Australian Government
Australian Maritime Safety Authority

Helicopter Operations

Frequently asked questions

These 'frequently asked questions' and answers provide general information about the new issue 3 of AMSA Marine Orders Part 57 Helicopter Operations (MO 57) that came into force on 1 August 2010. This information complements that contained in Marine Notice 16/2010.

Background

Ship-helicopter operations, for a variety of purposes, are becoming increasingly commonplace in Australian waters. AMSA revised MO 57 to ensure that these operations in Australian waters continue to be conducted with very high standards of safety and operational awareness.

AMSA has accepted, as best practice, the International Chamber of Shipping's *Guide to Ship Helicopter Operations*, 4th Edition (ICS Guide) as the most up to-date guide promoting standardised procedures for ship-helicopter operations worldwide.

Q Does MO 57 apply to my ship?

A Marine Orders Part 57 (MO 57) applies to all vessel's carrying out helicopter operations in Australian Waters.

Q Is this regulation applicable to all ships or only to ships certified to have a helicopter landing area or winching area?

A The provisions of Marine Orders Part 57 (MO 57) require all ships (there are no exceptions) **intending** to conduct helicopter operations in Australia to comply with the regulations contained within the order.

Q What is applicable to ships not intending to transfer a marine pilot by helicopter?

A Ships not intending to conduct helicopter operations do not have to comply. Note, however, that provision **5.5 Medical or other emergency** is there to cater for helicopter operations in an emergency.

Q Is this requirement applicable to any type of vessel?

A MO 57 Issue 3 is to a large degree performance based legislation replacing MO 57 Issue 2 which was predominantly prescriptive. Compliance with the ICS Guide is not intended to be 'mandatory' in the same way as the Australian Code of Practice was under the repealed Issue 2 of MO 57. The ICS Guide covers a range of situations including very detailed guidelines for highly specialised helicopter operations. For example; purpose built landing areas (helidecks) and helicopter facilities (including a hangar). It is not necessary to comply with all the suggestions in the ICS Guide, where these are clearly for operations in excess of those intended, since this would be impractical.

Note

It is not the intent of MO 57 to make any particular part of the ICS Guide mandatory. Guidelines that clearly do not apply to an individual master's intended helicopter operation do not have to be implemented and there is no need for an 'approval' to be sought from AMSA to vary each and every requirement of the ICS Guide.

Extracts from MO 57:

"**1.1 Purpose**

This Part of Marine Orders makes provision for and in relation to:

(a) the protection of the health and the security from injury of persons engaged in the loading or unloading of ships; and

(b) the safety of persons, including pilots, going on or coming from, or on board, ships, in connection with transfer operations by helicopter.

Note: Helicopters used in ship/helicopter transfer operations are subject to the jurisdiction of the Civil Aviation Safety Authority (CASA) and must comply with relevant CASA regulations.

4 Application

This Part applies to and in relation to:

(a) a ship registered in Australia; and

(b) a ship registered in a country other than Australia that is in the territorial sea of Australia or waters on the landward side of the territorial sea.

5.5 Medical or other emergency.

When it is necessary, due to medical or other emergency, either to evacuate a person requiring urgent medical attention or to embark or disembark medical or other emergency personnel, the master of the ship and the pilot of the helicopter may make such alternative arrangements as they consider appropriate in the circumstances, provided that safety is not thereby compromised."

AMSA has been asked several questions regarding equipment to be carried on the ship and its preparation for use when undertaking a ship-helicopter operation.

Q What standard fire fighting and rescue equipment is required by MO 57?

A SOLAS should be consulted for fire extinguisher capacity and quantity since it has some specific references to helicopter operations that are relevant. The Master may also wish to refer to the ICS Guide to ensure he/she is providing the safe operation required by MO 57. The requirement in MO 57 is that the equipment is at least as effective as what is specified in the ICS Guide.

Q Can the existing fire extinguishers (which are as per the vessel's fire plan) be moved to deck and used for this purpose OR is dedicated equipment required?

A Section 2.2 of Reg 18 of Chpt II-2 of Solas states "*Where helicopters land or conduct winching operations on an occasional or emergency basis on ships without helidecks, fire-fighting equipment fitted in accordance with the requirements in Part C may be used. This equipment shall be made readily available in close proximity to the landing or winching areas during helicopter operations.*" The required equipment may be obtained by using spare equipment or other equipment so long as it is returned to its normal position on completion of helicopter operations.

