor Training.
- 3 V-103/3 VTS On-the-Job Training
- 4 V-103/4 VTS On-the-Job Training Instructor.
- 5 V-103/5 The Revalidation Process for VTS Qualification and Certification.

These courses are not intended to be used directly as course material but are a guide that can be adapted in two ways:

- to meet the entry level knowledge of candidates;
- to enable course design to be matched to the requirements of the appropriate Competent/VTS Authority.

The Model Courses are designed to produce universally common standards of training and performance. It is for the relevant Competent Authority to approve the courses undertaken at accredited VTS training organisations.



2.4 ACCREDITATION AND APPROVAL PROCESS FOR VTS TRAINING

A training organisation intending to provide VTS training should apply for accreditation to the Competent Authority of the country, in which it is located. The Competent Authority or an authority designated and approved by the Competent Authority should carry out an audit in order to ensure that the IALA standards as well as any other requirements are met by the training organisation.

The purpose of approval is to provide a basis to ensure that the VTS courses meet the requirements of this Recommendation and the related Model Courses. It is also important that the Model Courses should be delivered under the framework of a Training Management System within an approved quality system.

The IALA Guideline No 1014 Accreditation and Approval Process for VTS Training sets out the process by which VTS Training Courses leading to the issue of V-103/1, V-103/2, V-103/3, V-103/4 and V-103/5 Course Certificates, can achieve approval.

2.5 RECOGNITION OF CERTIFICATES

Where suitable reciprocal arrangements apply, the Competent Authority of one Country or State should recognise a VTS Course Certificate of another Country or State provided that the:

- certificate has been issued in accordance with this Recommendation;
- Competent Authority is satisfied with the training arrangements of the other Country or State concerned.

3 VTS PERSONNEL

3.1 VTS OPERATORS AND SUPERVISORS

VTS Operator (VTSO) and Supervisor training should be carried out by an accredited training organisation, which provides approved VTS training courses, and be conducted in accordance with the appropriate IALA Model Courses V-103/1 VTS Operator Training and V-103/2 VTS Supervisor Training. These internationally agreed qualifications for VTS personnel are the key to the establishment of common training standards. Maritime related qualifications may be taken into consideration when assessing the training requirements for prospective VTSOs or Supervisors.

A sense of responsibility, watchfulness and preciseness characterise competent VTS personnel. Training and education should therefore aim at stimulating these qualities.

In addition to the duties carried out by VTSOs, VTS Supervisors supervise the activities undertaken within a VTS centre and ensure that the standards set by the authority are maintained.

3.1.1 OPERATIONAL JOB DESCRIPTIONS

VTS Authorities should develop detailed job descriptions for their operational personnel at each VTS centre, based on the types of service to be provided, the equipment available and the coordination needed with other organisations and departments.

Examples of the format of job descriptions for VTSOs and VTS Supervisors are provided in APPENDIX 1 and APPENDIX 2 respectively.

3.2 VTS MANAGER

The VTS Authority may establish the post of a VTS Manager. The VTS Manager is responsible for managing and co-ordinating the activities of the VTS centre on behalf of the VTS Authority. In some cases, a VTS Manager may have the responsibility for more than one VTS centre.

The manager should have knowledge of the principles and practices of the particular VTS, the types of service provided and the overall structure and capabilities of the VTS organisation. This VTS knowledge may be gained through experience as a VTSO or VTS Supervisor. Such experience would be particularly relevant where the role



includes responsibilities for VTS contingency planning. The manager should also possess managerial qualifications required by the Competent or VTS Authority concerned.

An example of the format for a VTS Manager's job description is provided in APPENDIX 3.

3.3 VTS CAREER PROGRESSION

The formal recognition of VTS qualifications provides the foundation for a properly balanced and self-evident career structure and the drive to set and make every effort for improved standards of performance.

The establishment of internationally recognised VTS qualifications provides a professional framework similar to that adopted by the shipping and pilotage industry. The regular validation of those qualifications seeks to create improvement and quality standards comparable to those of other professions. These attributes enable successful personnel to offer their services for employment on a worldwide basis.

Additionally, the scope for career progression, either in VTS or in a wider diversity of associated marine activities offers a career structure which provides for motivation and ambition, whilst making continued use of the skills and experience gained (see example in Figure 1).

3.4 INSTRUCTORS

VTS Personnel who demonstrate aptitude for training should be encouraged to obtain ability and experience in instructional techniques, knowledge of training programmes and an understanding of specific training objectives. This should enable them to become instructors for the VTS training courses or On-the-Job Training. In order to maintain a high level of training effectiveness, instructors should have an appropriate balance of professional VTS knowledge as well as an aptitude for teaching.

