



Offshore helideck review checklist

Report No. 6.56/322
November 2001



International
Association
of Oil & Gas
Producers



Publications

Global experience

The International Association of Oil & Gas Producers (formerly the E&P Forum) has access to a wealth of technical knowledge and experience with its members operating around the world in many different terrains. We collate and distil this valuable knowledge for the industry to use as guidelines for good practice by individual members.

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Many of our guidelines have been recognised and used by international authorities and safety and environmental bodies. Requests come from governments and non-government organisations around the world as well as from non-member companies.

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Offshore helideck review checklist

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This report has been prepared for OGP by a team drawn from the Aviation Subcommittee of the Safety, Health and Personnel Competence Committee (SHAPCC).

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General instructions

References

In some countries, specific regulatory guidance has been issued and should be used to amend this checklist as necessary.

1. UK Civil Aviation Authority (CAA) Civil Air Publication (CAP) 437 is the primary reference used for this Checklist.
2. UK Offshore Petroleum Industry Training Organization (OPITO) refueling and HLO procedures publications are the primary training references.
3. Recognition is also given to the work of the BHAB and their Offshore Helideck Inspection Checklist which serves as a key reference for this checklist.

Non-compliances

Record each non-compliance with a note number and summarize at the end of the checklist in the Summary of Non-Compliances.

Inspection Requirements

Daily, Weekly, Monthly, Quarterly, Semi-Annual, and Annual Checks should be recorded on the form and retained. In some regions more frequent intervals may be used as necessary, and the form may be amended accordingly. Annually all items are inspected.

Inspection signatures

Location _____
 Inspector _____
 Inspection interval _____
 Date _____
 Additional remarks [] - check here and use back for comments

Inspection checklist

A General helideck information

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int.
1	Name of installation/vessel	N/A	
2	Type Platform / FPSO / FSU / SPM / Semi Sub / DSV / Seismic / Lay Barge / Crane Barge / Support Vessel / Jack Up / other (circle one & give details)	N/A	
3	Owner	N/A	
4	Helideck Approval or Fitness Certificate available? Date:	[]	
	Are any limitations noted?	[]	
5	Previous report (if available) Date: Non compliances rectified?	[]	3 years
6	Helideck height (in feet) (For mobiles give variable range and normal operating height) Height=	N/A	6.1
7	Installation/vessel identification (locations of name, full name displayed, size of letters, background, illumination, clearly visible from air from all 4 sides)	[]	4.1 1-2
8	Helideck plans (see Annex A) (Drawing No, date & revision, strength test. Do the plans accurately show the detail in Annex A. If not, state omissions)	Drawing#: Revision: Date: Strength test:	[]
9	Helideck Procedures Manual (HLO, fire, passenger handling, blocked helideck, unattended installation, fuel, emergency response, weather, adverse weather, etc.?) Date:	[]	

B Helideck surface

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int.
1	Colour Dark grey / dark green / aluminium / other:	[]	4.2.1
2	Condition (both paint & cleanliness) Last repaint:	[]	
3	Non-slip characteristics (estimate) High / medium / low / nil	[]	3.8.1
4	Last friction test Date: Result:	[]	3.8.5 3.13.3
5	Gutter or raised curb (give detail: around all of the perimeter?)	[]	3.8.2
6	Drainage (sufficient number of downpipes, slope, debris, filter fitted)	[]	3.8.2
7	Deck sealed Yes / No	[]	3.8.2
8	Aircraft tie down points (Location, quantity, flush, bar diameter - 20mm, condition)	[]	3.9

C Helideck dimensions

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int.
1	Overall helideck (dimensions in meters)	[]	3.7.1
2	Safe landing area (dimensions. Contains D circle)	[]	3.7.2

