nwa
national workboat association

Crew Transfer Vessels: Good Practice Guide

2nd Edition

The National Workboat Association (NWA) represents owners and operators of workboats (including crew transfer vessels). This Good Practice Guide has been published to provide operators, charterers and contractors in the Renewables, Oil & Gas and Marine Civils industries with the information needed to recognize the standards for safe and effective Crew Transfer Vessel operation, management and crew competency; as required by statute and the NWA for safe operations in the personnel transfer sector.

The Objectives promote safety, efficiency and continual improvement of the services offered to the Industry. To do this the NWA will:-

- Continue to work with the UK MCA, Flag States and other maritime authorities to develop standards and qualifications on behalf of members
- Establish relationships with external bodies to ensure recognition of current standards are met
- Seek to promote higher safety standards and a positive Safety culture within the workboat community
- Clearly identify standards and training requirements
- Provide relevant information regarding vessel crewing standards to other industry stakeholders
- Promote the Association as the leading authority on the safety, operation and manning of workboats
- Assist members to deliver appropriate standards
- Promote appropriate training to ensure we keep the safety of crews and passengers at the heart of what we do

Kerrie Forster
Chief Executive
The National Workboat Association

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Preamble

This publication *(previously known as; GPG for Offshore Energy Service Vessels)* is intended to give all Stakeholders and others involved in the Personnel Transfer sector a clear guide to the operational management standards and training of vessel crews expected by members of the National Workboat Association (NWA). It has been produced by NWA members and related parties with considerable experience in this sector, for the benefit of operators, crew and stakeholders.

The Maritime and Coastguard Agency (MCA), who regulate both the vessels and the operational crews *working for - or in UK*, have expressed their support for the development of this guide to ensure appropriate standards of vessel operation, including the training and familiarisation of vessel crews are maintained. Other organisations involved in the development and operation of Crew Transfer vessels, including the G+ group, The Crown Estate, the IMCA Renewables committee and Renewables UK were all originally consulted regarding the content of this guide. We have also taken cognisance of the content of MAIB *and equivalent;* reports of their investigations into recent Crew Transfer vessel incidents.

Vessel construction standards are governed either by a vessel's Flag State guidelines, such as the MCA's recently revised Code of Practice for Small Workboats (The Revised Workboat Code) or Class rules and are not covered in this guide.

Persons looking to charter Crew Transfer vessels should also be aware of the ['Vessel Safety Guide' produced by The Crown Estates and published by Renewable UK] and the ['Safe Management of Small Service Vessels used in the Offshore Wind Industry'] produced by the G+ Offshore Wind Health & Safety Association and published by the Energy Institute.

This publication is intended to be a live document and will be updated in line with industry trends, technical advancement and improved practices – we welcome any comments or suggested additions you may have. Any comments should be sent to;- admin@workboatassociation.org

June 2019

1.0 Vessel Management

1.1 – **Management**
The operating company must have an effective management structure in place to effectively monitor the safe operation of the fleet, commensurate with the number of vessels being operated.

The operating company should assign a **Designated Person**(s) ashore having direct access to the highest level of management. The responsibility of the designated person should include monitoring the safety standards onboard, the public or third-party effect and pollution-prevention aspects of the operation of each vessel, ensuring that adequate resources and shore-based support are applied.

More information regarding the DPA role can be sourced via the latest revision of the ISM code.

1.2 – **Safety Management System (SMS)**
As per the latest revision of the UK Workboat Code; Companies should develop a documented **Safety Management System** in line with the International Safety Management code **(ISM)** that clearly states how it will support its fleet and personnel in both normal and emergency situations.

The SMS can [for further benefit] be developed and voluntarily certified against internationally recognised standards such as the International Safety Management Code (ISM), or ISO 9001, 14001 and 45001 *(OHSAS 18001)*. More information regarding this process can be advised by the MCA or recognised Class Societies.

Compliance with the ISM Code is mandatory for vessels to which the **High Speed Craft** (HSC) code applies, vessels **over >500gt**, **Special Purpose** and **Passenger vessels** *(not exhaustive)*.

1.3 – **Organisation**
The SMS should include a clear description of the reporting structure together with a clear description of the roles and responsibilities of the key persons within the organization [and shall be maintained]. The Master's responsibility and authority shall also be clearly defined and documented, this shall include information regarding the implementation and execution of the company Objectives or Mission Statement and the Safety and Environmental Protection policies of the company.

1.4 – **Resources and Personnel**
The company must ensure an effective system is in place to ensure only appropriately qualified, certificated, medically fit and **competent** seafarers are recruited to crew their vessels. The system should include periodic appraisal and the provision of additional training as required.

1.5 – **Safety and Environmental Policy**
This should contain a clear statement of the company's commitment to safety and environmental protection by means of maintaining a safe and conscious working environment for crew and others affected by the company's operations.