New methods and equipment are developed very quickly. This makes it necessary for instructors to keep up to date with new techniques and national and international rules and regulations. Instructors should be encouraged to include relevant new developments and techniques in the training.

Competent Authorities should ensure that Instructors are appropriately qualified and experienced for the particular types and levels of training and corresponding assessment of competence.

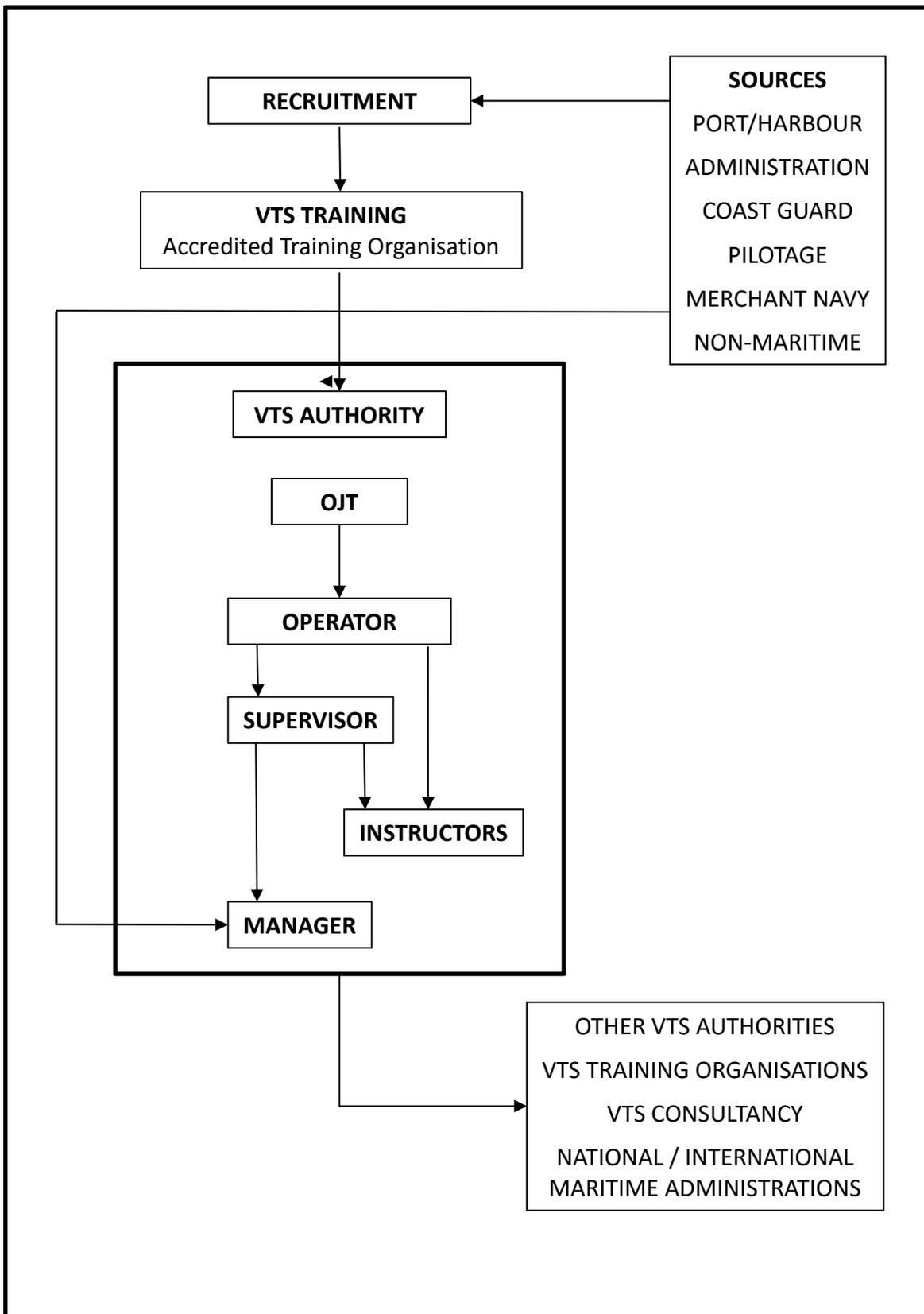


Figure 1 Career progression

4 SELECTION AND RECRUITMENT

4.1 ENTRY REQUIREMENTS

Successful recruitment of VTS personnel is important in order to maintain the quality and capacity of Vessel Traffic Services. To ensure the quality of the trainees it is crucial to use appropriate entry requirements and follow a thorough selection process.

