

The helicopter crew was not informed about the manned and operating starboard crane.

The helicopter performed a new visual circuit followed by a normal landing after yet another deck clearance.

History on the platform

Radio Operator (RDO)

According to the Offshore Personnel System (OPS), the helicopter was scheduled for arrival at 0620. The ETA for the helicopter changed a few times in the system. At 0548, the RDO checked the OPS and the helicopter was now at a nearby platform, which meant only a short time before arrival.

The RDO made a 20 minutes tannoy (public address) to advise HLO and PAX about the arrival of the helicopter. At approximately 0558, and in the absence of the HLO, the RDO answered the call from the helicopter and advised that they needed a couple of more minutes to get ready. Simultaneously, the HLO arrived at the radio room.

Crane Operator (CO)

The crane operator handling the crane during the incident was legally certified and qualified for the operation. The crane operator was normally the primary HLO for helicopter operations. The CO was on his tea break when the tannoy from RDO was given. The CO approached the OIM and asked for a plan on who should be doing crane and HLO duties. The OIM decided that the person normally acting as HLO should finish his work on the rig floor instead of normal HLO duties.

The CO went outside to finish the work at the rig floor but was immediately called to perform a crane operation with the starboard crane. The CO went directly to the starboard crane and started slewing the crane left. During the slewing process, the CO saw the helicopter appearing from behind the office building. The CO stopped slewing and the helicopter veered left and made a go around.

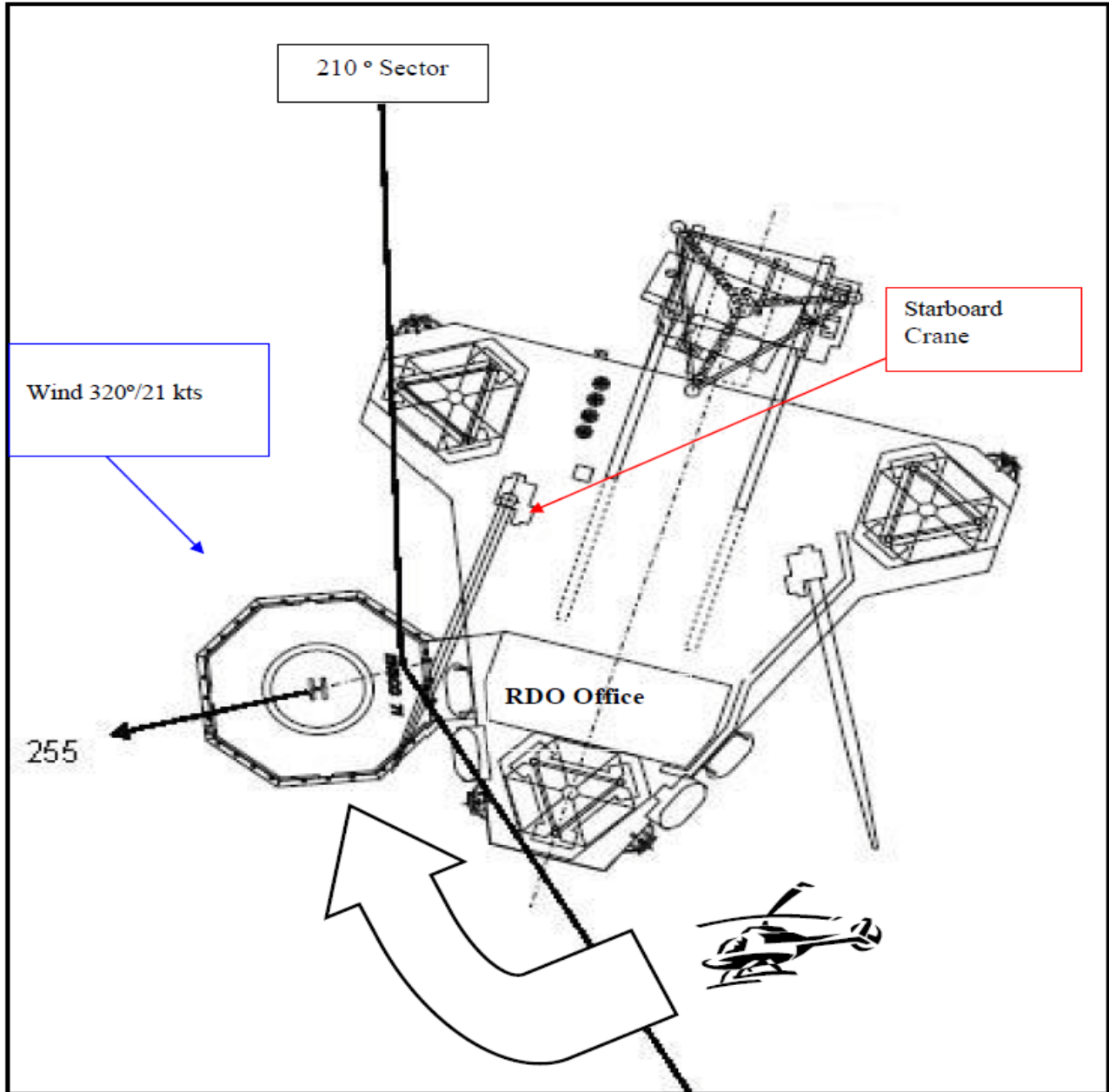
Helicopter Landing Officer (HLO)