These are expected to include;-

- A Commitment to comply with applicable Legislation and Codes of Practice
- Defined levels of Authority and Lines of Communications
- Ensuring adequate training and resources are made available to implement Safe Working Practices and Environmental protection
- Assessment of Risks
- Reporting of Incidents
- System of periodic Review and Audit of the vessels and the SMS *(Continual development)*
- Garbage and waste management

The Safety Management Manual is now common sight on the bridge of all commercial vessel types

Regular workplace inspections provide a pathway to understanding company culture

1.6 – **Operating Procedures**
Whilst all relevant operating procedures should be covered, experience of the sector shows that particular attention needs to be paid to the following areas;-

- Watch keeping Procedures
- Effective Use of Bridge Resources
- Passage planning
- Electronic Chart Systems
- The use of AIS and Radar
- Navigation at Speed / Situational Awareness
- Navigation in High Density Areas
- Navigation in Restricted Visibility
- Transfer of Personnel and Stores / Equipment
- Mooring / Berthing Operations
- On Board Maintenance
- Fire Prevention
- Emergency Procedures
- Housekeeping
- Safe access to vessels in port
- Avoidance or 'Management' of fatigue

1.7 – **Monitoring Operations**
There should be means in place to effectively monitor vessel and crew operations. These will require sufficient experienced and trained personnel to carry out planned audits, inspections and assessments, as laid down in the SMS.

2.0 Vessel Operations

2.1 – **Risk Assessment**
It is the responsibility of the operating company to ensure that all risks are identified and then to assess all identified risks to its ships, personnel and the environment and establish appropriate safeguards. Such Risk Assessments (RA) should be performed for all routine and non-routine tasks on board in an effort to reduce the risk to as low as reasonably practicable (ALARP).

The RA system should be well understood by the Master and crew. Risk assessments for vessel operations should be readily available to the crew, and there should also be a means to carry out a dynamic risk assessment if the operating parameters have changed. The Code of Safe Working Practices for Merchant Seamen (CoSWP) provides guidance on carrying out risk assessments. RAs should be subject to regular review,

To ensure that the authorizing person and the person carrying out the task are not the same person, back office support may be required during the review process.

2.2 – **Bridge Watchkeeping**
The Company should ensure sufficient, appropriately qualified crew are allocated to the vessel to ensure effective bridge watches are maintained for the local operating conditions. Watchkeepers should not be distracted from their primary task by other duties. The person in charge of the watch should positively establish the vessel's position, preferably by different means at regular intervals to ensure the vessel is not deviating from the planned track. Before any alteration of course the vessel's position should be known so that the vessel does not alter into danger. When a look out is posted they should be included as part of the watchkeeping team and given suitable instructions to assist the person in charge of the navigational watch.

The Helm/ Conn. of the vessel shall never be left unattended whilst making way.

Reference should be made to MGN 315- Keeping a Safe Navigational Watch.

2.3 – **Effective Use of Bridge Resources**
CTV bridges are well equipped, typically with one or two Electronic Chart Systems (ECS), Radar(s), echo sounder, AIS and communications equipment, as well as highly responsive propulsion and steering systems. It is essential that best use is made of the equipment. This includes a thorough understanding of the equipment by the Master and other watchkeepers to optimise the effectiveness of the equipment and recognise their limitations. This will require a sufficient period of familiarisation and training before becoming part of the operational crew. The Watchkeeper must make best use of all resources including the use of other crew members as lookouts and to assist as required. Consideration shall be made into the pro-active management of fatigue avoidance to seafarers, this is particularly important to those holding designated duties onboard. *See MIN 546- MCA.*

Complementary to this it must be remembered at all times that in most cases the bridge windows provide the largest information on situational awareness, often an over-reliance on AIS and ECS is a cause for late collision avoidance and poor navigational decision making.

2.4 – **Chart Systems**
There are 3 main types of navigation chart format;-

- Paper Charts – *ie: **B**ritish **A**dmiralty*
- **E**lectronic **N**avigational **C**hart
- **E**lectronic **C**hart **D**isplay **I**nformation **S**ystem

ECDIS complies with IMO Regulation V/19 & V/27 of SOLAS convention as amended, by displaying selected information from a System Electronic Navigational Chart (SENC). ECDIS equipment complying with SOLAS requirements can be used as an alternative to paper charts.

Taking into consideration vessel speed, local navigable environment and often confined bridge space; the only practicable way to monitor the vessel's progress may be to navigate using the electronic navigational charts. In such case courses are to be planned on paper charts and copied onto ECS and verified for accuracy. When underway, the vessel's passage must be adequately and continually monitored against the planned route.

Alternatively, Electronic Chart Systems meeting the requirements of MGN 319 can be designated as the primary means of navigation, which includes the ability to plan the passage directly onto the system. There is still a requirement to carry a form of back-up arrangement, but this includes the option to provide a second, approved ECS *(paperless system)* or paper charts.

A fully approved ECDIS chart system also offers the ability to be designated as the primary means of navigation and, if two approved systems are fitted, no paper charts are required to be carried on these vessels.

Whatever chart system is in use, it is essential it is kept up to date with accurate corrections for the operational area.

2.5 – **Navigation at [High] Speed**
With CTVs operating at speeds up to and in excess of 20 knots navigating and maintaining situational awareness is markedly different to many other areas of the marine sector where many crew members and Masters may have gained previous service. At these speeds situational awareness is essential as the reaction time to developing navigational and/or collision avoidance situations is significantly reduced.

It is essential that Masters and other bridge Watchkeepers are;

a) given sufficient training and familiarisation time when moving into the CTV to adapt to operating at these speeds,
b) are objectively assessed to ensure they have reached the required standard before being allocated their new role and
c) that appropriate safe speed limits are derived and adhered to.