The Competent/VTS Authority should set minimum entry requirements for applicants to become a member of VTS personnel.

When setting the entry requirements, the following points should be considered:

- prior skills and knowledge;
- previous maritime experience and education;
- personal suitability characteristics;
- medical fitness requirements.

If applicable, the Competent Authority may consider setting requirements for the VTS Authority to:

- verify that the applicant meets the entry requirements;
- assess the applicant's personal aptitude and suitability;
- establish a selection process in order to choose the most qualified applicant.

English is the accepted language of international business, trade and diplomacy. Subsequently there is a very high demand for education in the language as well as a high demand for other academic qualifications taught in English. This has led to the establishment of reliable tests to demonstrate that trainees have attained a sufficient level of the language to follow their chosen course or profession.

Candidates should also be fluent in the use of their own native language where their language is primarily used for communications (for example in inland waterways).

4.2 SELECTION PROCESS

The selection process should include aptitude testing, assessment of prior learning, medical/physical requirements and an assessment of the personal attributes of the candidate.

The purpose of the selection process is to provide a mechanism to facilitate selection of applicants for trainee operators. An important part of this is to test and assess the suitability of the applicants to perform the required VTS tasks. The selection process should be established and performed by the VTS Authority in accordance with the requirements set by the Competent Authority.

Personnel may be recruited directly as VTS Supervisors/Manager if they can demonstrate to the VTS Authority that they have the required experience to undertake the responsibilities and duties of a VTS Supervisor/Manager. The VTS Authority should ensure that such personnel have received VTSO training and any additional training as may be necessary to meet the required standards of competence for a VTS Supervisor/Manager.

4.2.1 APTITUDE ASSESSMENT

Aptitude assessments should be carried out as part of the selection process. All prospective candidates should be assessed, even if they have previous maritime experience. Assessments, which employ simulation of traffic movements, may be used.

Assessments should be designed to determine the ability of candidates to:

- discriminate between relevant and non-relevant information;
- combine auditory and visual information;



- demonstrate spatial and situational awareness;
- demonstrate alertness and decisiveness in all situations;
- carry out several tasks simultaneously;
- carry out routine work without losing situational awareness;
- show initiative while working within a framework of standards, regulations and structured procedures;
- recognise and manage work related and personal stress; and
- demonstrate appropriate communication and literacy skills.

Tests which employ simulation of traffic movements are recommended for this assessment.

An example of how aptitude testing might be arranged is given in APPENDIX 4.

4.3 ASSESSMENT OF PRIOR LEARNING (APL)

Depending on the recruitment level and background of candidates, some elements of the Model Course could be addressed through an Assessment of Prior Learning (APL) and experience, reflecting both the formal training and experience of the candidate. Any such module exemption should be approved by the respective Competent Authorities.

A variety of assessment methods are available for use by a Competent Authority, VTS Authority or Training Organisation to provide an accurate measure of the prior learning of the candidate. It is probable that a combination of methods may need to be used to ensure that all aspects of prior learning are taken into account.

When the assessment of prior learning indicates that the candidate has the competence required for a particular subject, no training on the subject need be given. However, when the assessment indicates that the required competence level is not being met appropriate training should be given to ensure that the competence level is met.

4.4 MEDICAL/PHYSICAL REQUIREMENTS

Candidates should meet the medical, including optical, standards of health established by the Competent and/or VTS Authority.

4.5 PERSONAL ATTRIBUTES

Personal attributes are important factors in the selection criteria. A continual assessment should be made of the candidates' suitability throughout the selection process. Candidates should at a minimum have an appropriate sense of responsibility, ability to adopt and follow procedures, as well as having a willingness to co-operate with others as part of a team.

5 QUALIFICATION AND CERTIFICATION

5.1 QUALIFICATION

Qualification is the education, knowledge, skill, experience or any other attribute which the Competent and/or VTS Authority may have determined desirable for performing the duties of the relevant position.

VTS qualifications should primarily be based on the principle that satisfactory results are obtained during the IALA VTS Model Courses.

The following steps are recommended for attaining qualification:

- 1 The candidate has been selected and the set requirements as regard to prerequisites and medical/physical requirements are fulfilled.