D Helideck markings

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Installation/rig (State name painted on deck)	[]	4.1.1 4.1.3 4.2.1
	(Height 1.2m, colour-white, position, outlined [alum.decks only])	[]	
	(Are other names on deck e.g. Block No. Oil Company, Logo? If so give details)	[]	
	Are there side identification panels? (visible all angles and directions of approach)	[]	
2	Perimeter line (Colour white, width 0.3m, location)	[]	4.2.1 4.1.4
3	Aiming circle (Colour-yellow, width 1m, inner diameter 0.5D, location 0.1'D' outboard)	[]	4.2.4
4	Chevron (For obstacle clearances) Length/width 0.79m/0.01m, colour-black, angle 210°, location - edge of D circle)	[]	4.2.2
5	Actual D value (Height 0.1m, Colour black, location, inboard of Chevron)(does it match physical measurements?)	D= []	4.2.2
6	Perimeter 'D' value (Value, quantity 3, colour white, height 0.6m, location, orientation)	D= []	4.2.2
7	'H' (size 4m x 3m x 0.75m) location, orientation (concentric with bisector), swung $\pm 15^\circ$ max)	[]	4.2.4
8	Max allowable mass (Value, size 0.9m, colour white, location. Design load calcs confirm value?)	[]	3.4-6 4.2.3
9	Prohibited Landing Sector (If used, provide location, angle, colours red/white hatching, reason)	[]	4.2.5

E Surface net (not required in all areas, if surface friction is adequate)

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Material [recommend sisal (no polypropylene)]	[]	3.8.4
2	Type Knotted/threaded	[]	3.8.3
3	Coverage (Covers aiming circle, clear of name and t value)	[]	3.8.3
4	Age/condition 1 / 2 / 3 / 4 / 5 years	[]	3.8.3
5	Rope diameter 20mm	[]	3.8.3
6	Mesh size 200mm	[]	3.8.3
7	Net size 6x6m / 121x12m / 15x15m / other	[]	3.8.4
8	Tension (2225N) Max lift 0.25m at center	[]	3.8.3
9	Tie down points Every 1.5m	[]	3.8.3
10	Method of securing Rope / webbing / ratchet tensioners	[]	

F Perimeter safety net

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Material Wire mesh / polypropylene / sisal / corrugated steel	[]	3.10.2
2	Width from deck edge 1.5m	[]	3.10.1
3	Condition/securely attached	[]	3.10.2
4	Last drop load test (75 kgs) Date	[]	3.10.1 (annual)
5	Hammock effect (Nil bounce effect)	[]	3.10.1
6	Drop down area protected	[]	3.10.1
7	Slope (slope at least 10 degrees. Highest point above deck level: 250mm)	[]	3.10.1
8	Covers drop down areas (unless adequate structural protection exists)	[]	3.10.1

G Perimeter lighting

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1 Colour	Yellow	[]	4.3.1
2 Serviceability (All working, brightness, condition of lens)	Yes / No	[]	4.3.1
3 Height & distance apart (<250mm, <3m)		[]	4.3.1
4 Power rating Candelas 25		[]	4.3.8
	Connected to uninterrupted (second generator) emergency power supply?	[]	4.3.8
5 Location	Co-incident with perimeter line	[]	
6 Limit of safe landing area (Have red lights been temporarily employed to delineate unsafe sectors? If so, state how the situation is going to be rectified.)		[]	4.3.2
7 Switching (Controlled from Radio Room/ Bridge or HLO)		[]	4.3.4

H Flood lighting

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1 Position, height & quality (Position, quantity, height, adequate illumination, brightness meets 10 lux & 8:1 ratio)		[]	4.3.3-5
2 Serviceability (All working)	Yes / No	[]	
3 Dazzle protection (What method is employed to avoid dazzle & type of unit)	Shuttering / Directional beam	[]	4.3.3
4 Switching (Controlled from Radio Room by HLO)	Yes / No	[]	4.3.4 4.3.8
5 Emergency power supply (In addition to the perimeter lights, are the floods connected to the uninterrupted (second generator)/emergency power supply?)	Yes / No	[]	4.3.8

I General lighting

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Installation floodlighting (All floodlighting angled so as to not dazzle pilots)	Yes / No	[] 4.3.3
2	Structures > 15m above deck level (Omni-directional red lights every 10m above deck level. To include all crane booms)		[] 4.4.3
3	Highest point (Omni-directional, colour, intensity)		[] 4.4.4
4	Light pollution		[] 4.3.4

