


CONTENTS

HELICOPTER OPERATIONS2

1. RESPONSIBILITY2

2. EQUIPMENT FOR HELICOPTER OPERATIONS.....3

3. REQUIREMENTS FOR HELICOPTER OPERATIONS3

	<p>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</p> <p>4.14. HELICOPTER OPERATIONS</p> <p>HSE PROCEDURES MANUAL</p>	<p>Sect : 4.14 Page : 2 of 5 Date : 07-Aug-25 Rev : 10.0 Appr : DPA</p>
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HELICOPTER OPERATIONS

Helicopter operations are commonly used for embarkation and disembarkation of the marine Pilot and medical evacuation in emergency situations. The helicopter operation is a complicated, high-risk operation. This operation demands accuracy, training, and clearly established procedures. The officers and crew members associated with these operations should show a high level of situational awareness and good seamanship.¹

The transfer of marine pilots by helicopter is routine in some ports. Helicopter operations must be conducted in compliance with the instructions and guidelines contained in the latest edition of the ICS publication 'Guide to Helicopter/Ship Operations'. On ships trading regularly to these ports familiarity of operation must not be allowed to compromise safety standards.

There has been an alarming increase in the number of High Potential Near Miss reports related to poor preparation of helicopter landing areas. Most cases have involved loose items of equipment, in particular slack (unpressurised) fire hoses. Loose items of equipment and slack (unpressurised) fire hoses will move around in an unpredictable manner when exposed to helicopter down-wash, seriously compromising safe helicopter operations by introducing a very high risk of impact with the helicopter. If loose items and slack fire hoses are observed by the helicopter pilot the landing will be aborted.²

All loose objects within and adjacent to the operating area must be secured or removed. Fire Pumps should be running and providing sufficient water pressure on deck. Fire hoses and foam equipment should be ready, near to but clear of the operating area, and if possible upwind and with nozzles pointing away from the area in case of inadvertent discharge.³

Whilst not specifically stated, fire hoses must be charged or pressurised to ensure they are ready for immediate use and do not pose a hazard as a loose item.⁴

Fire Hose fully ready for use = Fire pump running > Hose connected > Hydrant open > Fire hose purged of air/full of water > Nozzle closed⁵

1. RESPONSIBILITY

The Master is responsible for the following:

- Giving clearance for the proposed helicopter operation.
- Suspending or calling off the operation if in his opinion, it risks the safety of the vessel.
- Conducting appropriate crew training prior helicopter operations.
- Safe transfer of persons and goods between helicopter and vessel taking all necessary precautions as per the ICS guidelines.


¹ W 47 / 2022

² W 47 / 2022

³ W 47 / 2022

⁴ W 47 / 2022

⁵ W 47 / 2022

	<p>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</p> <p>4.14. HELICOPTER OPERATIONS</p> <p>HSE PROCEDURES MANUAL</p>	<p>Sect : 4.14 Page : 3 of 5 Date : 07-Aug-25 Rev : 10.0 Appr : DPA</p>
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- Ensuring equipment as required by ICS guidelines and or local guidelines at port of call are on board and in good working order.
- Ensuring communication means specified in the ICS publication are followed.

2. EQUIPMENT FOR HELICOPTER OPERATIONS

For vessels which regularly complete helicopter operations, the vessel shall carry equipment as required by ICS guidelines / SOLAS / applicable local regulations for helicopter operations. 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.