The HLO handling the landing involving the incident was legally certified and qualified for the operation. The HLO was normally the storekeeper and primary crane operator but was performing the duties as the HLO during the incident. The HLO had been on duty since 0200 and received the 20 minutes call at 0548 via the tannoy while on his break. Leaving the break room, the Offshore Installation Manager (OIM) briefed the HLO that he should be handling the landing instead of continuing his ongoing duty.

The HLO then proceeded to put on his safety gear and then went to the RDO room to check in ready for duty. As the HLO arrived at the RDO room, the helicopter requested deck clearance over the radio. The RDO answered the call with a standby message. The HLO directly proceeded to the helideck area to perform his checks. After a visual scan of the helideck, the HLO heard the helicopter on short final and then gave the deck clearance and proceeded to the safe area at the bottom of the stairs. A few seconds later, the HLO noticed the helicopter veering left and initiating a go around.

On the second approach the HLO gave another deck clearance and the helicopter made an uneventful landing.

Schematic Platform Overview



The 210° flying sector was to the left of the solid black line.

The helicopter approached from a nearby platform and from behind the RDO office building.

Analysis

Timeline

	Scheduled	Actual
Arrival (Helicopter)	0620	0600
Deck Clearance (HLO)	0615	0559
Deck Clearance Request (Heli)	Approaching	0558
Radio Room (HLO)	0600	0555
Tannoy (RDO)	0550	0548

The scheduled arrival time changed several times and this consequently gave the personnel a shorter time to prepare and coordinate. The 20 minutes tannoy gave the HLO 12 minutes to meet in the radio room, coordinate, dress with safety gear and perform the physical deck clearance.

Communication

Appendix 1 is a flow chart of the available communication on the platform at the time of incident. Radio communication was possible between the RDO, HLO and the helicopter on VHF frequency 123.450 MHz, Communication between crane operator, HLO and RDO was only available with the means of a landline telephone - not an open line. In cases where both cranes were operating at the same time, the RDO could only communicate with one of the cranes at a time (radio channel 6).

The communication setup meant that only a “closed loop” between the helicopter, HLO and RDO could be maintained during the deck clearance and the landing phase. This meant that the CO could not maintain sufficient situational awareness.

Helideck Manual

The procedure and timeline for helicopter landing operation was described in the helideck manual:

<p>30 minutes before ETA</p> <p>Radio operator:</p> <ul style="list-style-type: none">• receives information from the OTC about:<ul style="list-style-type: none">- expected time of arrival- helicopter type- No. of passengers- freight quantity- fuel needs- request for weather information- other information• informs the HLO about when the helideck crew must be ready for helicopter operations,• ensures that passengers in transit are informed of the transit platform,
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10 minutes before ETA

HLO:

- listens in on the radio communication between the helicopter pilot and the radio operator,
- ensures that crane operations at the helideck are discontinued, and that the boom is in a safe position before the arrival of the helicopter.

Shortly before landing

HLO:

- checks that the light system is on,
- checks that only authorised personnel are on the helideck;
- checks that crane booms have been placed in a safe position,
- checks that fire fighting and safety equipment is ready and accessible,
- checks that fire guard is at the foam monitor at the windward side,
- awaits call from the helicopter,
- informs the pilot which foam monitor is manned.

During landing

HLO:

- locates himself at a safe position where there is a good view of the whole helideck and from where the alarm systems can be activated immediately in case of the occurrence of an accident.

The helideck manual described the normal procedures to be followed when a helicopter was arriving at the platform. A timeline was outlined from ETA -30, ETA -10, shortly before landing and during landing. Due to the change in ETA and early arrival of the helicopter, the timeline was not followed as described.

During landing, the HLO was to locate himself in a safe position where a good view of the whole helideck could be maintained throughout the landing phase.

View from HLO safe position



No visual references of crane or approaching helicopter.

View from the crane operators seated position.



The helicopter approached from left and behind the office building giving no visual references to the crane operator.