2.6 – **Navigation in following seas**
It is important for the Crew to be aware of the specific sea keeping Characteristics of their vessel. This shall be used in best judgement to determine safe speed and course in the prevailing conditions to prevent porpoising (nose diving) or broaching and unnecessary damage or injury to the vessel or its passengers.

It is common with some vessel designs, particularly jet powered vessels; whilst underway in following seas to be unable to maintain hull planing speed. Some vessels are fitted with interceptors or trim tabs, these vessels will have an advantage at maintaining speed over those without. When seas build, vessels become liable to getting caught within a wave trough and fail to climb out of it; when underway with sufficient sea room it is sometimes possible to alter course by 20-30 degrees to climb out of a trough. If this is not practicable, then it is advised to slow to displacement speed in order to allow the trough to naturally dispel before returning the vessel to normal cruising or planing speed.

Consideration should be paid to the seabed contour and coastline and how wave conditions may be affected as along with wind speed and tidal conditions.

BA Charts are printed with QR codes for easier access to chart corrections

2.7 – **Navigation in High Density Areas**
CTVs typically operate between a port base and a windfarm both of which are likely to be highly trafficked and contain numerous obstructions and hazards to navigation local to that environment, which may be significantly different to the crews' previous experience. Again, it is important that new crewmembers are given sufficient time to become familiarised with the local conditions and are assessed as being ready to operate, before being allocated to operational duties.
Passages to and from the windfarm and to any other ports in use shall be properly planned with hazards clearly identified. The planned courses are to be laid off on the charts and should be verified for accuracy. The vessel's passage must then be adequately monitored against the planned route.

2.8 – **Navigation in Restricted Visibility**
Vessel speed should be adjusted in areas of restricted visibility, as per rule 6 and rule 19 of the Collision Regulations (COLREGs). Additional lookouts should be posted, and sound signals made.

Regardless of the weather it is recommended that seatbelts should be fitted and worn at all times

2.9 – **Navigation in Heavy Weather**
When underway in heavy weather conditions the Master shall ensure that the vessel is not operated outside of the operational envelope detailed by Class or the shipyard.

High speed craft are known to suffer some degree of control difficulty in following and quartering seas which can result in behaviour such as surfing, bow diving and broaching. MGN 328 contains guidance on operating a vessel in following and quartering seas and measures which may be taken to reduce or remove such behaviour. This guidance should be used in these conditions to maintain a safe working vessel and ensure passenger and crew safety and comfort.

When proceeding at high speeds in high or steep seas, the vessel impacts will increase and there is increased risk of exceeding Whole Body Vibration dosage guidelines, therefore Masters shall consider proceeding at a reduced speed. The Master shall instruct crew and passengers to remain seated, wearing their safety belts before heavy weather is likely to be encountered.

Reference to MGN 436(A1) and MGN 353

2.10 – **Planned Maintenance System**
The Company should ensure an effective maintenance regime is put in place on board, including in particular, those items designated as critical to the safe operation of the vessel. The Master should ensure that all accessible spaces are checked regularly.

2.11 – **Under Keel Clearance**
Attention shall be given to minimum under keel clearance, including sufficient supplementary depth to account for the vessel's dynamic movement and environmental change. Generally transits will be planned for any state of tide; available depth of water is affected by height of tide and weather conditions. *(Meteorological conditions can on occasion mean that the actual tide height is less than prediction.)*

Swell, waves and natural or manmade seabed undulance can cause sudden reduced depths of water, when a vessel which is applying large amount of thrust (as typical for CTV's) operates in close proximity of the seabed 'SQUAT' effect is eminent. More information here; https://en.wikipedia.org/wiki/Squat_effect

2.12 – **Transfer of Personnel**
As with most other operations, transfer of personnel shall be covered by the company's risk assessment system, however, the variable nature of this operation requires that the risk must be (without record) assessed locally again by the Master on each occasion to determine if it is safe to proceed.

Conditions will vary at each location depending upon exposure, local weather and environmental conditions as well as the transfer system in place in each situation. When in port, the additional use of (dis)embarkation equipment: *gangway, steps or ramp etc,* shall be considered when assessing the reduction of risk to transferees. The transfer should only take place once a briefing to all personnel involved has been made and the direct instruction of the Master is given.

No personnel should proceed to either (dis)embark a CTV or to access the 'transfer area' of a CTV without being under the direct control of the vessel crew.

The welfare and control of passengers shall be managed in such a way as to safe-guard and protect from injury or illness those onboard, this shall include the proactive use of seating and personal securing apparatus (seat belts or harnesses) during transfer to the operational site from port, whilst the vessel is manoeuvring alongside, onto a berth or asset . Ensuring that pax are changed and seated prior to the vessel undocking from a boatlanding, as the free movement experienced at this time can cause injury, especially if pax are focused on other tasks.

It is to be expected that there may be some variety between exact operating practices across various assets *(wind turbines, offshore substations, oil and gas structures, construction platforms, construction vessels and accommodation units),* individual owners and charterers, expectations over the commands, actions and equipment to be used *(PPE, transfer hardware and lifting apparatus)* shall be discussed by all those involved in the transfer during a pre-task toolbox talk.

