Simulator

FFLBS-A1 FREEFALL LIFEBOAT SIMULATOR
(full mission, on the 6 DoF platform, class A)

Purpose

FFLBS-A1 Free-fall lifeboat simulator is intended for training of personnel working on ships equipped by free-fall lifeboat in accordance with STCW Code:

- Section A-VI/2 STCW Code "Specification of the minimum standard of competence in survival craft and rescue boats other than fast rescue boats";
- IMO Model Course 1.23 "Proficiency in Survival Craft and Rescue Boats (other than Fast Rescue Boats)" (2024 Edition),
- Section B-I/14 STCW Code "Section B-I/14 Guidance regarding responsibilities of companies";
- Section A-VI/1, Table A-VI/1-1 "Specification of minimum standard of competence in personal survival techniques".

FFLBS-A1 is included into training package on the proficiency in survival craft.

Implementing of simulator into the training process will provide training center conformity with IMO Model Course 1.23 "PROFICIENCY IN SURVIVAL CRAFT AND RESCUE BOATS OTHER THAN FAST RESCUE BOATS" (2024 edition).

New edition emphasizes practical training sessions, that require access to a navigable river, lake or the sea, preferably in harbor or estuarial waters. The practical drills and evaluation could be carried out aboard a ship, making use of its equipment and facilities.

At the same time, the training elements of the practical drills and exercises related to the **launch**, **recovery**, **operation** and **manoeuvring** of lifeboats and rescue boats, including night drills, drills into **rough seas**, and drills in **ice covered waters** may be conducted using simulation.

Target group

Deck - Management
Deck - Operational
Deck - Support

Engine – Management
Engine – Operational

Ship types

All types

Training elements related to equipment familiarization and survival craft seamanship should still be delivered using an **actual** survival craft conforming to the LSA Code.

The simulator can be used to train the coxswains of free-fall lifeboats operated on mobile offshore units in accordance with OPITO standard "Offshore Lifeboat Coxswain Training"

Knowledge and skills

The simulator allows to drill the following skills:

- boarding lifeboat,
- free-fall launching,
- clear the ship's side,
- handling and manoeuvring of lifeboats in different weather conditions, including rough seas, and at night,
- steer a lifeboat by compass,
- beaching lifeboat.

Structure

The simulator includes the following equipment and software:

- gangway and embarkation station,
- free-fall lifeboat model, which is a part of a real fire-retardant lifeboat, conforming with LSA Code.
- 6 DoF dynamic platform
- computer equipment,
- CCTV equipment,
- simulator software.

Operational scheme

- The instructor brings the lifeboat to the "embarkation" position.
- Crewmembers walk up the gangway and embark the lifeboat and fasten the seat belts.
- The coxswain takes place at the steering wheel.
- The instructor brings the lifeboat into "launching" position. In this position the lifeboat starts to wallow with the vessel in distress on which it is mounted.
- The coxswain starts the engine and initiates free-fall launching. Entry into the water is not made perfectly, but taking into account the state of the sea.

- Then the coxswain clears the ship's side and carries out handling the lifeboat in different weather conditions including rough sea.
- All crewmembers can feel some stress during launching, refloating and being in the lifeboat, but navigating in the safe manner.

Lifeboat model

The used lifeboat model is a part of a real fire-retardant free-fall lifeboat, that complies with LSA Code, with the bow cut off. The bow section is closed by an end bulkhead made of the lifeboat hull material.

The model is designed to seat a coxswain and 4 crew members.

At the request of the customer, the hull of the lifeboat can be marked with the special name of the ship or name of the organization and port of registry as well as logotype.

VHF stations are used for the instructor's interaction with the coxswain.

Dynamic platform

The dynamic platform is designed for mounting a model of a lifeboat with a crew of not more than 5 persons on it and ensures the movement of the lifeboat along the trajectories and at the speed set in the software, including free-fall launching and float free, as well as the behavior of the lifeboat on the water surface in rough sea. Before launching, the dynamic platform performs movements that simulate the movement of a vessel on the waves.

CCTV equipment

CCTV system is installed in the cockpit of the lifeboat with information display to the instructor's workplace, and with the possibility of recording and archiving performance of exercises.

Simulator software

The software consists of:

- Instructor WorkPlace (IWP),
- Student WorkPlace (SWP),
- Dynamic platform control module,
- Module for processing commands from the lifeboat controls.

IWP functions:

- choice of the navigation area;
- adjusting wave height, time of day, lifeboat drift speed and direction;
- video and audio monitoring of what is happening inside and outside the cockpit.
- video recording for debriefing.
- emergency stop of the exercise, return of the simulator to its initial state.

SWP functions:

- Lifeboat operation, including:
  - operating an engine,
  - freefall launching, including the use of the main and emergency release device,
  - clearing the distress ship's side and lifeboat handling in rough sea and in different weather conditions,
  - use of steering gear,
  - steering a lifeboat by compass,
  - beaching a lifeboat,
- display of the surface situation.

