ShoreConnection

HELIDECK MONITORING SYSTEM

The benchmark

SecRec HMS

HELIDECK MONITORING SYSTEM

- Safe and efficient helicopter operations
- Durable, accurate and timely
- Professional reports
- Easy installation - low maintenance cost
- Customized to your helideck
- Wide range of additional modules

Motion and meteorology
for offshore aviation

Weather and dynamic motions represents potential hazards to offshore helicopter operations.
Our SecRec HMS provides motions and meteorological information which are essential to support safe and efficient helicopter operations to merchant rigs and vessels, exceeding all your expectations with its innovative technology and high quality of materials. With its modular design, we can customize a SecRec HMS to suitably meet your needs.

User focus
We have focusesd on developing a user friendly and durable product that provides a professional impression to recipients of reports generated from a SecRec HMS.
Automatic HMS data and meteorological observations are reported and used to ensure that safety limitations, set by the authorities and helicopter operators, are met.
The comprehensive Operator and Maintenance Instruction provide instructions and required information for the daily use of the system.

Pre flight reports
Pre-flight reports and display screen shots derived from the system are E-mailed ashore to the Helicopter Operators for flight planning purpose.

Radio Message
During the approach and while on-deck, the Helicopter Pilot has to make vital safety decisions. In this phase, updated HMS information is passed on via radio from the vessels Radio Operator to the Helicopter Pilot.

Unique replay and 12 months recording feature
All HMS data are recorded for 12 months. These data can be replayed and analyzed on board or even ashore using the unique playback and data export function. The SecRec HMS can also display and record video using a helideck camera. This popular combination makes investigation fast and precise.

Applicability of Meteorological Equipment to Helideck Categories

Currently there are six different helideck categories which are referred to in CAP437 and listed in the Helideck Certification Agency (HCA) Helideck Limitations List (HLL):

HLL Code A	Fixed Installations
HLL Code B	Semisubmersible - Rigs and Lay Barges
HLL Code C	Large vessels; e.g. Drill vessels, Jack-ups, FPSO and Barges
HLL Code D	Small vessel; bow mounted helideck
HLL Code E	Small vessel; aft or amid ship mounted helideck
HLL Code F	Oil tanker mooring bouy

The Meteorological requirement for the different helideck category are listed in CAP437 Chapter 6 pt 4.2 and Appendix G, Chapter 5. **Note!** Helideck category D, E and F with presumed less frequent flights, are not required to be fitted with the Cloud Sensor or the Present Weather & Visibility Sensor.
If your helideck category is in doubt, we recommend you to discuss your operational profile with HCA to determine your meteorological category before you purchase a SecRec HMS.

Motion Categories and Operational Limitations

Floating helidecks (HLL code B,C,D,E,F) are divided into three motion categories for roll, pitch, inclination and heave;
Cat 1/ HLL codes B and C
Cat 2/ HLL code E
Cat 3 / HLL code D

Note! Small vessels will be categorized 2 or 3 on inspection by the HCA and their helideck certificate and associated Jeppesen or EAG data will reflect this (except that small vessels with amidships decks will always be Category 2).

Layout – SecRec HMS

A SecRec HMS consists of an Operator Station, sensor package and interfaces;

- Motion Sensor for roll, pitch, heave, surge, sway, yaw (N/A for HLL Code A)
- Wind speed and direction sensor/ distribution
- Air -temperature, -dew point and - humidity sensor (calculated sky base)
- Two Air pressure sensors
- GPS distribution for time date, speed, magnetic variation
- Gyro distribution for true heading
- LAN for E-mail reporting and remote support
- Uninterruptable Power Supply

HLL Code A, B and C

- Cloud Ceilometers (Sensor) for cloud amount and height
- Visibility and Present Weather Sensor

Add-on options

A SecRec HMS can always be expanded with many add-on options such as:

- Camera module with integrated video display/ recording of helideck operations.
- Back-up HMS module
- Add-on Operator Stations
- Slave Operator Station (HMS SW on any PC in the LAN)
- Serial / Data Export of selected HMS data to third party SW
- Wave and sea surface current - Radar / Interface
- Acoustic Doppler Current Profiler (ADCP) / Interface
- Interface to Sea Surface Water Temperature sensors (SAR vessels)
- Interface to Draft Sensors for automatic attitude compensation
- GPS-Compass (for installations without Gyro and GPS)
- Helideck Light Control from Panels and HMS OS
- Interface/ Control Switch for Helideck Status Light manual / auto (HMS)
- Alarms / Status to ICAS and/ or bridge alarm system

METAR

Semi-automatic METAR reports can be added where this is a requirement for national / international aeronautical weather forecast services.