Prior to transfer, the crewmember shall verify that the transfer location is safe, clear of any lifting operations, that any required fall arrest equipment is available and ready for use, that the ladder is free from marine growth and that the vessel is stable. The crewmember should always 'count down' the last 5 rungs for persons transferring back onboard.

The crewmember must ensure that any personnel preparing to transfer are wearing the required PPE and be aware of any indications that personnel may not be fit to make the transfer, *ie: if a passenger shows signs of pre-existing illness or they have been adversely affected by seasickness during the transit.*

The use of **P**ersonnel **L**ocator **B**eacons *PLB's* onboard CTV's has become adopted industry good practice as a control measure for quickly identifying the happening and location of a MOB, but the controls are often not correctly trialled or prepared in combination with other onsite stakeholders equipment selection or vessel bridge equipment.

IMCA research document M_234 'Personal Locator Beacons' explains;

"AIS based [PLB] systems are the preferred method for locating a MOB. However, when using an AIS only PLB, there is a risk that the MOB signal may go unnoticed; as not all vessel AIS systems are configured to raise an alarm, nor do all vessels [chart] display equipment use the appropriate symbols."

Alternative PLB operating systems often use 121.5 MHz radio waves for device communication, though additional research by the International Civil Aviation Organization found a number of disadvantages with this operating system, including but not limited to; No satellite detection of the 121.5 MHz signal, If multiple MOB beacons are activated from a single vessel / platform, then the ability to direction-find the beacons by SAR assets is seriously compromised, 121.5 MHz is not a frequency routinely carried by maritime vessels, and the range information is not available when using 121.5 MHz. the detector unit provides approximate direction and signal strength only.

2.13 – **Carriage and Transfer of Stores and Equipment**

All stores must be carried within the constraints of the vessel's stability book and the International Maritime Dangerous Goods (IMDG) code *(see 2.14)* and must be properly secured to prevent any movement during passage. The transfer of stores to and from the vessel should be controlled by the vessel's crew under the authority of the Master; A Crewmember should be trained as a Slinger & Signaller/banksman. All lifting equipment used should comply with the requirements of the appropriate Merchant Shipping lifting regulations and be appropriately checked and in date. Loads that arrive at the vessel pre-slung should be verified by the vessel's crew that they are safe to accept on board. Personnel on board shall be aware at all times of the risks of dropped objects and never stand beneath slung loads or any work aloft.

2.14 – **Carriage of Dangerous Goods (IMDG)**

The Carriage of Dangerous Goods - *DG* on CTVs is treated by the MCA in exactly the same way as any other vessel. If it is intended for the vessel to carry DG, the vessel must first be surveyed by the MCA to ensure it is deemed suitable. The vessel will then be issued with a 'Document of Compliance to Carry Dangerous Goods' (DoC DG). This document will list the classes of DG that can be carried, the correct stowage location and the associated equipment that must be fitted on board. The DoC DG for a workboat is usually only applicable to the waters of the issuing Flag State. If operating internationally, the operator should always seek permission from the Coastal State before carrying DG.

Note: The only circumstances under which a vessel may carry DG without obtaining a DoC DG in UK waters, is if the total quantity of DG to be carried does not exceed 30kg/ 30litres and these materials are part of specialist equipment to support the function of the vessel, in order to facilitate the specific tasks for which they are designed. (see Workboat Code Edition 2 – Section 29.3.2).
This would allow for example a standard oxy-acetylene welding set to be carried, but nothing else at the same time.

Undeclared or incorrectly handled Dangerous Goods are strictly prohibited and is a violation of IMDG Regulation. Failure to comply could lead to Prosecution.

More information can be found at;
https://www.gov.uk/guidance/moving-dangerous-goods

The Master and persons ashore responsible for allocating stores/equipment to be carried should receive training in the requirements of the IMDG Code and all DG cargo shall be accompanied by a correctly completed DG Manifest document. Dangerous goods carried by the vessel as cargo should not be left unattended whilst crew are not onboard, ie: overnight or during portside activity.

2.15 – **Personal Safety**

Whilst the Master has overall responsibility for the safety of all on board, everyone has an obligation to look out for their own safety and the safety of other persons on board. Crew are expected to comply with the requirements of the MCA 'Code of Safe Working Practices for Merchant Seafarers' (CoSWP), a copy of which should be carried on board and kept up to date. Crewmembers must also be fully conversant with any client specific or local site safety requirements. The Master should ensure that each person who comes on board the vessel is given a safety induction and they are wearing the appropriate PPE.