Navigation areas:

- Open sea with a vessel in distress and the rescue vessel.
- A part of the sea near coastline, for drilling skills of intentional grounding a lifeboat.

Dynamic platform control module

The module controls the dynamic platform in order to ensure its movement along the trajectories corresponding to the free-fall launching and refloating, as well as the behavior of the lifeboat on the water surface in rough weather.

Module for processing commands from the lifeboat controls

The module ensures processing commands from the following controls:

- engine control panel buttons,
- engine throttle,
- main steering gear,
- release devices,
- top light button,
- search light button.

Methodical guidelines for using the simulator

The simulator is supplied in the set with the guidelines for the use of the simulator, developed in accordance with the Technical description and operating instructions for the fire-retardant free-fall lifeboat.

Operating conditions of the simulator

Requirements for the premises for the delivery, installation, storage and use of the simulator:

- heated, dry, enclosed, well-lit, with dimensions: for the model of the lifeboat, platform and ladder with the embarkation station - at least (L x W x H, m) - 10 x 10 x 5,5; for the instructor's workplace - at least (L x W, m) - 2 x 2;
- a separate, well-ventilated or forced-cooled premise for a hydraulic oil station with dimensions of at least (L x W, m) - 3 x 3.
- stationary electric network 220V and 380V, total power consumption of at least 10 kW.

Additional options

The simulator can be supplied with e-learning modules for theoretical education, multimedia training software for practice, and knowledge assessment software for testing, which are combined into training package on the proficiency in survival crafts.

Simulator classes

The simulator can be presented in different classes:

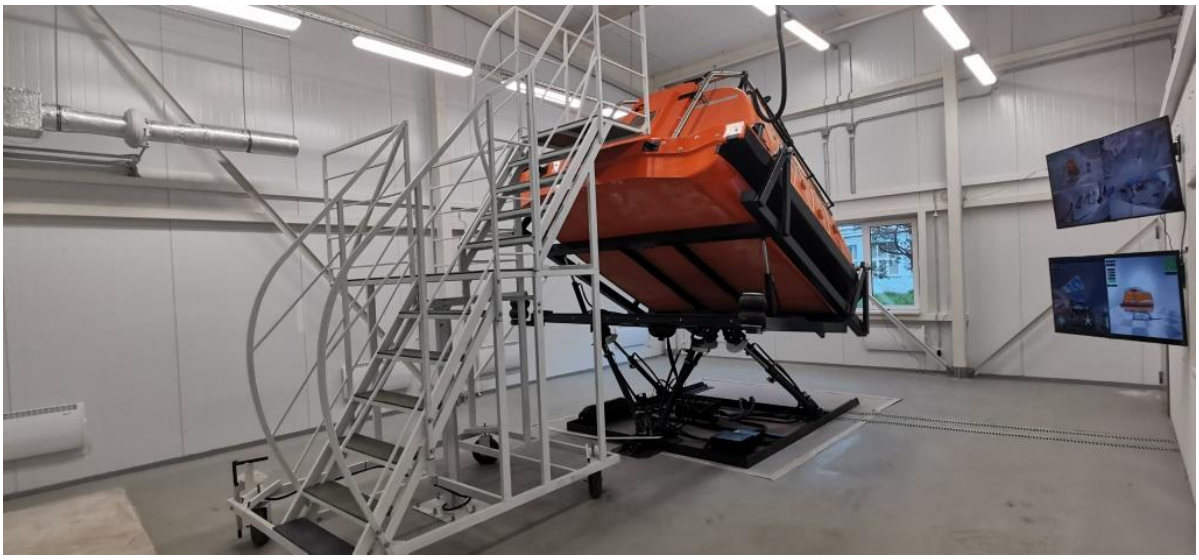
- **FFLBS-A1** – class A, full mission, on the 6 DoF dynamic platform, simulator software
- **FFLBS-B** – class B, with real controls, without 6 DoF dynamic platform, simulator software,
- **FFLBS-C** – class C, simulator software.

Legislation

- Regulation VI/2 STCW Convention, Section A-VI/2 STCW Code, Table A-VI/2-1" "Specification of the minimum standard of competence in survival craft and rescue boats other than fast rescue boats",
- IMO Model Course 1.23 "Proficiency in Survival Craft and Rescue Boats (other than Fast Rescue Boats)" (2024 Edition),
- Section B-I/14 STCW Code "Guidance regarding the responsibilities of companies and recommended responsibilities of masters and crew members",
- Regulation VI/1 STCW Convention, Section A-VI/1 STCW Code, Table A-VI/1-1 "Specification of minimum standard of competence in personal survival techniques",
- OPITO Offshore Lifeboat Coxswain Training Standard.

