



Maritime &
Coastguard
Agency

Remote Operator Roles and Functions Descriptor:

Remote Operator – Operational level of responsibility (Navigation/ Vessel Operations)

Remote Operator – Management level of responsibility (Navigation/ Vessel Operations)

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1.0 Introduction

- 1.1 The UK maritime industry's development of Maritime Autonomous Surface Ships (MASS) highlights the increasing importance of a Remote Operator's (RO) role.
- 1.2 The RO is at the forefront of innovative maritime operations, controlling a vessel's system, navigation and operation, from a Remote Operations Centre (ROC).
- 1.3 The role and function(s) of ROs should be clarified to encourage understanding throughout industry and to enable the safe navigation and operation of MASS.
- 1.4 This descriptor sets out the initial considerations for a Remote Operator's role and function, including:
 - i. Delineation between the level(s) of responsibility for different Remote Operators.
 - ii. Identification of RO functions for each level(s) of responsibility.
- 1.5 This document should be read in conjunction with:
 - i) "RO_GLOSSARY"
 - ii) "RO_CERTIFICATION_FRAMEWORK"
 - iii) "RO_TRAINING_DESCRIPTOR"
 - iv) "RO_COMPETENCY_TABLES_(O)"
 - v) "RO_COMPETENCY_TABLES_(M)"
 - vi) "RO_TRB_TABLES_P2"
- 1.6 This document considers the role of the RO undertaking watchkeeping duties at the management and operational level of responsibility.
- 1.7 This descriptor does not currently consider a RO engineering role.

2.0 Assumptions made within this descriptor

- 2.1 Remote Operators hold valid STCW certification, or other valid commercially endorsed Certificates of Competence (CoC), accepted for use by the Maritime and Coastguard Agency (MCA).
- 2.2 Remote Operators hold the underpinning competence and experience set out by their CoC.

2.3 Vessels operated within this scheme are remotely controlled, from a ROC.

2.4 During navigational watches and vessel operations, Remote Operators can request assistance from engineers, technicians or other specialists.

3.0 Remote Operator Roles – General Principles

3.1 The role of a RO is performed from a Remote Operations Centre (ROC).

3.2 The RO can include any person, including the Master, with recognised or certifiable experience who is engaged in the remote operation of a vessel.

3.3 MCA currently considers the term “Remote Operator” as the umbrella term used to define those roles that perform duties, remote to that of the vessel, in a ROC that complies with the applicable requirements¹. Within this framework, this could include a Master or an Officer in Charge of a Navigational Watch (OICNW).

3.4 A RO may serve in a role, subject to the privileges of their CoC and Certificate of Proficiency (CoP), as set out in “RO_CERTIFICATION_FRAMEWORK”.

3.5 Within this training and certification scheme, the RO role is currently defined within the following levels of responsibility:

- i) Remote Operator – Operational Level of Responsibility (Navigation and Vessel Operations)
- ii) Remote Operator – Management Level of Responsibility (Navigation and Vessel Operations)

3.6 The levels of responsibility set out in 3.5 can be abbreviated to:

- i) Remote Operator (O).
- ii) Remote Operator (M).

¹ For example:

- a) A Master or OOW may hold Dynamic Positioning (DP) certification in addition to their core maritime CoC. Whilst they control the vessel by the use of the DP system, they can retain their role (Master/OICNW), whilst also being considered as a Dynamic Positioning Operator (DPO).
- b) A navigational watchkeeper can perform radio watchkeeping duties under the umbrella term of an Officer of the watch, whilst also performing the function of a Radio Operator.
- c) Similar in remote operations, the Master/OICNW can hold their core maritime CoC, appropriate to their role. They may also hold their CoP as a Remote Operator and perform their function remotely. Therefore, the Master/OICNW retain their roles whilst being considered as a Remote Operator.

4.0 The Role of the Remote Operator (O)

4.1 The provisions set out in sections 4 and 5 of this document do not apply to engineers.

4.2 As set out in “RO_CERTIFICATION_FRAMEWORK”, a Remote Operator undertaking navigational watchkeeping duties or vessel operations shall be competent and experienced prior to undertaking duties.

4.3 A Remote Operator (O) may assume the role as OICNW.

4.4 The Remote Operator (O) can not assume management roles, such as the Master.

4.5 A Remote Operator undertaking watchkeeping duties as the OICNW shall hold the certification set out in “RO_CERTIFICATION_FRAMEWORK”.

4.6 At the operational level set out in this scheme, the Remote Operator (O) is expected to be able to undertake the following supplementary functions:

- i) Contribute to the safe operation of the vessel,
- ii) Monitor connectivity and control between the ROC and vessel,
- iii) Conduct and monitor vessel operations at the operational level,
- iv) Conduct and monitor navigation at the operational level, and
- v) Respond to system failures, emergencies and security incidents.

5.0 The Role of the Remote Operator (M)

5.1 As set out in “RO_CERTIFICATION_FRAMEWORK”, a Remote Operator assuming a management role shall be sufficiently competent and experienced to hold the responsibility for the vessel.

5.2 A Remote Operator (M) undertaking duties as Master of a vessel shall hold the appropriate certification as set out in “RO_CERTIFICATION_FRAMEWORK”.

5.3 A Remote Operator (M) is permitted to assume a management role, for example the Master of the vessel.

5.4 The Remote Operator (M) that assumes the role of the Master of the vessel, holds the overriding authority and responsibility for the vessel.

5.5 At the management level set out in this scheme, the Remote Operator (M) is expected to be able to undertake the following supplementary functions:

- i) Manage ROC operations.
- ii) Coordinate connectivity and the sensory interface.

- iii) Manage vessel operations and navigation.
- iv) Coordinate the response to system failures, emergencies and security incidents.

6.0 Remote Operator Competence, Experience and Qualifications

- 6.1 The functions set out in sections 4.0 and 5.0 of these descriptors are supplementary to the existing skills and competence of the certification set out in the "RO_CERTIFICATION_FRAMEWORK".
- 6.2 The "RO_CERTIFICATION_FRAMEWORK" sets out the certification requirements for each level of responsibility. This certification indicates that a standard of competence and experience has been met, prior to undertaking training or duties.
- 6.3 The "RO_TRAINING_DESCRIPTOR" sets out the training scheme required to be followed for a Certificate of Proficiency to be issued, at the appropriate level of responsibility.
- 6.4 The "RO_COMPETENCY TABLES" sets out the level of competence that must be completed within a training course, at the appropriate level of responsibility.
- 6.5 The "RO_TRB_P2" sets out the tasks and in-service experience that must be completed within an industry placement to proceed to the management level of responsibility.
- 6.6 A Remote Operator is qualified to perform their role and function(s), upon the successful completion of the appropriate training phase, and the successful achievement of a Remote Operator CoP, at the identified level of responsibility.

7.0 Conclusion

- 7.1 This descriptor identifies the generic elements of roles and functions that underpin the Remote Operator training and certification framework.
- 7.2 The level of responsibility for the Remote Operator's role is set out at the management and operational level. This is aligned to certification, training and competency requirements.
- 7.3 Levels of responsibility and functions may be reviewed as required to ensure the scheme remains current and applicable to industry.

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