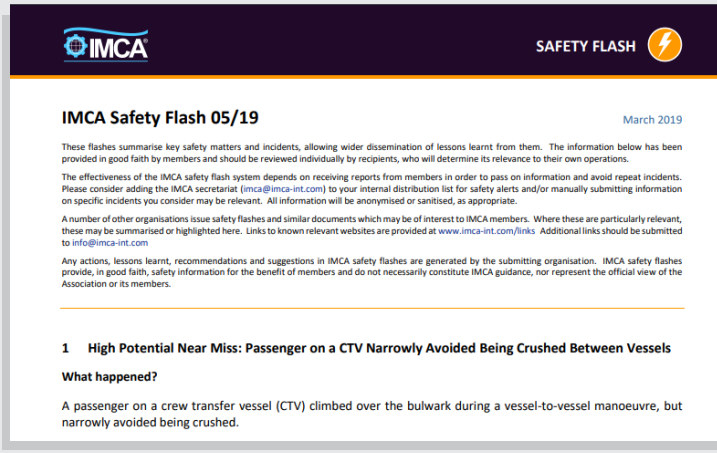
Crew members should be aware of;-

- Hours of Work and Rest Regulations
- Effects of fatigue and Drugs / Alcohol
- Use of CCTV/VDR onboard vessels
- Mooring and close quarters operations

Good seamanship should be observed throughout mooring operations given the associated dangers, such as snap backs, snagging/trapping and slips, trips and falls. A tool box talk should be held prior to operations to establish job roles, mooring set up, weather conditions, expected communications and contingency plans. Following the completion of mooring operations decks should be cleared for safe movement.

2.16 – **Reporting of Incidents and Near Misses**

The Company should encourage the reporting of incidents, accidents and Near Misses. Accidents to personnel or equipment should be reported as required in the company's SMS. – These should be reported internally to shore management as well as externally, where required to the regulator and client. Copies of the relevant reporting form should be kept on board. By reporting Near Misses lessons can be learned from situations and future similar occurrences prevented. The NWA encourages members to report all incidents, accidents and Near Misses either directly to the IMCA Safety Flash System (incidentreports@imca-int.com), or via the NWA so that lessons learned can be disseminated throughout the industry.



IMCA SAFETY FLASH

IMCA Safety Flash 05/19 March 2019

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learnt from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat (imca@imca-int.com) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at www.imca-int.com/links Additional links should be submitted to info@imca-int.com

Any actions, lessons learnt, recommendations and suggestions in IMCA safety flashes are generated by the submitting organisation. IMCA safety flashes provide, in good faith, safety information for the benefit of members and do not necessarily constitute IMCA guidance, nor represent the official view of the Association or its members.

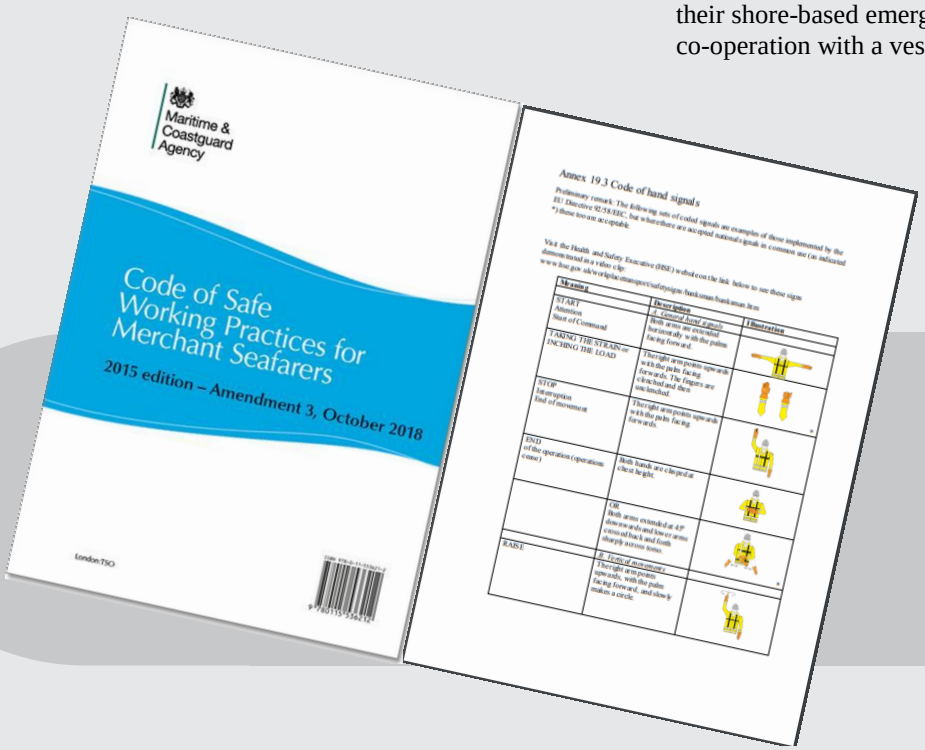
1 High Potential Near Miss: Passenger on a CTV Narrowly Avoided Being Crushed Between Vessels

What happened?

A passenger on a crew transfer vessel (CTV) climbed over the bulwark during a vessel-to-vessel manoeuvre, but narrowly avoided being crushed.

2.17 – **Emergency Procedures**

Procedures should be drawn up for all expected emergency situations and a program of drills and exercises put in place (following the SOLAS) regulations to ensure everyone in the emergency response is aware of their role, in the event of a real emergency. UK vessels should refer to MGN 71. Vessel operators should test their shore-based emergency structure at least annually in co-operation with a vessel.