- 2 On successful completion of an approved training course, the VTS trainee receives a course certificate.
- 3 The course certificate may then be submitted to the appropriate authority who, after validation, should issue a VTS Certification Log book.
- 4 The VTS trainee should complete OJT at a specific VTS centre, under the supervision of an OJT Instructor (OJTI).
- 5 On successful completion of OJT the appropriate authority should issue an endorsement and/or a certificate enabling the trainee to operate.
- 6 Any additional successful completion of approved VTS training courses, such as Supervisor or OJTI, should also be entered in the VTS Certification Log book.

The VTS certification log book should be revalidated on a periodic basis. Revalidation is the process for the maintenance of a VTS qualification. It ensures that holders of a VTS qualification, develop, increase and retain their competence in order to maintain a satisfactory level of operational performance.

5.1.1 VALIDITY

A qualification within a VTS certification log should be valid until either:

- an assessment indicates that the holder has fallen below the standards, including medical requirements, set by the Competent Authority for qualifications;
- there is a break in service, for whatever reason, for a period defined by the Competent Authority; or
- the maximum time period for undertaking recurrent training has been reached.

5.2 CERTIFICATION

5.2.1 VTS COURSE CERTIFICATE

A VTS Course Certificate should be awarded by the accredited training organisation, which provides the approved VTS training, to trainees on completion of their VTS training. The course certificate should include:

- the candidate's full name;
- the country in which it was awarded;
- signature of the issuing Authority and the training organisation;
- the relevant course;
- date of birth and/or unique identification information;
- the date of award;
- the unique serial number of the course certificate.

5.2.2 VTS CERTIFICATION LOG

A VTS Certification Log should be issued by the Competent/VTS Authority after validation of the course certificate. This log should be in the format of a Log Book or in another appropriate format (which may be digital) set by the Competent Authority. The log should include (but not be limited to):

- the holders full name;
- the country in which it was awarded;
- date of birth and/or unique identification information;
- the date of issue;
- a unique serial number;
- brief details of the VTS course certificate(s) held, including their serial number;



The VTS certification log should be used to record:

- the type of service (i.e. Information Service, Navigational Assistance Service or Traffic Organisation Service) which the holder is authorised to provide;
- regular assessment records and the result thereof;
- any break in service defined by the Competent/VTS Authority;
- on-the-Job training at each VTS at which the holder is employed as a VTSSO or Supervisor including the name of each VTS Centre at which On-the-Job Training has been completed, the name and signature of the OJTI and the date the training was completed;
- revalidation records including the name of the organisation at which the Certificate was revalidated, the signature of the person responsible for the revalidation and the date of revalidation;
- additional VTS training courses (Supervisor, OJTI) successfully completed including the name of the organisation where the additional VTS training courses was undertaken, the signature of the person responsible for the training and the date the training was completed;
- any relevant course, or training, successfully completed including the name of the organisation at which Supervisor training has been completed, the name and signature of the person responsible for the training and the date of completion.

VTS Course Certificates and Certification Logs should be in the official language or languages of the awarding country. If the language used is not English, the text should include a translation into that language.

5.3 MAINTAINING QUALIFICATION

In order to maintain qualification of VTS personnel, the VTS Authority should ensure that all personnel, under their jurisdiction, undergo an assessment at regular intervals. This could be in the form of a continual assessment at the VTS centre or at a training organisation.

If VTS personnel fail an assessment or have had a break in service, for whatever reason and for a period as determined by the Competent/VTS Authority, the VTS personnel concerned may be required to undertake updating training, or any other measure as deemed appropriate by the Competent Authority in order to revalidate the qualifications contained within the VTS certification log.

5.3.1 REGULAR ASSESSMENT OF PERFORMANCE

An assessment of the performance of each member of VTS Personnel should be carried out by a VTS Supervisor/Manager at regular intervals, preferably annually, to ensure that the standards set by the Competent Authority for operator qualifications are continuing to be met.

In the absence of a VTS Supervisor/Manager, the assessment should be carried out by a person designated by the Competent/VTS Authority.

This regular assessment may take the form of performance monitoring/review or appraisal. If, as a result of the regular assessment, the standards set by the Competent Authority are not met then a process of Updating Training should be followed.

5.3.2 REFRESHER TRAINING

IMO Resolution A.857(20) states that once suitably qualified and trained employees are performing on the job, their performance must be observed and monitored to ensure that it continues to meet the established standards.

Model Course V-103/5 describes the different steps in the process of the maintenance of a VTS certification log. The Revalidation Process ensures that holders of a VTS certification log maintain a satisfactory level of operational performance in order to retain, develop and increase their competency. In turn, this will assist in ensuring the safety and efficiency of navigation in a designated VTS area.