This is normally only required by national aviation authorities for a few permanently located units.

Back-up / Contingency Meteorological observation equipment

All CAP437 (HCA certified) helidecks are recommended to have a meteorological backup solution for the following data;
Wind Speed and Direction, Air- Pressure, -Temperature, Humidity and Dew point.
This may be an automated package or individual hand held instruments.
For frequently used helidecks we recommend an automated meteorological back-up module/ HMS.

Conforming Standards

ICAO Annex 14

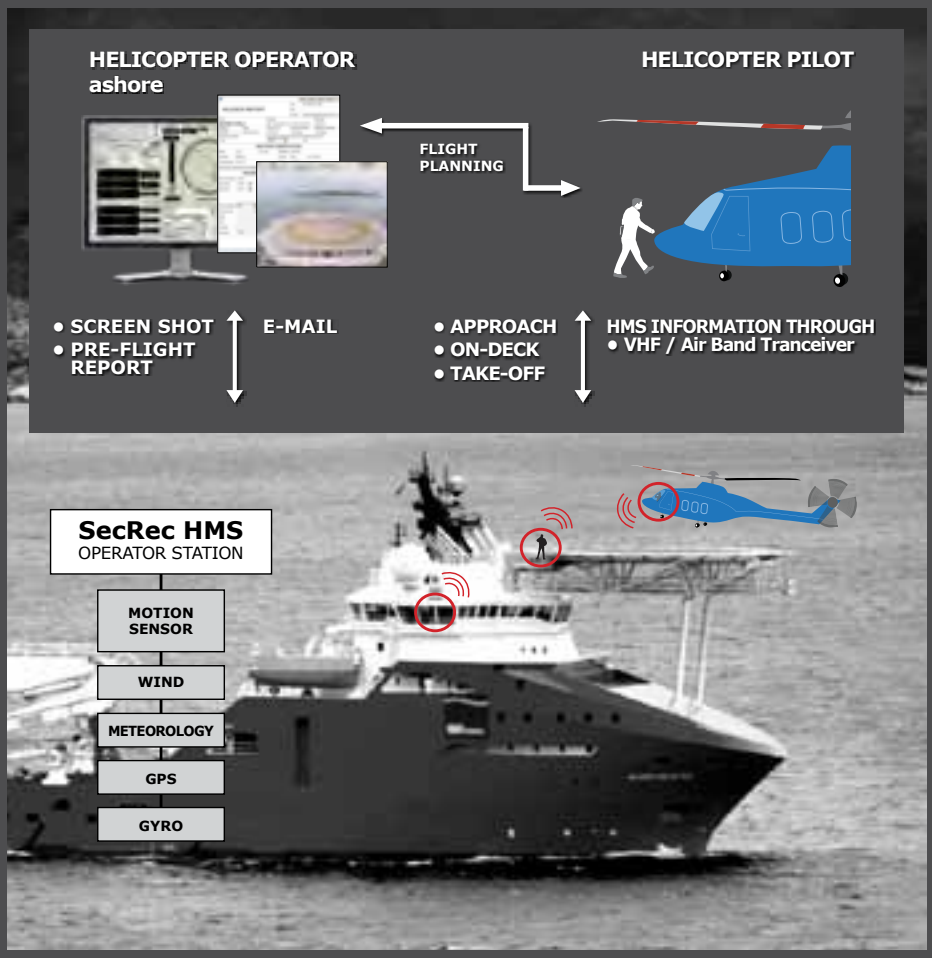
UK CAA guidelines CAP437 / CAP746

Norwegian CAA / BSL D 5-1

UK / Norwegian Standard HMS rev 8 from HCA, Bristow, Bond and CHC

Brazilian, NORMAM 01, Chpt. 6

Systems delivered after Q3 2008 are operationally ready for the upcoming CAP 437 MSI / WSI scheme



Data Verification Report (DVR)

The Helideck Certification Agency (HCA) and the helicopter operators both require a valid DVR of the HMS. All displayed values have to be compared against reference sources and verified to be within the specification. This verification report is done by, or in cooperation with ShoreConnection International, who issues the report and submits this to HCA or the local helideck certification authority.

