



Exploration & Production

GENERAL SPECIFICATION

Logistic and Operational Support

GS EP LSO 110

Environmental effects considerations for helidecks

02	01/2012	Update following the EP reorganisation, march 2011
01	01/2006	Addition of EP root to GS identification
00	01/2005	First issue
Rev.	Date	Notes

Owner: OPS/LSO

Managing entity: OPS/LSO



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1. Scope

This General Specification summarises the requirements for the design, construction and setting up of helidecks on offshore structures (fixed installations: jack-up, platforms, etc. – or floating installations: vessels, semi-sub platforms, barges, FPSOs, MODUs, manned installations or NUI, etc.) regarding the environmental effects.

The design of helidecks shall comply for all aspects with the [CAP 437](#) requirements.

This General Specification is based on two main documents: the [CAP 437](#) (as a standard: see more particularly the Chapter 3) and the [CAA PAPER 2004/02](#) (as a guidance document).

The main points to be addressed during the helideck design process are listed here:

1. Helideck structural design
2. Helideck height and air gap under the helideck
3. Helideck turbulence assessment
4. Temperature rise due to hot exhausts
5. Cold flaring and rapid blow-down systems
6. Special considerations for moving helidecks
7. Multiple platform configurations

The DGEP aviation experts shall approve the design of helidecks.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
CAP 437	Offshore Helicopter Landing Areas – Guidance on Standards

Professional Documents

Reference	Title
CAA PAPER 2004/02	Helideck Design Considerations – Environmental Effects
DNV-OS-E401	Offshore Standard : Helicopter Decks

Regulations

Reference	Title
ICAO Annex14	Volume II : Heliports



Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
GS EP STR 102	Design of offshore topside structure

3. Acronyms

CAA	Civil Aviation Authority (United Kingdom)
CAP	Civil Aviation Publication
CFD	Computational Fluid Dynamics
D Value	The largest overall dimension of the helicopter when rotors are turning
DNV	Det Norske Veritas
FPSO	Floating Production Storage & Offloading
FSO	Floating Storage & Offloading
HLL	Helideck Limitation List
ICAO	International Civil Aviation Organization
LFL	Lower Flammable Limit
LOS	Limited Obstacle Sector ($\leq 150^\circ$; see CAP 437 Glossary)
MODU	Mobile Offshore Drilling Unit
NUI	Normally Unattended Installation
OFS	Obstacle Free Sector ($\geq 210^\circ$; see CAP 437 Glossary)
SLA	Safe Landing Area (see CAP 437 Glossary)

4. Helideck design considerations

4.1 Evidence of helideck problems

It is almost inevitable that helidecks installed on the cramped decks of offshore structures will suffer to some degree from their proximity to tall and bulky structures, and to gas turbine