Simulator

FFLBS-A1 FREEFALL LIFEBOAT SIMULATOR
(full mission, on the 6 DoF platform, class A)



Gangway, embarkation station and lifeboat model

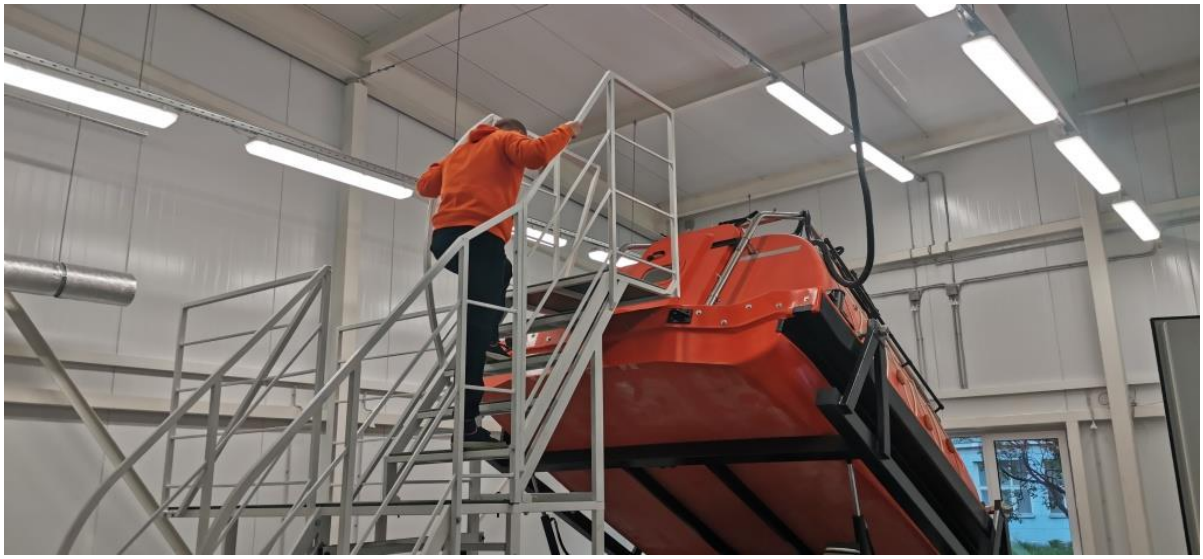
Lifeboat model

6 DoF dynamic platform

Web: http://www.stormsimulators.com/

CCTV equipment


Intructor WorkPlace


Students walk up the gangway

Web: http://www.stormsimulators.com/

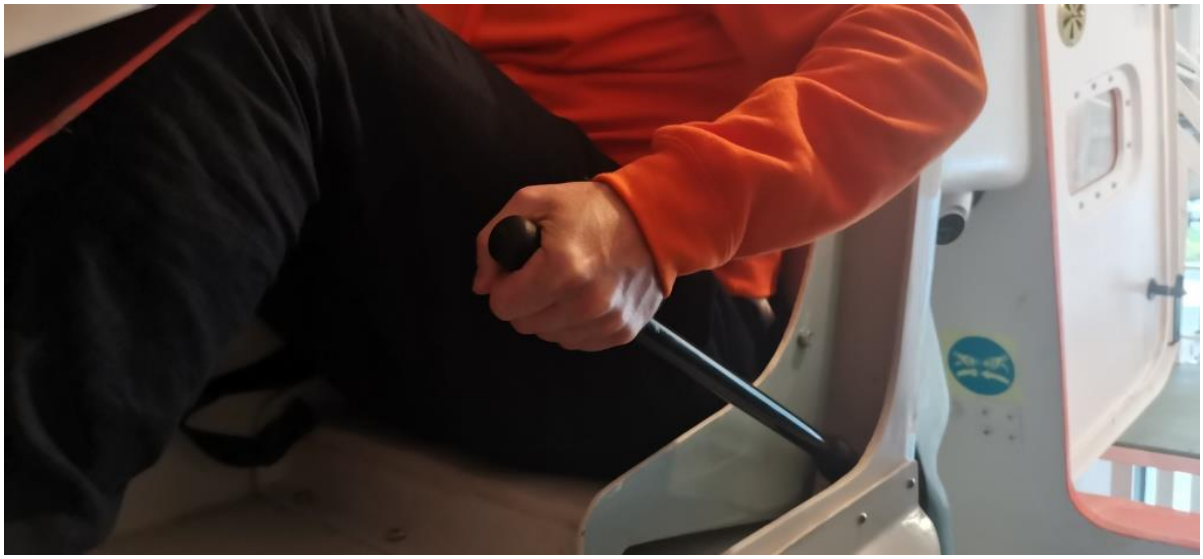
Students embark the lifeboat

Students fasten the seat belts

The coxswain takes place at the steering wheel

The coxswain takes place at the steering wheel

The coxswain starts the engine



The coxswain initiates free-fall launching

The coxswain clears the ship's side and carries out handling the lifeboat at daylight, at night

Dynamic platform provides lifeboat movement during free-fall launching and in rough sea