To ensure the continued maintenance of a VTS certification log, the Competent Authority should implement a process of refresher training. Refresher training consists of periodic Recurrent Training. This should be supplemented by Adaptation Training and/or Updating Training as deemed necessary. Each type of training should include a relevant method of assessment.

5.3.3 REVALIDATION OF VTS QUALIFICATIONS

Revalidation of VTS qualifications within the VTS certification log is required if either of the conditions described in section 5.1.1 (Validity) occur. The revalidation of VTS qualifications within the VTS certification log as described within Model Course V-103/5 should ensure the holder of a VTS qualification continues to maintain professional competence.

6 QUALIFICATIONS OF INSTRUCTORS AND ASSESSORS

6.1 INSTRUCTORS

Competent Authorities should ensure that instructors and assessors are appropriately qualified and experienced for the particular training and assessment of competence for which they are given responsibility. Such qualifications and experience should be incorporated in the quality standards. Appropriate training in teaching techniques, training and assessment methods and possibly practices should be offered to the instructors and assessors on a regular basis.

Any person conducting VTS training should:

- have a detailed understanding of the training programme and of the specific training objectives for the type of training being conducted;
- be appropriately qualified in the task for which training is being conducted;
- have an appropriate balance of professional and teaching qualifications;
- if conducting training with the use of a simulator:
 - have received appropriate guidance in instructional techniques involving the use of simulators; and,
 - have gained practical and operational experience on the simulator being used.

6.2 ASSESSORS

Any person conducting assessment of competence of VTS personnel during training should:

- have an appropriate level of knowledge and understanding of the competence to be assessed;
- be qualified in the task for which the assessment is being made;
- have received appropriate guidance in assessment methods and practices;
- have gained practical assessment experience;
- if conducting assessment involving the use of simulators, have gained practical instruction on the type of simulator under the supervision, to the satisfaction of an experienced assessor.

7 TRAINING

7.1 INTRODUCTION

The type of training depends largely on the knowledge base of the trainee concerned.

To deliver a training course effectively, consideration should be given to the availability and the use of:

- qualified instructors;



- support staff;
- classrooms and other spaces;
- equipment, including simulators;
- textbooks, technical papers;
- other reference material.

Thorough preparation is the key to successful implementation of a training course.

All stages of VTS training should include continuous assessment. A task book (training log) should be used to show progress being made by VTS personnel in their training. The log would show the number of hours allocated and/or time in which each task was completed. Training times should be dependent on the experience of trainees. Training to work as a member of a team should normally be part of the syllabus.

All training and assessment of VTS Personnel should be:

- structured in accordance with written programmes, including such methods and media of delivery, procedures, and course material as are necessary to achieve the prescribed standard of competence;
- conducted, monitored, evaluated and supported by persons qualified in accordance with section 6, Qualifications of Instructors and Assessors.

All training courses should be based on the Model Courses associated with this Recommendation. They should also be accredited by the Competent Authority concerned. VTSSO training should be carried out at a Training Organisation, which provides accredited VTS training.

Competent Authorities should ensure that the aims and objectives of training are defined within an overall training programme. Specific training objectives and tasks should be selected so that they relate as closely as possible to VTS tasks and practices.

7.2 MODEL COURSES

The model courses associated with this Recommendation are composed of modules. This approach facilitates model courses to be developed and:

- reflects the training received, while maintaining common international standards;
- takes into account the previous training and experience of prospective VTS personnel.

7.2.1 VTS OPERATOR MODEL COURSE V-103/1

The award of a VTSSO Certificate and endorsement to act as a VTSSO should be achieved by successfully undertaking the following modules:

- 1 Language
- 2 Traffic Management
- 3 Equipment
- 4 Nautical knowledge
- 5 Communication co-ordination
- 6 VHF-radio
- 7 Personal attributes
- 8 Emergency situations

7.2.2 VTS SUPERVISOR MODEL COURSE V-103/2

The award of an endorsement in the VTS Certification Log as a VTS Supervisor should be obtained by a VTSSO successfully undertaking the following modules:

- 1 Advanced Traffic Management.
- 2 VTS equipment.
- 3 Additional personal attributes.
- 4 Responding to emergency situations.
- 5 Administrative functions.
- 6 Legal knowledge.

Following successful completion of V-103/2 the endorsement should be documented and recorded in the VTS Certification Log.

7.2.3 ON-THE-JOB TRAINING (OJT) MODEL COURSE V-103/3

Every certificated VTSSO should receive On-the-Job Training from a qualified OJTI before being authorised to carry out the duties of a VTSSO.

