

Jonathan Turner: Superyacht aviation considerations

Jonathan spent 17 years in the Royal Navy where he specialised in flying helicopters from frigates and destroyers, many similar in size to the larger yachts of today's superyacht fleet. Since leaving the Navy, he has had a varied career in the private sector, specialising in a broad range of maritime aviation operations. An accomplished instructor and experienced auditor, he now has a role with Maritime Aviation Support and Training (MAST) Consultancy to help educate the industry and improve aviation safety standards across the maritime sector.

Introduction

There are well over 300 superyachts that have aviation capability on board and the number is growing exponentially, year-on-year, as both new builds and refit projects. This means around 5% of all superyachts are currently able to support the operation of helicopters to some degree, whether privately or commercially. Having the ability to land a helicopter on a yacht adds great value to the owner/charterer as it offers a significant degree of operational flexibility and efficiency. Operating helicopters in the maritime environment, however, is challenging. There are numerous potential hazards and risks that should be considered fully, to ensure they are mitigated sufficiently to achieve the ultimate aim of providing safe and efficient helicopter operations for the owner/charterer. This document has been designed as a basic overview of some issues related to safe helicopter operations on board superyachts. It is not intended to be a definitive guide to cover all aspects for all vessels/operations. We recommend specialist, independent guidance is sought for each vessel.

Uses of helicopters on board superyachts

There is a wide range of operational tasks which helicopters conduct in support of yachts, including:

- Guest transfers
- Heli skiing
- Helicam / filming
- Medical & Casualty Evacuations ('Medevacs' & 'Casevacs')
- Search & Rescue (SAR) ? Travel to recreational sites for activities such as diving
- Sling loading

Although guest transfers is by far the most common task, having a helicopter can add great flexibility by being used for other missions which can increase the utility of the yacht, greatly. To conduct these roles safely and efficiently, all personnel involved should be trained sufficiently and suitable equipment and on board support facilities should be available to support them

properly.

Regulations

Several national and international organisations publish regulations relevant to the use of helicopters on vessels, including superyachts. Some of the main organisations' reference documents for maritime Helicopter Landing Areas (HLAs), include those published by:

- International Maritime Organisation (IMO)
- International Civil Aviation Organisation (ICAO)
- European Aviation Safety Agency (EASA)
- National Aviation Authorities, such as the UK Civil Aviation Authority (CAA)
- International Chamber of Shipping (ICS)
- Flag States
- Classification Societies

The relevance and interpretation of different regulations will be subjective and determined on a case-by-case basis, depending on factors such as whether the yacht is private or for commercial use. In general, commercial helidecks (i.e. those intended to serve paying passengers), require stringent adherence to a set of known standards, whereas the requirements for private HLAs are usually less restrictive. There are some common technical requirements for all types of HLA, however, such as a requirement to provide a deck with sufficient dynamic load-bearing capacity for the weights of the range of helicopters they are intended to serve. We recommend that specialist, independent advice should be sought to ensure the relevant references are used and to ensure that the HLA is suitable for the intended operation.

On board aviation safety management

The management of aviation safety on board is vital for the safe and efficient operation of helicopters. Aviation-capable vessels should have regular Aviation Safety Audits (ASA), conducted by suitably-qualified and experienced specialists in maritime aviation, which will look at all relevant aspects of the vessel, such as: the HLAs; support facilities, equipment; procedures and training. A comprehensive audit will reveal the risks associated with the operation of helicopters from that vessel, so that an aviation hazard log can be produced. From the aviation hazard log, a robust set of Standard and Emergency Operating Procedures (SOPs and EOPs) can be produced to mitigate these, based on industry best practice, wherever possible. This should be an iterative process with regular reviews to ensure the operation remains as safe as possible.

Crew training

The dedicated helideck team on board any aviation-capable vessel should be qualified and competent to perform their roles, whether they are a Helicopter Landing Officer (HLO) or Helideck Assistant (HDA). It is recommended that all helideck crew receive industry recognised

training, such as that which is accredited by the UK Maritime and Coastguard Agency (MCA). This specialist training will provide delegates with theory and practical sessions, including live helicopter firefighting, which enable them to practice SOPs and EOPs to develop proficiency in their roles. Aviation should be considered as a 'whole ship' evolution. Whilst the dedicated helideck team will take primary responsibility for helicopter operations on board, all personnel have a role to play in 'flight safety', as anyone is capable of spotting something which may have a safety implication. In addition, all departments will have some interaction with helicopter operations, whether the Bridge team providing safe landing conditions, the engineering department providing engineering and systems support, or the interior team providing towels and refreshments for guests after landing. For this reason, it is advisable that the whole complement of crew be given aviation awareness training to help them understand the hazards of risks posed by operating helicopters and how they may affect their jobs.

Night helicopter operations

Flying at night adds several additional risk factors to on board helicopter operations. Commercial helidecks will be fitted with a range of lighting facilities designed to assist pilots when landing/taking-off at night. Private yachts, however, are very unlikely to have a recognised HLA lighting system and without approved, commercial standard deck lighting, the pilot will have poor visual references which greatly increases the risks when flying close to the yacht. Night flying should be fully risk-assessed for each vessel and only conducted if considered safe to do so.

Superyacht helicopter incidents & accidents

There have been several incidents and accidents over the past few years where helicopters have either been lost, or nearly lost, due in part by poor attention to maritime aviation safety. Most of these incidents could have been avoided, had certain risk factors been identified and resolved before they became a problem; providing whole crew training can assist in achieving this. Whilst the details of some of these incidents have been kept relatively private by the vessel's operators, others have become very high-profile in online and international media, due in part to the instant sharing of pictures and videos on social media by eye witnesses. This recent phenomenon has led to some incident videos having gone viral before the emergency services have even been informed. The ready availability of portable devices should be considered by ship owners and operators due to a potential negative impact any adverse publicity could have on the owner's brand and, not to mention potential insurance liabilities and/or legal action.

Summary

Operating a helicopter on a yacht is not 'just another tender' as there are a complex set of hazards and risks to consider and mitigate against. We recommend that aviation-capable new build and refit yachts seek specialist, independent support at the outset of the project, should in house personnel not have the appropriate knowledge, which can help to avoid expensive errors and operational compromises when the vessel is delivered. For operational vessels, specialist,

independent support and industry recognised helideck crew training will ensure that helicopter operations on board are as safe and efficient as possible for the owner, charterer and crew. If you require any advice any aspects of maritime aviation, our experienced team are on standby to assist you with your maritime aviation support and training requirements.