3. REQUIREMENTS FOR HELICOPTER OPERATIONS

- 3.1. Proper winching/landing area as appropriate to be marked as per ICS guide / Classification society requirements.
- 3.2. The vessels name shall be marked in a contrasting colour (white) on the Helicopter hatch. The helicopter landing area shall be coated with nonslip paint.⁶
- 3.3. The access from hatch cover to deck should be a fixed height inclined ladder with fixed handrails and front platform with operational load for two persons (150 KG). The steps and platforms should be made of non-slip materials.⁷ (a set of steps that will at all times provide the user with three points of contact two hands, one foot / two feet, one hand)⁸
- 3.4. Sample of access: Portable steps, firmly attached to hatch.⁹




⁶ W 37 / 2021

⁷ W 28 / 2023

⁸ W 37 / 2021

⁹ W 37 / 2021

	<p>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</p> <p>4.14. HELICOPTER OPERATIONS</p> <p>HSE PROCEDURES MANUAL</p>	<p>Sect : 4.14 Page : 4 of 5 Date : 07-Aug-25 Rev : 10.0 Appr : DPA</p>
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- 3.5. Shipboard safety checklist for helicopter operations to be completed prior helicopter operations (Form 3.3.7)
- 3.6. Applicable procedures as per ICS guide including communication and contingency procedures to be strictly complied.
- 3.7. Training to be conducted to ships staff prior each helicopter operation.
- 3.8. All helicopter operations are to be treated as safety critical with appropriate planning, risk assessment and toolbox talk conducted.¹⁰ Monitor the operation closely and keep necessary items ready. Never neglect safety procedures¹¹
- 3.9. Check weather conditions like clear sky, visibility, precipitation, sea state etc. Fair weather condition is an inevitable factor in helicopter operations. The helicopter team will foresee the expected weather conditions prior the operations. However, the ship's officers should also consider the same at that time. The speed and direction of wind has great impact on helicopter operations. During the operation, officers must keep an eye on wind direction and speed. Extreme wind conditions will be very unsuitable for landing/winchng of the helicopter.¹²
- 3.10. Communication is the most vital factor in helicopter operations. The ship's officer must establish proper communication with the helicopter team well in advance before the operation.¹³
- 3.11. Keep a constant watch on ship's course and speed¹⁴
- 3.12. Prepare landing/winchng area with utmost care¹⁵
- 3.13. Always follow Terminal/Port specific requirements and checklists¹⁶
- 3.14. Strength confirmation letter from the classification society shall be available on board for the helicopter landing surface¹⁷
- 3.15. The Master must ensure that any obstacle within the landing or winching area is clearly marked if it does comply with the recommendations for obstacles in the ICS Guide.¹⁸
- 3.16. In addition to the marking arrangements described, the Master should ensure that, if possible, a minimum of two access/egress routes to and from the landing area available to

¹⁰ W 47 / 2022

¹¹ W 28 / 2023

¹² W 47 / 2022

¹³ W 47 / 2022


¹⁴ W 47 / 2022

¹⁵ W 47 / 2022

¹⁶ W 47 / 2022

¹⁷ W 28 / 2023

¹⁸ W 28 / 2023

	<p>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</p> <p>4.14. HELICOPTER OPERATIONS</p> <p>HSE PROCEDURES MANUAL</p>	<p>Sect : 4.14 Page : 5 of 5 Date : 07-Aug-25 Rev : 10.0 Appr : DPA</p>
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ensure that, in the event of an incident on the landing area, helicopter passengers and crew can escape upwind of the incident.¹⁹

- 3.17. Red and white strips should be used for marking the position of notifiable objects within either the manoeuvring zone or clearing zone that exceed the height limits for those zones (refer ICS Guide to Helicopter/Ship Operations): Object within the clear zone of height exceeding 2.5 cm, Objects outside the clear zone but within the manoeuvring zone of height exceeding 25 cm.²⁰
- 3.18. Yellow should be used for marking the position of objects beyond the manoeuvring zone to which it is considered appropriate to draw the attention of the helicopter pilot. Yellow may also be used to mark objects within manoeuvring zone and clear zone below the height limits for either the clear zone (2.5 cm) or the manoeuvring zone (25 cm) and to which it is considered appropriate to draw the attention of the helicopter pilot.²¹

References:

1. Guide to Helicopter /Ship Operations - ICS Publication
2. IAMSAR – Vol 3

¹⁹ W 28 / 2023

²⁰ W 28 / 2023

²¹ W 28 / 2023