J Obstruction marking & lighting

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Obstructions (List and give colour scheme)		[] 4.4.1-2
2	Crane colours (Colour [if close to helideck or 150° sector boundary])	Contrasting	[] 4.4.1-2
3	Lighting (Give detail)		[] 4.4

K Status lights

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Visible from all approach directions		[] 4.3.6
2	Connected to emergency supply/UPS		[] 4.4.8
3	Switching (Automatic and manual activation with connection to Emergency Power Supply)		[] 4.4.6

L Obstruction environment

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	210° Sector Obstructions (State items, location & height, max 0.25m within 1000m above deck level)	[]	3.7.2
2	150° Sector Obstructions (State items, location & height above deck level) a) up to 0.62 'D' (or 0.12 from edge of safe landing area)=0.05'D' 0.62-0.83 'D' (or 0.33 from edge of safe landing area)=gradient of 1:2	[]	3.7.4
3	180° 5:1 falling gradient (11.4°) for obstructions below the helideck level (State items, location, distance from the edge of netting and height below deck level)	[]	3.7.5

M Turbulence

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Structure (State items likely to cause turbulence)	[]	3.3
2	Hot emissions (State emissions, e.g. flares, turbine exhausts)	[]	3.3
3	Cold emissions (State emissions, e.g. vents, blow down)	[]	3.3
4	Air gap beneath helideck (State height & obstruction environment)	[]	3.3
5	Prevailing wind (State any restrictions in landing/to weight/approach-departure direction)	[]	3.3

N Refuelling systems

General comments only
(Use Refuelling System Inspection Form)

O Access points

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Locations (Primary and secondary)	[]	3.11.2
2	Handrails (Foldable if obstacle height?, height)	[]	3.11.5
3	Safety notices (Recommended tail rotor, clear deck, hearing protection, in dual language if necessary)	[]	3.11.5
4	Control of pax (System employed to prevent inadvertent access to helideck, frangible chainsat secondary access points)	[]	3.11.5

P Fire protection

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Foam monitors (Quantity, type)	[]	
	Aspirated / Non aspirated Manual / oscillating / oscillating with manual override / remote		
	If non-aspirated, state what aspirated back up available	[]	5.2.7
2	Delivery rate (Liters/min of applied foam)	[]	5.2.5
	_____liters/minute		
3	Concentrate (Capacity of tank, quantity in tank, type, percentage [marked container])	[]	5.2.4 5.2.6
	Capacity: Type: Quantity available: Percentage:		
4	Certificate of conformity (Cert. of conformity, test report on concentrate, water & produced foam [if applicable])	[]	5.3.3 (Annual)
5	Back-up concentrate (Quantity)	[]	5.2.6
6	Hydrant points (Quantity, location)	[]	5.2 8-9
7	Hand lines (Quantity, location, hand controlled spray/jet nozzles)	[]	5.2.8
8	Foam hand branch (Quantity, location, delivery rate)	[]	5.2 8-9

P Fire protection (continued)

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
9	Foam inductors (Quantity, location, concentrate-quantity, percentage setting, connection, Branch / Hydrant	[]	5.2.8 5.3.2
10	Dry powder (DP) (No. & capacity of each unit, location, access to helideck, last test date,) _____x_____ kg (45kg min)	[]	5.4
11	CO ₂ (No. & capacity of each unit, location, access to helideck, lance, last test date) _____x_____ kg (22kg min)	[]	5.4
12	Back-up DP & CO ₂ (Back up determined by duty holder but should be determined by circumstances. No & capacity, locations) DP _____x_____ kg CO ₂ _____x_____ kg	[]	5.4