On-the-Job Training should follow an approved programme of training with specific learning objectives, which:

- provides knowledge of the local or regional nautical topography, hydrographic and meteorological characteristics and legislation and regulations relating to the responsibilities and activities of the VTS Centre;
- provides detailed knowledge of the services provided by the VTS Centre and ensures that during the required period of training the VTSSO receives systematic practical training and experience in the tasks, duties and responsibilities of a VTSSO at the VTS Centre concerned;
- is closely supervised and monitored by a qualified OJTI at the VTS Centre;
- is adequately documented and recorded in the VTS Certification Log.

The Competent Authority should define the duration of the on-the-job training period and the detailed training syllabus, taking into account the requirements of the particular VTS Centre.

7.2.4 ON-THE-JOB TRAINING INSTRUCTOR MODEL COURSE V-103/4

The award of an endorsement in the VTS Certification Log as OJTI should be obtained by successfully undertaking the following modules:

- 1 Development of a VTS centre specific training programme.
- 2 Preparation of a trainee specific programme.
- 3 Delivery of OJT training.
- 4 Evaluation/assessment/examination of trainees.
- 5 Completion of OJT training leading to authorisation to operate.

Following successful completion of V-103/4 the endorsement should be documented and recorded in the VTS Certification Log.

7.2.5 REVALIDATION PROCESS OF VTS QUALIFICATION AND CERTIFICATION V-103/5

In order to ensure the revalidation of VTS qualifications by means of refresher training, three types of training are described in Model Course V-103/5:

- Recurrent Training is carried out at regular intervals and is part of a structured training programme thereby enabling continual professional development and resulting in the maintenance of the VTS qualification.
- Adaptation Training is carried out whenever significant changes are expected or when changes have been made, concerning equipment, regulations, operational procedures or any other matter which is relevant to the performance of VTSSOs.



- Updating Training is tailor made training following a training needs analysis indicating that VTSOs need additional training. Updating Training may be required after a break in service, unsatisfactory operational performance or other circumstances leading to a reduced level of competence.

8 ACRONYMS

APL	Assessment of Prior Learning
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities - AISM
IAPH	International Association of Ports and Harbours
IMO	International Maritime Organisation
IMPA	International Maritime Pilots Association
INS	Information Service
NAS	Navigational Assistance Service
OJT	On-the-Job Training
OJTI	On-the-Job Training Instructor
TOS	Traffic Organisation Service
VTS	Vessel Traffic Services
VTSO	Vessel Traffic Service Operator

9 DEFINITIONS AND CLARIFICATIONS

For the purpose of this Recommendation, the following definitions and clarifications have been used:

- Accredited VTS Training Organisation is an organisation that the Competent Authority or an authority designated and approved by the Competent Authority, grants recognition to a training organisation for demonstrated ability to meet predetermined criteria for established standards;
- Approved VTS Training Course is a course of study in VTS that has successfully completed the quality assurance process under which a training course is assessed to ensure that IALA standards are met;
- Adaptation training is carried out whenever significant changes are expected or when changes have been made, concerning equipment, regulations, operational procedures or any other matter which is relevant to the performance of VTS personnel;
- Competent Authority is an authority made responsible, in whole or in part, by the Government for the safety, including environmental safety, and efficiency of vessel traffic and the protection of the environment;
- Competence is having the knowledge, skills, attitude and personal attributes necessary to safely, effectively and efficiently carry out the functions or sub-functions assigned to a specific VTS position;
- Qualification is the formal recognition of competence which should be recorded in a course certificate, endorsement or certification log;
- On-the-Job Training (OJT) is training and familiarisation at the VTS Centre at which the person will be employed. It includes training on the types of service provided by the VTS centre, the VTS procedures, facilities and equipment used as well as the local geography and appropriate regulations and other procedures;