3.0 Crew Certification and Training

3.1 – **Master**

Although the minimum requirement for the Master of a UK coded and manned vessel operating in the UK sector, outside Cat 3 waters is the RYA Yachtmaster's Certificate of Competency (CoC) with a commercial endorsement, it is becoming increasingly common, especially for vessels working outside the UK sector, or on contracts made by G+ members, for the Master to hold the "STCW Master (Code vessel) < 200gt" CoC. Other superior STCW CoCs may also be utilised. Such certification will include;-

- International Regulations for Preventing Collisions at Sea
- Navigation
- Vessel Handling
- General Seamanship, including Maintenance
- Responsibilities of the Master
- Safety
- Meteorology
- Signals
- First Aid*
- Human Element, Leadership and Management (HELM)

For vessels carrying Radar and/or Electronic Chart systems, the Master and other watchkeepers should have attended appropriate nationally recognised and approved courses.

For coded vessels carrying a Stability book, the Master should also have attended an MCA approved stability course.

Whilst it is clearly a statutory requirement for the Master to hold the appropriate CoC for the size of vessel they are commanding, it is particularly important that the Master is effectively familiarised and competent in the handling of the type of craft they are operating. This is covered in the following sections 3.5 and 3.6.

* Masters operating more than 60miles offshore should hold the higher Medical Care certificate as required under EU legislation.

Crew training/certification matrix tables from some of the most influential flag states are detailed in Annex 4 of this document.

3.2 – **Other Crew Members**

Other crew members will need to hold a relevant CoC, depending upon the area of operation, as defined in the revised Workboat Code, as well as an appropriate, current medical fitness certificate *(for example ENG1).*

Other crew members (not Master) will require as a minimum the relevant MCA approved safety courses;-

- Basic First Aid
- Personal Survival Techniques
- Basic Fire Fighting

Crewmembers should be encouraged to gain their Navigational Watch Rating certificate as soon as practicable, to increase the bridge resources to the Master on passage. Banksman and Slinging courses are also normally required to ensure the crewmember is competent to control the 'deck' aspects of lifting operations.

In addition they shall be competent in passenger and cargo transportation activities see section 3.5

Note: One of the crew onboard should also hold the Approved Engineering Course (AEC 1 & 2) or a higher engineering qualification. *Some administrations may require an Engineering CoC to be carried in their waters*.

The Workboat Apprenticeship is a fantastic way to provide starters in the industry with the correct skills and experience before they take a designated duty onboard.

For more information about the apprenticeship see http://www.workboatassociation.org

3.4 – **Familiarisation and Induction**

One of the primary keys to the efficient operation of any vessel is the effective familiarisation and induction of the crew who are operating the vessel. Given the small numbers of crew involved and the often sophisticated navigation equipment fitted to CTVs this familiarisation is essential to the safe and efficient operation of the vessel.

An effective familiarisation training programme on a CTV shall start with the employee's job description, responsibilities and intended duties, followed as a minimum by;-

Basic Vessel Induction;-

- Layout of vessel including emergency routes
- Location of all Safety Equipment and its use,
- Access to vessel SOLAS Training Manual
- Owner's Health & Safety Requirements, including PPE and its correct use
- Accident / Observation reporting procedures

Technical Induction;-

- Layout and Operation of Engine Room Equipment
- Operation of Deck Equipment, Cranes and Access plant
- Cargo Stowage/Transfer arrangements
  Planned Maintenance Procedures
  Equipment Manuals
- Bridge equipment including PLB locator and any additional project equipment.

Vessel Operation Induction;-

- Propulsion Type
- Manoeuvring Characteristics of Vessel
- Proving Competence in Operating Vessel
- Safety Briefing for Passengers/Technicians on embarkation*

Area of Operation/Client Induction;-

- General Wind Farm terms and basic operations

Area of Operation Wind Farm local Requirements;-

- Local Wind Farm Operating Requirements;-
- Role of Marine Co-ordinator (MC)
- Location of MC
- MC Reporting Requirements
- Navigation/manoeuvring within Wind Farm
- Client Health & Safety Requirements
- Personnel Transfer arrangements
- Equipment Transfer arrangements
- Arrangements for the Transfer of Fuel

* See sample **passenger** briefing in Appendix 3.

3.5 – **Competency Training**

Master

In addition to the appropriate certification referred to in Section 3.1 above, any potential Master will be required to undertake an objective assessment to prove their suitability to command a CTV. In addition to the general attributes to take command, the variety of propulsion and control systems within the offshore energy sector make it imperative for safe operations, to ensure the person appointed as Master of the vessel has achieved the appropriate standard of competence in handling that particular type of vessel/propulsion/control system.

Whilst potential Masters may have evidence of experience with other operators it is the responsibility of the Vessel owner to verify the competence of each person for the vessel to which they are to be appointed.

In most cases this will involve a period gaining experience under the command of an experienced Master on that vessel, with positive reports being filed (preferably from more than one Master), before the potential Master is permitted to undertake independent operations – a sample of the key competences deemed by the NWA necessary for those working onboard CTVs is attached in Appendix 1.

A Master, who has proved their competence to operate a CTV to the satisfaction of the employer shall have when possible successfully completed an assessment at least equal to the list of competences detailed in Appendix 1. Record of such assessment should be maintained by both the Seafarer and the Operatory, this should include the vessel propulsion type(s) in which the operator has demonstrated competence, ie; Jet / Propeller / IPS / Controllable Pitch Propellor (CPP)/ other.

A Master is required to have already been deemed competent in the tasks covered by the Crew member's necessary competencies in Appendix 2 before being assessed in the Master's function.