Q Can you confirm whether for a landing or winching area, used only for the occasional pilot transfer, all the fire fighting equipment requested in 4.7 of the ICS Guide is to be provided on board?

A Section 2.2 of Reg 18 of Chpt II-2 of Solas states "*Where helicopters land or conduct winching operations on an occasional or emergency basis on ships without helidecks, fire-fighting equipment fitted in accordance with the requirements in Part C may be used. This equipment shall be made readily available in close proximity to the landing or winching areas during helicopter operations.*" The required equipment may be obtained by using spare equipment or other equipment so long as it is returned to its normal position on completion of helicopter operations.

Q The ICS Guide, in section 4.7, provides a summary of the required fire fighting and rescue equipment. In particular it says that the following equipment should be onboard (which is also in line with SOLAS Ch.II-2, Reg.18) We would appreciate clarification:

1. **if ALL the above fire fighting equipment should be onboard the ship?**
2. **whether the requirement for a foam system is covered by portable foam applicators and of what capacity and how many units?**

A1 Vessels that comply with their SOLAS responsibilities will be able to comply with the requirements of section 4.7 of the ICS Guide

A2 Section 5.1.3 of Reg 18 of Chpt II-2 of Solas states "*a suitable foam application system consisting of monitors* ***or foam making branch pipes*** *capable of delivering foam to all parts of the helideck in all weather conditions in which helicopters can operate".* So Foam fire-fighting systems are required but monitors could be substituted by foam branches / portable applicators. The latter are simply connected to fire hoses as required to achieve the foam rate specified. AMSA understands the ICS Guide to mean 'foam solution' to be the foam/water mixture (extinguishing medium) and not the delivery rate of the foam solution in its pre-use state.

Note

An issue that seems to arise as a result of consulting SOLAS concerns the number of extinguishers that could be provided for a helicopter operation. The wording in SOLAS indicates that the number of extinguishers is not important and hence a large number of small capacity extinguishers could be seen as compliant. The ICS Guide generally indicates a number of extinguishers including a 'maximum number'; hence inferring a requirement for larger extinguishers but less of them.

The Master should decide what is 'safe' for his/her ship-helicopter operation taking into account the number of trained personnel available and the ship's equipment. When considering fire extinguishers the master should bear in mind that if he/she substitutes SOLAS portable extinguishers for the one or two much larger extinguishers as per the ICS Guide, then this may not be 'as effective'.

A ship-helicopter operation risk assessment is likely to show that each operation, landing or winching, has an identical risk of an incident requiring fire-fighting equipment. AMSA takes the view that, during a winching operation, a hovering helicopter requires the same fire fighting equipment to be ready on the ship as in a landing operation because the consequences are the same if the helicopter were to crash onto the deck. This would indicate that equipment, when suggested by the ICS Guide, should be present at every operation. Infrequent operation does not mitigate the risk of an incident occurring but only the frequency with which the incident can occur. AMSA will not, therefore, accept that a reduced frequency of ship-helicopter operations be used as an excuse to remove/reduce required equipment.

AMSA has been asked several questions regarding the deck strength and the deck markings for the helicopter landing area (HLA).

For example:

Q Can you please clarify the requirement for deck strength documentation to meet the requirements of provision 5.2.2 of MO 57?

A The vessel is required to have onboard documentation to prove that the area that is being used for helicopter operations is capable of withstanding the static and dynamic loads that will be experienced during the operation.

Q Is the vessel's classification society delegated to verify the helicopter landing area strength?

A This information must include the maximum weight (tonnes) that can be landed on the nominated helicopter landing area. This information may be provided by:

(a) the classification society that conducts the ship's surveys and issues the certificates; or

(b) the shipbuilder that built the ship; or

(c) the competent authority for the ship (flag state).

Q Please clarify the HLA strength required to meet provision 5.2.2 of MO 57?

A The strength required to meet provision 5.2.2 of MO 57 will be the strength sufficient to enable the safe operation of the intended helicopter. Thus once a strength calculation has been carried out then the Master can compare the information supplied to him / her against the permitted parameters and assess whether the operation can be carried out in safety.

Q Please advise the minimum load requirement for the HLA on a bulk carrier hatch cover?

A The minimum load requirement will be the load requirement sufficient to enable the safe operation of the intended helicopter.

Q With respect to the deck markings for a helicopter landing area? Please clarify whether marking 'H' (inside touch-down zone) should be painted athwart ship or fore and aft direction?