- Recurrent training is the training that should be carried out at regular intervals and is part of a structured training programme thereby enabling continual professional development and resulting in the maintenance of the VTS qualification;
- Refresher training as defined by IMO Resolution A.857(20) is the training carried out to maintain a certain level of performance, skills in areas or knowledge which are infrequently used and where consequence of non-performance is great. There are three types of refresher training: recurrent training, adaptation training and updating training;
- Revalidation process is the process for the maintenance of a VTS qualification contained within a VTS certification log. It ensures that holders of a VTS qualification, develop, increase and retain their competency in order to maintain a satisfactory level of operational performance;
- Simulator Training is the simulation of operational events, practices and procedures to instruct trainees and assess their ability to demonstrate their levels of competence;
- Updating training is tailor made training following a training needs analysis indicating that member(s) of VTS Personnel need additional training. Updating training may be required after a break in service, unsatisfactory operational performance or other circumstances leading to a reduced level of competence;
- VTS Authority is the authority with responsibility for the management, operation and co-ordination of the VTS, the interaction with participating vessels and the safe and effective provision of the service;
- VTS Certification Log is a record of certificates and endorsements awarded to VTS Personnel during their VTS career;
- VTS Operator (VTSO) is an appropriately qualified person performing one or more tasks contributing to the services of the VTS;
- VTSO Certificate is a certificate of competence awarded by a Competent Authority after the candidate VTSO has successfully completed both the V-103/1 training and V-103/3 OJT at the specific VTS centre where the VTSO is employed, as well as meeting any specific requirements of the Competent Authority;
The VTSO Certificate entitles the authorised holder to serve as a VTSO and perform the functions which endorsements have been made.
- VTS endorsement is a record in the certification log entered by a Competent Authority, VTS Authority or an Accredited Training Organisation after the candidate has successfully completed any Model Course associated with IALA Recommendation V-103, as well as meeting any specific requirements of the Competent Authority;
The VTS endorsement entitles the authorised holder to serve as a VTSO/Supervisor/OJTI and perform the functions for which the endorsement(s) have been made.
- VTS Course Certificate is a document awarded by the accredited VTS training organisation, to indicate that a trainee has achieved successful completion of an approved course of instruction.

VTS Personnel are persons primarily trained in VTS operations and holding appropriate qualifications issued by, or on behalf of, a Government or a Competent Authority. Different levels of skills, knowledge and competence of VTS Personnel are set out in this Recommendation namely, VTSO, VTS Supervisor and OJTI(s). Some VTS Centres may also have a VTS Manager.

10 REFERENCES

- [1] IALA VTS Manual
- [2] IALA Model Courses V-103/1, V-103/2, V-103/3, V-103/4 and V-103/5
- [3] IALA Guideline 1014 – Accreditation and Approval Process for VTS Training



- [4] IALA Guideline 1017 – Assessment of Training Requirements for Existing VTS Personnel, Candidate VTS Operators and Revalidation of VTS Operators Certificates
- [5] IALA Guideline 1027 - Simulation in VTS Training
- [6] IALA Guideline 1045 - Staffing Levels at VTS Centres
- [7] IALA Guideline 1103 – Train the Trainer



APPENDIX 1 VTS OPERATOR JOB DESCRIPTION

1. INTRODUCTION

The job description set out in this annex is intended to provide a broad guide to the tasks expected to be undertaken by a VTSO. VTS Authorities should develop detailed job descriptions for VTSO at each VTS centre, based on the services to be provided by the particular centre, the equipment available and the coordination which takes place with Allied Services.

2. JOB PURPOSE

The purpose of the position of a VTSO is to deliver Vessel Traffic Services (VTS) in order to ensure the safe and efficient movement of vessels within the area of jurisdiction.

3. ACTIVITIES AND TASKS

- 1 Interact with ships to deliver the VTS services defined by the Competent/VTS authority.
- 2 Operate equipment for communications, data collection, data analysis and establishment of a traffic image.
- 3 In an Information Service (INS) transmit information at appropriate times, at the request of a vessel or when deemed necessary by the VTS, for example a sudden deterioration of weather conditions.
- 4 In a Navigational Assistance Service (NAS) transmit such information as may be needed to aid a ship in difficult navigational or meteorological circumstances or in case of defects or deficiencies. The assistance to be given on request by a ship or when deemed necessary by the VTS.
- 5 In a Traffic Organisation Service (TOS), organise the vessel traffic within a waterway by means of waterway information, traffic monitoring and traffic regulations using, as necessary, nautical knowledge of the area concerned, the traffic image and a suitable marine information management system.
- 6 Respond to emergency situations such as distress, marine pollution and other special circumstances defined for the VTS area. Where arranged, co-ordinate communications with ships, allied services and other agencies.

4. KNOWLEDGE, SKILLS AND EXPERIENCE

VTS Personnel undertaking these activities and tasks should hold a current VTSO Certificate and an endorsement in the VTS Certification Log for On-the-Job Training at the VTS Centre at which the Operator is employed.



APPENDIX 2 VTS SUPERVISOR JOB DESCRIPTION

1. INTRODUCTION

The job description set out in this annex is intended to provide a broad guide to the tasks expected to be undertaken by a VTS Supervisor. VTS Authorities should develop detailed job descriptions for VTS Supervisor at each VTS centre where they are employed. The detailed job descriptions should be based on the services to be provided by the particular centre, the equipment available and the coordination which takes place with allied services.