It is recommended to watch the IMCA Competence Assurance (C 015) video to achieve a good understanding of seafarer competency
https://youtu.be/LFVYw5-m-NY

Other Crew Members
Crew members will need appropriate levels of skill for their role on board (Including working with passengers and controlling and exercising safe transfers). As part of this role at least one other crewmember will have sufficient vessel handling skills on this type of vessel to be able to get the vessel to a safe position, in the event of incapacity of the Master. In addition, as a minimum, the crew member will be expected to have completed the tasks listed in the Crew member's necessary competencies in Appendix 2. In particular, they must be conversant in the personnel transfer arrangements in place at each location, including any local client or Marine Coordinator requirements.

Assessors
Assessors of potential CTV operators are expected to be either a current or recent operating Master of a CTV with at least 2 years' experience.

3.6 – **Record of Sea time**
Crewmembers should be encouraged to obtain a Discharge Book which will provide a verified, ongoing service log as well as a recognised form of Identification.

Alternatively, another more comprehensive way of compiling recognisable evidence of experience gained, is to maintain a 'Log' of vessels served/ operations completed, signed by the resident Master/Manager as appropriate. This log will not take the place of an assessment when moving to another vessel, or being promoted, but it does provide good evidence of experience and competences achieved.

Logs such as those contained in the NWA Training Record Books or the IMCA service logbook are good platforms for this recording.

Training record books for use onboard CTVs and various Other types of workboats can be found via the Workboat Association website;
www.workboatassociation.org/training/

References

Publications and Codes

- G+ Offshore Wind Health & Safety Association –
  'Management of Small Service Vessels used in the Offshore Wind Industry'
- IMCA – Crewmember Service Logbook
- IMCA – Competence Assurance video (C 015)
- IMCA – Guidance on Competence Assurance and Assessment: Marine Roles for Small Workboats (C 017)
- IMCA – Research on Personal Locator Beacons M 234
- IMO – Collision Regulations (COLREGs)
- IMO – Convention for the Safety of Life at Sea (SOLAS)
- IMO – High Speed Craft (HSC) code
  In addition: MCA – High Speed Offshore Service Craft (HS-OSC) code
- IMO – International Maritime Dangerous Goods (IMDG) code
- IMO – International Safety Management (ISM) code
- MCA – Code of Safe Working Practises for Seafarers (CoSWP)
- MCA – Revised Workboat Code 2018
- Renewables UK / The Crown Estates – 'Vessel Safety Guide'.

MCA: Marine Guidance/ Information Notes

- MGN 71: Muster, drill, onboard training, decision support system
- MGN 315: Keeping a safe navigational watch.
- MGN 319: Electronic chart plotting systems for small vessels
- MGN 328: High-speed craft dynamic stability in following, quartering seas
- MGN 353: Control of vibration at work regulations 2007
- MGN 436, Amendment 1: Effects of shocks and impacts on small vessels
- MIN 546: Seafarer fatigue

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Annexes

Annex I: Master's necessary competencies

Minimum competencies deemed necessary for the safe manning of a Crew Transfer Vessel;
(Please note; the expected operation of the vessel shall be considered in regards to manning requirements / crew lists and a vessel's manning shall not be solely reliant upon meeting legal minimum safe manning conditions.)

Master

The Master shall be able to demonstrate practical boat handling and bridge management, including;

- General navigation, coordination and awareness whilst underway
- Manoeuvring craft in restricted areas & berthing
- Approach and navigation within a construction area or project location
- Safe approach and landing on to a boat landing
- Conversant with navigation equipment and use it effectively
- Demonstrate safe transfer of personnel and equipment
- Demonstrate effective communications skills both onboard and to third parties

The Master shall be able to provide detailed vessel specific information on;

- Appreciation of the limiting parameters and characteristics of the vessel
- A sound knowledge of vessels propulsion system and its back-up control arrangements;
- Bunkering and fresh water and discharge procedures
- Understanding of vessel's stability book and the stability requirements for the vessel
- Understanding of the ships drawings, storage and ballast tanks, bilge and primary systems.
- Knowledge of engine room, technical spaces and the planned maintenance system
- Demonstrate use, inspection, stowage and securing of cargo and cargo handling equipment
- Demonstrate application of IMDG Code onboard
- Perform an effective passenger briefing as per Annex 2
- Demonstrate use, inspection, maintenance and stowage of firefighting and safety equipment (including their alarms)
- Describe and when practicable demonstrate the search and rescue and man overboard procedures
- Demonstrate knowledge of reporting procedures for personnel and environmental incidents

Annex II: Crew member's necessary competencies

Minimum competencies deemed necessary for the safe manning of a Crew Transfer Vessel;
(Please note; the expected operation of the vessel shall be considered in regards to manning requirements / crew lists and a vessel's manning shall not be solely reliant upon meeting legal minimum safe manning conditions.)