A The deck markings for helicopter landing areas should comply as much as practicable with the ICS Guide but a helicopter pilot will ultimately decide if it is safe to complete the chosen operation safely or not. Section 4.3.2 & 4.3.3 of the ICS Guide give details of marking requirements. For example the D diameter is something that may be varied on ships for occasional use, such as marine pilot transfer, providing the Master is offering a safe arrangement (nothing dangerous to the helicopter operation and arrangements are agreed with the helicopter service provider and the helicopter pilot).

Q Regarding documentation of strength of HLA on a ship's deck; how does the ship's Master declare that ship's strength of deck is compliant with MO 57?

A The Master will declare the certified strength of the vessel's HLA during his communications with his port agent, the port authority, the pilotage provider and the helicopter operator / pilot prior to any helicopter operation taking place. Most ports in Australia have port specific forms which formalise the information exchange as required by the ICS guide and MO 57.

Extracts from MO 57

"5.2.2 The operator of a ship on which a helicopter is likely to land must ensure that there is available on the ship information relating to ability of any deck surface to withstand the static and dynamic loads imposed by a helicopter landing on that surface.

Note The information referred to in this provision would normally be provided by, or based on criteria provided by, the Classification Society carrying out the ship's surveys.

5.2.3 The master of a ship must, when requested, provide the information referred to in 5.2.2 to:

(a) the pilot of a helicopter; or

(b) a surveyor; or

(c) any other person with an interest in the safe operation of a helicopter on the ship."

Q Some of our vessels have Class certificates for permissible helicopter loads on landing area while others have only shipbuilders or dockyard plans. Is a shipbuilder's plan acceptable for the purposes of MO 57?

A Yes, as long as it is specific for helicopter operations and is not a general load per unit area figure which is more likely to refer to the static forces imposed by the carriage of cargo in that area.

Q Can you clarify who decides if an existing arrangement, deviating from the ICS Guide for some aspects, is acceptable or not?

A The Master is responsible for providing a safe arrangement. There should be clear communication with the helicopter service provider before an operation commences. Where there are deviations from the ICS Guide markings these need to be communicated to the helicopter service provider (pilot) and be clearly identified. Based on this communication the Master and helicopter pilot will decide about the safety of the intended operation and the helicopter pilot has the "final say".

Q Can a helicopter land on an area not marked with an "H"?

A Helicopter landing areas can consist of purpose built landing pads or areas of the vessels deck which are free from obstructions complying with the clear area requirements of The International Chamber of Shipping's *Guide to Helicopter/Ship Operations*, 4th Edition (2008).

Helicopter operating areas may be marked where the landing area is not purpose built these are not required to be marked where helicopter operations are "infrequent".

Areas marked "Winch Only" are normally designated as such due to the presence of obstructions in the approach zones. However, noting the operational preference for helicopters to land on, a space may be used where marked as:

- A designated landing spot marked as "H",
- An un-marked spot; or
- A spot marked as "Winch Only"

so long as it is capable of withstanding the dynamic and static loads imposed by the landing and take off of the helicopter and complies with the clear area and other safety requirements as set out in MO 57.

Note

A large number of enquires have been received in relation to the assessment of deck strength in accordance with the ICS Guide 4.14 and MO 57 provision 5.2.2 . This information is required to ensure the safety of the helicopter, its pilot, the crew of the helicopter, the ship's crew and other parties involved in ship-helicopter operations. The differences in the structural arrangement between a helideck and ship's normal structure have highlighted, these include hatch covers. Examples are; a cargo hold hatch cover, designed and approved to withstand an average sea pressure load or an area of deck approved for carrying and securing cargo.

The use of phrases in MO 57 such as '*the recommended dimensions and obstacle free zones in the ICS Guide are to be implemented as far as practical*'; '*obstacles within the helicopter landing or operating area that do not comply with the ICS Guide must be clearly marked*'; and '*information referred to in this provision would normally be provided by*'.

MO 57 is the legislation covering the ship-helicopter interface and it requires that the Master ensures he/she has provided a safe arrangement. Helicopter operations include winching, landing and even hovering over/on a vessel. The operator and master are expected to have fulfilled their obligation, in provisions 1.1 and 5.1, to provide safe shipboard arrangements.

In general MO 57 is about helicopter operations conducted from a ship's HLA on an occasional basis. These HLAs are not the dedicated helidecks with Class notation. AMSA accepts that each ship is different and so are the situations when they may use their HLA. MO 57 is therefore written to give as much flexibility as possible to owners to arrange details such that the Master and the ship achieve the desired objective of safe arrangements.