Q Rescue equipment

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Rescue equipment box(es) (Location, quantity, condition, lighting)	[]	5.6.1
	Layout of the equipment	[]	5.6.1
	Accessibility from all helideck access points	[]	5.6.1
2	Checklist Attached to container	[]	5.6.2
3	Adjustable wrench (Quantity, location) 1	[]	5.6.1
4	Large rescue axe (Non wedge or aircraft type) 1	[]	5.6.1
5	Bolt cutters (Quantity, location) 1	[]	5.6.1
6	Large crowbar (Quantity, location) 1	[]	5.6.1
7	Grab or salving hook (Quantity, location) 1	[]	5.6.1
8	Heavy duty hacksaw (Quantity, location) 1	[]	5.6.1
9	Heavy duty blades (Quantity, location) 6	[]	5.6.1

Q Rescue equipment (continued)

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
10	Fire resistant blanket (Quantity, location)	1	[] 5.6.1
11	Ladder (Quantity, location)	1	[] 5.6.1
12	Life-line/rescue harness (Quantity, location)	1	[] 5.6.1
13	Side cutting pliers (Quantity, location)	1	[] 5.6.1
14	Set of assorted screwdrivers (Quantity, location)	1	[] 5.6.1
15	Harness knife c/w sheath (1 per deck crew)		[] 5.6.1
16	Self-contained breathing apparatus (Quantity, location, storage, spare bottles)	2	[] 5.6.1
17	Portable safety lamp (Quantity, location, operating life)	2	[] 5.6.1

R Protective clothing (RFF)

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Stowage type (Location, condition)		[] 5.8
2	Helmet with visor (Quantity, , type, BS/EN code, condition)		[] 5.8
3	Gloves (Quantity, type, PREN code, condition)		[] 5.8
4	Boots (Quantity, type, PREN code, condition)		[] 5.8
5	Fire tunic & trouser or one piece (Quantity, type, PREN code, condition)		[] 5.8

S Additional equipment

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1 Chocks ([Sandbag type best on decks with a deck net])quantity)	Sandbag / rubber / metal frame Quantity:	[]	6.9.1a-2
2 Tie down stops/ropes (Type, quantity - 6 minimum, break strenght min of wt of helo)	Webbing / rope / webbing with tensioners	[]	6.9.3
3 Scales for baggaage, freight, passengers (Type, max wt., cllibration date)	Calibration date:	[]	6.9.1b (Annual)
4 Helicopter start unit (Type, location, voltage. Can lead reach to a/c in any position, incl. in maint. programme?)	Rectifier, battery trolley, 28V DC	[]	6.9.1c
5 Snow/ice clearing equipment (If needed)		[]	6.9.1d
6 Equipment for showing passenger brief (Type, location, dual language or subtitles?)	Laser / brief	[]	ANO Art 39
7 Prohibited Landing Marker	4x4m red flag with diagonal yellow cross	[]	4.2.6
8 Windsock (Location, condition, illumination, in clear air?)		[]	4.1.5 6.4.2

T Radio equipment

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1 VHF Main (Call sign, location, quantity [min req. varies, eg 2 in N.Sea], ATSSD approved, details, connected to emergency supply/UPS)		[]	6.9.4
2 VHF portable (Quantity 1 min, with headset)		[]	6.9.4
3 NDB (ATSSD approved, details, ident, frequency)		[]	
4 AIP ENR 1-15 available		[]	
5 Radio log (written or electromagnetic, kept for 28 days, detailing: no of pax, pax wt, baggage/freight wt.)		[]	

U Weather equipment

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Anemometer (Location, calibration date, in clear air)	Date calibrated: []	6.4
2	Air temp (Calibration)	Date calibrated: []	6.4
3	Precision barometer (Location of a sensor relative to h/deck level, calibration date?)	Date calibrated: []	6.4
4	Visibility, cloud base & cover (Give details of equipment if available)	[]	6.4
5	Pitch/roll/heave & sea state (Give details of equipment if available)	[]	6.4
	Can the equipment record the max. figure over the preceding 10 mins?	[]	
6	Location of the readouts (Can the radio op access to all weather info?)	[]	6.4
7	Are personnel trained in weather observation?	[]	
8	Are helideck/bridge personnel knowledgeable on operator weather limitations and also on adverse weather policy?	[]	
9	AWOS? (Provide telephone or comms link available)	[]	