Appendix 2 was the Radio OP/HLO checklist for all helicopter arrivals. In the left hand column, the planned timeline and checklist items were described with a normal ETA-30 minutes available. This was considered as a robust and sufficient checklist. In the right hand column, the actual timeline and checklist items are described based on the actual ETA-12 minutes available. Consequently, items were checked under time pressure and/or not performed which in turn lead to a “less optimal” execution of the procedure.

Furthermore, a procedure was described in the case that the checklist was incomplete:

“NOTE: If a Helicopter arrives early, or we are not ready for it, (for any reason), time must be taken to complete the above steps, prior to giving Helideck clearance. If the checks are incomplete the Helicopter must be stood off.”

Findings

The personnel involved all had approved training and were certified for the operation.

1. The ETA changed several times in the OPS system.
2. Early arrival of the helicopter.
3. Tannoy made 13 minutes before landing (incident).
4. Change of duties between crane operator and HLO.
5. Change in planned duties of the CO on arrival at the rig floor.
6. CO not able to stay “in the loop” with a radio.
7. Deck clearance requested while HLO at the RDO room.
8. The helicopter crew was not informed about the manned and operating starboard crane.
9. Deck clearance given while HLO exiting deck and helicopter on short final.
10. Limited visual references from the crane when the helicopter approached from behind the building.
11. Limited view from the HLO safe position.
12. The HLO did not stand off the helicopter.
13. No triangular radio communication possible between the HLO, the CO and the helicopter during the landing phase.

Conclusions

The incident occurred as a chain of events that consequently lead to the inadvertently lack of situational awareness of the CO and the HLO. Human factors such as time pressure due to an early arrival of the helicopter and the late change of duties by the OIM combined with insufficient visual reference from the HLO’s safe position and the crane resulted in a “less optimal” deck clearance procedure and no visual warning of the developing conflict.

Human factors such as a backup HLO with limited “on hands training” left a “rusty” feel to the execution of the procedures and execution of tasks.

The limitations of the communication and visual references did not give the CO the opportunity to stay in the loop during the time leading up to the incident.

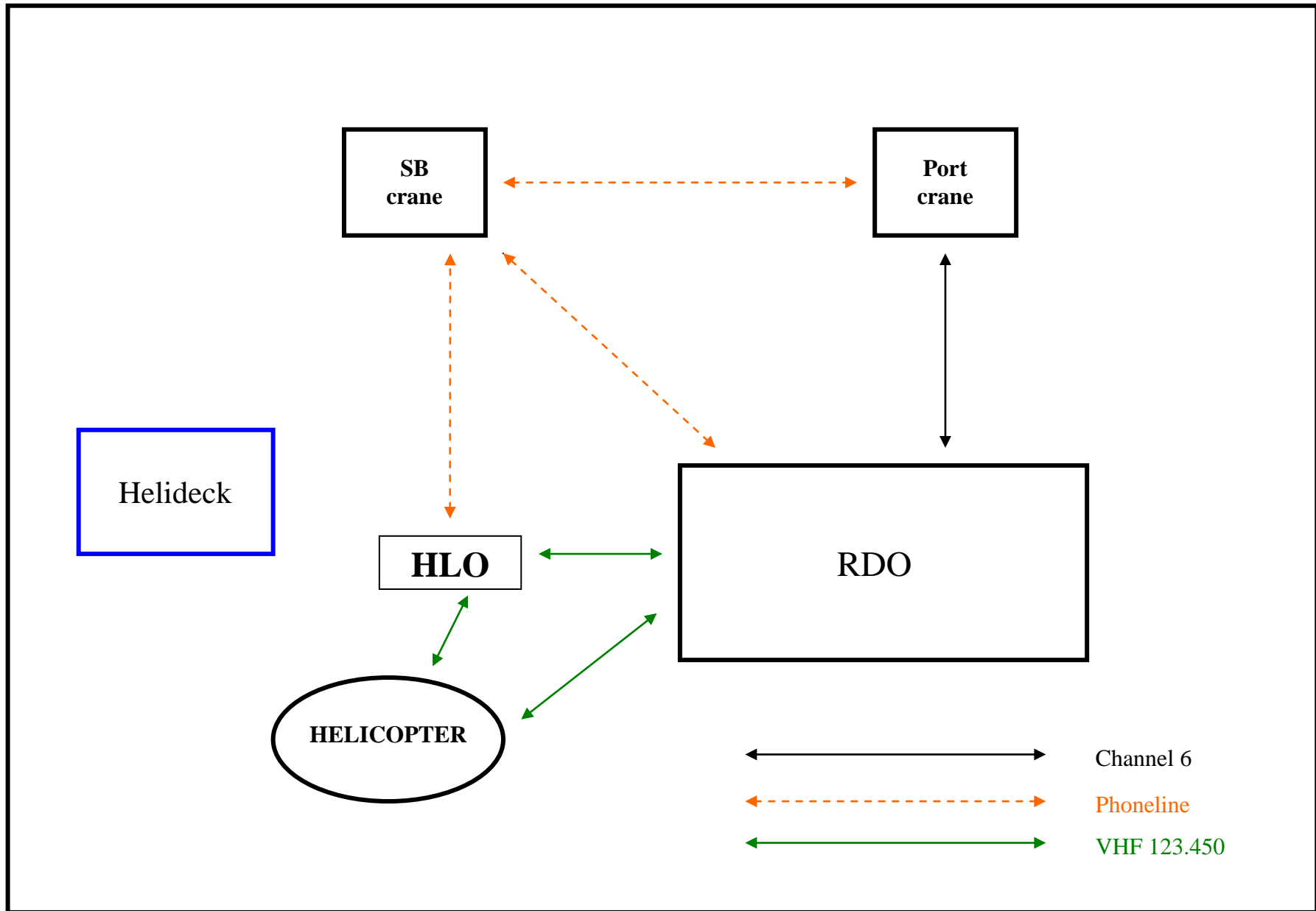
The AIB Denmark could not establish the actual position of the crane, leaving no opportunity to exactly evaluate the severity of the incident.