2. JOB PURPOSE

The purpose of the position of a VTS Supervisor is to:

- 1 Supervise the activities undertaken at the VTS with regard to the types of service provided;
- 2 Supervise a team, that has the responsibility for conducting a Vessel Traffic Service, to the satisfaction of the Competent/VTS Authority as well as vessels and other users;
- 3 Ensure that the standards set by the Competent Authority for operator qualifications continue to be met;
- 4 Ensure that co-ordination takes place between the VTS, allied services and other port facilities and services.

3. ACTIVITIES AND TASKS

In addition to the activities and tasks appropriate to a VTS Operator:

- ensure that the service provided meets the requirements of both the users and the VTS Authority;
- co-ordinating the interface between the VTS, allied services and other port facilities and services;
- supervision of VTSOs;
- ensure the efficient running of the VTS operations room;
- carry out assessments of VTSOs;
- in conjunction with OJTI, carrying out revalidation assessments on VTSOs.

4. KNOWLEDGE, SKILLS AND EXPERIENCE

VTS Personnel undertaking these activities and tasks should hold a current VTSO Certificate and the appropriate endorsements in the VTS Certification Log for VTS Supervisor and for On-the-Job training at the VTS Centre at which the Supervisor is employed.

Unless recruited directly, VTS Supervisors should preferably have appropriate experience as a VTSO as required by the Competent/VTS Authority.

APPENDIX 3 VTS MANAGER JOB DESCRIPTION

1. INTRODUCTION

The Job Description for the Manager may include some, or all, of the purposes, activities and tasks set out below. VTS Authorities should ensure that Managers of VTS Centres receive adequate training in all aspects of VTS appropriate to their responsibilities and introduce arrangements which ensure that the necessary level of competence in VTS is maintained.

2. JOB PURPOSE

The purpose of the position of a VTS Manager is to

- lead and manage the operation and delivery of Vessel Traffic Service (VTS);
- ensure that the VTS has adequate resources to undertake properly the responsibilities defined by the VTS Authority.

3. ACTIVITIES AND TASKS

The job description for the VTS Manager may include the following responsibilities:

- ensuring that the aims and objectives of the VTS are met at all times;
- ensuring that all VTS operations follow current rules, regulations and legislation;
- managing and co-ordinating financial, technical and human resources;
- ensuring that the standards set by the Competent/VTS Authority for operator qualifications and training are met;
- ensuring that the training and certification of VTS personnel are appropriate to the service types being provided;
- ensuring VTS quality standards are maintained;
- maintaining awareness of continuing development for the VTS centre(s);
- planning and developing of emergency procedures as appropriate to the VTS area of responsibility;
- ensuring that all adopted standard operating procedures are reviewed and amended as required;
- developing and maintaining a good public information and relations programme; and
- ensuring compliance with evidentiary provisions in the event of an incident or accident occurring in the VTS area. The Manager should also ensure that all such events are properly recorded and readily available for examination by the Competent/VTS Authority.

4. KNOWLEDGE, SKILLS AND EXPERIENCE

The VTS Manager should have a demonstrated knowledge of the delivery of Vessel Traffic Services. Ideally, the VTS Manager should possess a VTSO / Supervisor qualification.

The VTS Manager should also have a demonstrated high level ability to effectively lead and manage the operation and the delivery of service as well as to initiate, lead and implement change and continuous improvements.

Management experience and leadership skills are also considered to be important.



APPENDIX 4 APTITUDE TESTING

The Competent Authority should consider appropriate personal aptitude and suitability requirements for each applicant. To assess the applicant's aptitude and suitability, different types of tests and evaluations may be used. This could include, but not be limited to;

- interviews;
- written tests;
- practical tests; and
- psychometric tests.

A test of the applicant regarding aptitude and suitability may include, but not be limited to, the following abilities:

- situational awareness;
- spatial conceptual ability:
 - assessment of the relative movement to fixed and moving objects.
- communications skills (written and oral):
 - effective participation as a member of a team;
 - vocabulary and verbal expression capacity.
- numerical aptitude;
- simultaneous tasking capability [multi-tasking] :
 - ability to receive multiple inputs;
 - ability to prioritise and decide what situations require immediate action.
- judgement and responsibility;
- ability to take initiatives and make decisions;
- ability to function under conditions of stress;
- ability to work and co-operate with others as part of a team.