Installation and commissioning

A SecRec HMS is normally installed and commissioned in a few days when retrofit to a helideck. On board a new build the HMS is normally installed by the yard/ system integrator. By following the Installation and Commissioning Manual any electro technician can install and start up a SecRec HMS.

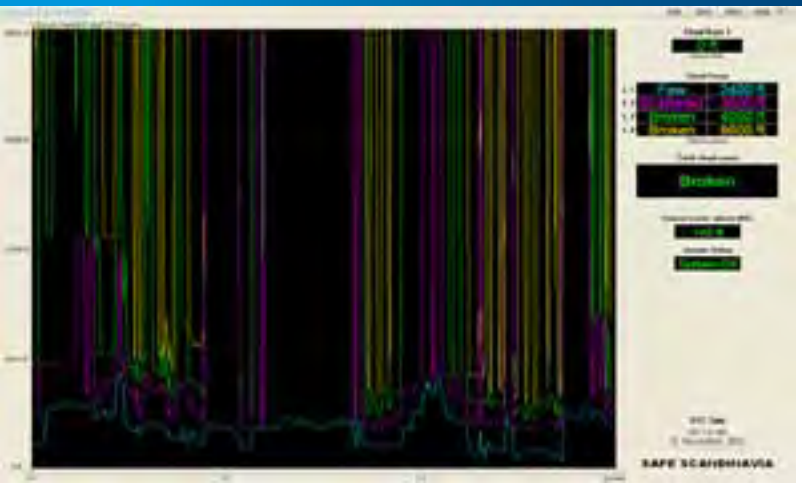
Selection and location of sensors

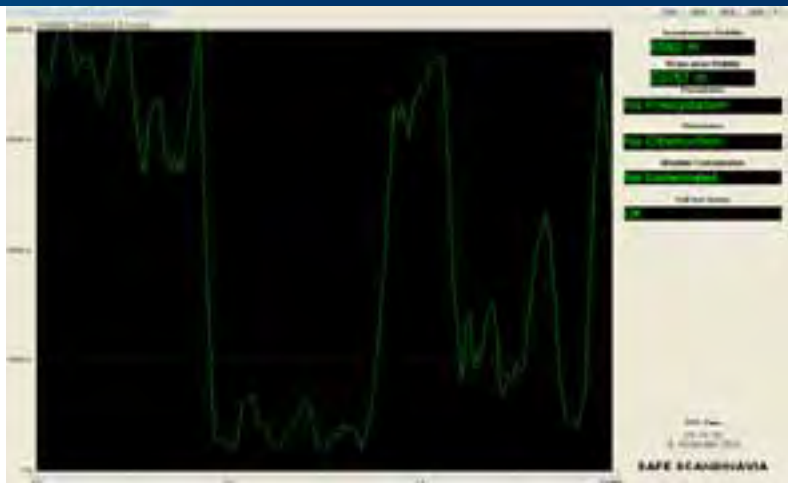
In order to ensure reliable and long term stability of measurements, it is important to select suitable sensors at their optimal locations. ShoreConnection helps customers to locate and interface a wide range of sensors in many different categories.

THE HMS DISPLAY

- Helideck/Vessel name
- Wind speed and direction
- Vessel and helideck heading
- Motion Limit Indication
- UTC time, date, speed over ground
- Air temperature, humidity - dew point
- Roll, pitch, inclination, heave and heave rate
- Orientation of the helideck relative to the vessel
- Air pressure (QNH and QFE)

ADDITIONAL DISPLAY





Top left:
Optional Cloud Ceilometers Display

Top right:
Optional Visibility and Present Weather Display

Bottom left:
Optional Light Control module

Bottom left:
Optional Camera module

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