V Emergency response

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Helicopter emergency diagrams (Location, which types are covered?)	B212 / 365N / 365N2 / S76A / S76B / S76C / B214 / AS332LI / AS332L2 / S61N / Others	[]
2	Emergency procedures (Is there an Emergency Procedures Manual detailing helicopter emergencies?)	[]	5.10

W Helideck crew (note: OPITO or equivalent standard)

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Helideck Landing Officer (HLO) Total number, number per shift	[]	
	Completed: Basic offshore Safety Induction & Emergency Training Prog.	[]	
	Further Offshore Emergency Training programme	[]	
	Previously served as HLA or have previous suitable experience	[]	
	Have a Helicopter Refuelling Certificate meeting industry standard	[]	
	Have an RT license	[]	
	Possess current Emergency Helideck Team Member Certificate	[]	
	Have completed an initial HLO training programme	[]	
2	Helideck Assistant (HLA) (Total number, number per shift)	[]	
	Completed: Basic Offshore Safety Induction & Emergency Training prog.	[]	
	Further Offshore Emergency Training programme	[]	
	Have previous experience of handling helicopters	[]	
	HDA: have completed and initial training programme covering routine operations (including refuelling)	[]	
	Have a Helicopter Refuelling Certificate meeting industry standard, where required	[]	
	Have completed an approved Emergency Helideck Team Members Course	[]	
	HLO & HDAs: Training records available?	[]	

X General (exercises and drills)

	Remarks	✓ if OK	CAP 437 Ref. & inspct. int
1	Date of last practice in use of foam agents on simulated fuel spill	[]	
2	Date of last practice in use of portable equipment (including DP & CO ₂) on simulated engine fires	[]	
3	Date of last test of fire fighting systems	[]	
4	Aircraft evacuation drills, including removal of casualties, with and without smoke and breathing apparatus	[]	
5	Crash drills/briefings, to include high and low impact. On/off helideck incidents (preplanning, priorities, actions, techniques & problems likely to be encountered).	[]	

Y Summary of non-compliances

List of non-compliances

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____
- 9 _____
- 10 _____
- 11 _____
- 12 _____
- 13 _____
- 14 _____
- 15 _____
- 16 _____

Additional remarks

[] - check here and attach sheets

Annex A

Plans required - to scale

- GA of the entire Platform/Rig
- Elevation - clearly showing the 180° 5:1 sector
- Plan view of helideck and the obstacle environment

Detail to be shown

- All helideck markings, giving dimensions and color
- Deck net location
- Tie down points
- Perimeter net
- Lighting - both perimeter and floodlighting
- Location of RFFF
- Refueling system
- Guttering & downpipes
- Access points
- Windssock(s)
- 210°, 150° & 180° sectors to be clearly shown
- All obstruction non compliance's to be detailed, stating height above/below deck level
- Color scheme of above
- Structures that might cause turbulence over the helideck
- Hot emission sources e.g. flares, turbine exhausts

What is OGP?

The International Association of Oil & Gas Producers encompasses the world's leading private and state-owned oil & gas companies, their national and regional associations, and major upstream contractors and suppliers.

Vision

- To work on behalf of all the world's upstream companies to promote responsible and profitable operations.

Mission

- To represent the interests of the upstream industry to international regulatory and legislative bodies.
- To achieve continuous improvement in safety, health and environmental performance and in the engineering and operation of upstream ventures.
- To promote awareness of Corporate Social Responsibility issues within the industry and among stakeholders.

Objectives

- To improve understanding of the upstream oil and gas industry, its achievements and challenges and its views on pertinent issues.
- To encourage international regulators and other parties to take account of the industry's views in developing proposals that are effective and workable.
- To become a more visible, accessible and effective source of information about the global industry, both externally and within member organisations.
- To develop and disseminate best practices in safety, health and environmental performance and the engineering and operation of upstream ventures.
- To improve the collection, analysis and dissemination of safety, health and environmental performance data.
- To provide a forum for sharing experience and debating emerging issues.
- To enhance the industry's ability to influence by increasing the size and diversity of the membership.
- To liaise with other industry associations to ensure consistent and effective approaches to common issues.



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