Crew member

All Crew members shall be able to demonstrate an effective passenger briefing including;

- Safe transfer of personnel in port, to a structure at sea and ship to ship
- Location and operation of all safety and firefighting equipment
- Method of donning Lifejacket, work vest, TPA & Survival Suits
- Location and Operation of Emergency Fire Pump
- Safe Operation of Weather & Watertight Doors and Fire Flaps
- Location of emergency stops for Fuel and ventilation systems
- Knowledge of emergency Communication equipment; GMDSS, Radio, EPIRB, SART, Flares
- Demonstrate effective knowledge and response actions for;
    - Fire
    - Man Overboard
    - Medical Emergency
    - Abandon ship

Crew members shall be able to provide detailed vessel specific information on;

- Personnel and equipment transfer procedures
- A thorough understanding of the duties and responsibilities of a Lookout
- Conversant knowledge of the bridge electronic navigation and communication equipment
- The location and basic knowledge of the vessels SOLAS training manual
- The location and understanding of the Code of Safe Working Practices (CoSWP)
- The location and use of the ships GMDSS equipment including a demonstration of the MAYDAY procedure both spoken and DSC

It shall be expected that an onboard Crew member other than the Master shall be able to demonstrate basic vessel handling skills including; the essential vessel manoeuvring whilst underway, avoiding danger, ability to (un)berth the vessel, and basic knowledge of the collision regulations and safe navigation.

Annex III: Sample Passenger briefing

- Generic example only -

For your safety please read and familiarise yourself with the following,
If you do not understand any of these instructions inform a Crew member immediately.

1. Whilst on board this vessel, everyone has a responsibility for their own actions but, the Master is ultimately responsible for your safety.

2. Please ensure you follow any instructions given by the Master or by the crew on his behalf

3. The vessel operates a Non-Smoking policy inside the cabin

4. Restricted areas are clearly marked and should not be entered

5. Emergency Exits are clearly marked *(this should also be demonstrated)*

6. Any person requiring access to the main deck, must
   a) Seek permission first from a Crew member
   b) Always be accompanied by at least one other person

7. Lifejackets and appropriate PPE must be worn at all times whilst on deck or when transferring to or from the vessel.

8. On discovering any emergency situation, raise the alarm by contacting a crew member immediately.

9. In the event of an emergency clear orders will be given by a member of the crew, ensure you listen carefully and follow instructions as directed

10. Life jackets with a whistle and a light and Thermal Protective Aids for use in an emergency are located under your seat *(include immersion suits if applicable)*

11. Donning instructions are located both on the equipment and posted in several locations around the vessel *(this should be demonstrated)*

12. Life-rafts are stored in cradles on the exterior of the vessel and will be deployed automatically, or by a member of the crew, further instruction when to disembark the vessel into a raft will be issued by the Master.

13. On witnessing a Man Over Board, raise the alarm by shout **MAN OVERBOARD-MAN OVERBOARD** repetitively until asked to stop by a member of the crew. Maintain visual contact with the casualty and point with your arm in the casualties direction.

14. On discovering a fire, raise the alarm by activating a fire alarm, alternatively shout **FIRE-FIRE-FIRE** repetitively until asked to stop by a Crew member.

15. Do not throw any rubbish overboard but use the dedicated receptacles onboard as per the vessels Garbage Management plan.

16. Ensure you have collected or organised for the transport of all your equipment and personal items before disembarking the vessel.

17. If you feel unwell or sick whilst onboard do not hesitate to inform a Crew member.

Annex IV: Crew training matrix

	Non HS-OSC			HS-OSC		
	Master	Deckhand	Engineer/Deckhand	Master	Deckhand	Engineer/Deckhand
COC RYA/MCA Advanced Powerboat, commercially endorsed.	M					
German waters - STCW <500gt Near Coastal II/3	M1			M1		
German waters- STCW OOW II/1		M1			M1	
COC STCW A-II/2 Master <200GT (international)	R			M		
Navigational Watch Rating Certificate A-II/4 STCW		R			M	
Valid medical certificate, max. validity is 2 years - STCW A-I/9	M	M	M	M	M	M
GMDSS (General Operators Certificate) or (Restricted Operators Certificate)	M1			M1		
MCA Approved Engine Course (AEC)		M2	M2		M2	M2
Crowd Management STCW A-V/3				M	M	R
MCA approved ECDIS Generic training as per MIN 503 -section 2	R			M		
ECDIS Type Specific, Furuno FMD-3100 STCW I/14	R			M		
MCA Human Element, leadership and managment training	R			M		
STCW A-V1-1 Personal survival techniques	M	M	M	M	M	M
STCW A-V1-3 Elementary First Aid	M	M	M	M	M	M
STCW A-V1-2 Fire Fighting and Fire Prevention	M	M	M	M	M	M
STCW A V1-4 Personal Safety and Social responsibilities	M	R	R	M	R	R
Vessel Type Specific training and familiarization HS-OSC Section 9 - Chapter 18.				M	M	M
ISM introduction (in house training)	R	R	R	M	M	M
Valid European Health card. EHIC(E1-11)	R	R	R	R	R	R
Radar Training	R	R	R	R	R	R
Stability training	R			R		
Electronic Chart Plotter training	R			R		
Crane operator certificate if crane needs to be used	**	**	**	**	**	**
Slinger and/or Banksman certificate		R	R		R	R
Crew Competence Assesment	R	R	R	R	R	R
Introduction to the Carriage of Dangerous Goods	R	R	R	R	R	R

M = Mandatory

M1 = Mandatory for operations in German waters

M2 = At least one member of the crew onboard has to be in the possession of a MCA AEC certificate or equivilent

** = For vessels fitted with a crane

R = Recommended

MCA requirements

NWA recommandation

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