



OUR REALISTIC AND RELIABLE VR SIMULATOR MEETS THE GENERAL TRAINING REQUIREMENTS AND COVERS DUTIES OF:

HLO

Helicopter landing officer

HDA

Helideck assistant

**Helideck VR
simulator**



Key features

Unique on the market

The first domestic VR simulator with the generous helideck-handling training program for personnel of mobile offshore units and sea vessels.

Excellent visualization

Highly realistic visualization system, accurate response to the user actions and most advanced VR equipment ensure the detailed elaboration of operations on the helideck.

Realistic digital twins

Digital twins of ships, helicopters and equipment precisely simulate the real objects: full immersion and perception of the authenticity of what is happening enhance the quality of training.

Elaborated training scenarios

Available set of scenarios aligns with regulatory documents, international maritime norms and standards (IMO, IATA, OPITO), and considers the real experience in offshore helicopter operations on vessels and other offshore facilities.

Flexible configuration

Modular software architecture provides customizable delivery of simulator functionality and easy scalability to develop new training programs.

Scope of application

Multi-user Helideck VR simulator is designed for marine personnel qualification assessment and training to conduct offshore helicopter operations on any offshore platform or vessel.

Regulations

HLO/HDA training program is developed on the basis of Article 7 requirements of IMO Resolution A.741 (18) "International Safety Management (ISM) Code", IMO Resolution A.1079 (28) "Recommendations for the training and certification of personnel of mobile offshore units (MOUs)", IMO Resolutions A.855(20) "Standards for on-board helicopter facilities", as well as considering the OPITO standards for training and assessing the competencies of helipad personnel "Helideck Operations Initial Training Standard (HLO and HDA Initial Training)", "Helideck Assistant (HDA) Workplace Competence Assessment Standard", etc.



Training goals

Practical exercises for HLO/HDA personnel include elaboration of the following skills:

- ★ Familiarization with procedures, regulations and regulatory documents
- ★ Job description and responsibilities of the personnel involved
- ★ Key aspects of briefings for the helicopter operations (ops) support group
- ★ Radio communication skills development for safer carrying out of operations
- ★ Coordination of vessel and helicopter crews' actions
- ★ Preparation of the helideck for landing
- ★ Skills to operate specific helideck equipment
- ★ Safe landing and takeoff
- ★ Loading and unloading of passengers and cargo
- ★ Prompt response to emergency situations

Exercise scenario

Workplaces for instructor and student(s) are available.

Exercise participants perform tasks according to their assigned roles and work out the coordination of the helicopter operations (ops) support group:

PIC

Pilot in command

SS

Support (working) staff

OOW

Officer of the watch

HLO

Helicopter landing officer

HDA

Helideck assistant

M

Master

Stages of the ongoing exercise follow the formal procedure of the scenario being performed. Interaction among participants is organized by the voice messages transmission between workstations, which simulates radio communication.





Instructor

Instructor supervises training and learning processes using a desktop PC and workstation software with all the necessary functionality, which provides full control of the exercise:

- ★ Exercise initialization and client operation control
- ★ Training module (a resource to conduct the exercise) to be selected
- ★ Exercise mode to be selected: a training mode or an exam mode
- ★ Tips in training mode, which facilitate the exercise completion
- ★ Correctness evaluation for all steps and stages of the exercise
- ★ Role assignment and establishing a connection to the exercise
- ★ Managing the ongoing exercise and creating various emergency situations
- ★ Unhindered movement within a virtual scene
- ★ Voice commands to other participants via the radio communication
- ★ Exercise recording and playback

Student

2 student client configuration options are available:

PC client

A desktop PC
(in case VR equipment is not available)



VR client

A standalone VR headset



PC client

Use keyboard, mouse, game controller and the visualization available on the PC monitor to interact with the virtual environment.

VR client

Use of VR controllers and visualization is available in the VR headset to interact with the virtual environment.

Moving within the training area space allows moving in a virtual scene. The accessible area and safety rules are determined by the instructor at the exercise preparation stage.

Regardless of the configuration, the following functionality is available:

- ★ Viewing the final results of an exercise
- ★ Confirmation of readiness to start the exercise
- ★ Software setup and radio communication try-out
- ★ Moving in the virtual scene
- ★ Interaction with helideck equipment
- ★ Radio communication between the participants of the exercise
- ★ Setting up the voice commands, which are to be given to other participants of the exercise

Tips are introduced for the training mode: necessary actions to be taken and goals to be reached are displayed over objects in the virtual environment at each step of the exercise.

Potential emergency situations

Students also acquire skills to quickly respond to the following potential emergency situations:

- ★ Exiting the helicopter towards tail rotor
- ★ Forgotten brake pads
- ★ Crane operations before helicopter landing or taking off
- ★ Outman access to the helideck
- ★ Loss of communication between HLO and navigation bridge
- ★ Exiting the helicopter in a helmet
- ★ Loss of communication between HLO and helicopter crew
- ★ Incorrect net mount (e.g. loose sling)
- ★ Loss of orientation in case of distress or getting a foreign object (dust) into man's eyes