Appendix

1. Flow chart – communication during helicopter operation
2. Planned and actual execution of checklist

Appendix 1

Flow chart - communication during helicopter operation



Appendix 2

Planned and actual execution of checklist

Radio Op / HLO Checklist for all Helicopter Arrivals				Radio Op / HLO Checklist for all Helicopter Arrivals			
Actions To be taken		Time Line	Responsible party	Actions To be taken		Time Line	Responsible party
1	Radio Op is to ensure that the on shift Crane Operator is aware of pending flights during shift	Shift change	Radio Op	1	Radio Op is to ensure that the on shift Crane Operator is aware of pending flights during shift	Shift change	Radio Op
2	Radio Op must consult Flight Route received from OTC and cross refer with Radio Ops Heliplan and OPS for timings and passenger numbers.	-30 mins	Radio Op	2	Radio Op must consult Flight Route received from OTC and cross refer with Radio Ops Heliplan and OPS for timings and passenger numbers.	-12 mins	Radio Op
3	Radio Op must call Heli Crew with a minimum of 20 minutes notice of Helicopter arrival.	-20 mins	Radio Op	3	Radio Op must call Heli Crew with a minimum of 20 minutes notice of Helicopter arrival.	-12 mins	Radio Op
4	Radio Op must call onshift Crane Operator, (if not HLO), and ask for update of ongoing Crane activities, (if Crane op is HLO) confirm same when he arrives at Radio room.	-15 mins	Radio Op/ HLO	4	Radio Op must call onshift Crane Operator, (if not HLO), and ask for update of ongoing Crane activities, (if Crane op is HLO) confirm same when he arrives at Radio room.	not done	Radio Op/ HLO
5	HLO ensures crane activities at helideck or within 210 flying sector are discontinued as per Helideck manual.	-10 mins	HLO	5	HLO ensures crane activities at helideck or within 210 flying sector are discontinued as per Helideck manual.	-not done	HLO
6	HLO Carries out Helideck check, confirms status of fire fighting systems, readiness of personnel, etc.	-7 mins	HLO	6	HLO Carries out Helideck check, confirms status of fire fighting systems, readiness of personnel, etc.	-1 mins	HLO
7	If Starboard crane has previously been operating, HLO must confirm to Radio Op that Starboard crane is now clear of helideck with engine stopped for duration of helicopter landing and take off.	-5 mins	Radio Op/ HLO	7	If Starboard crane has previously been operating, HLO must confirm to Radio Op that Starboard crane is now clear of helideck with engine stopped for duration of helicopter landing and take off.	not done	Radio Op/ HLO
8	HLO advises Helicopter if Port crane is working and if so, advises pilot that cabin is manned and nature and duration of operations.	-3mins	HLO	8	HLO advises Helicopter if Port crane is working and if so, advises pilot that cabin is manned and nature and duration of operations.	not done	HLO
NOTE: If a Helicopter arrives early, or we are not ready for it, (for any reason), time must be taken to complete the above steps, prior to giving Helideck clearance. If the checks are incomplete the Helicopter must be stood off.				NOTE: If a Helicopter arrives early, or we are not ready for it, (for any reason), time must be taken to complete the above steps, prior to giving Helideck clearance. If the checks are incomplete the Helicopter must be stood off.			