# **SSH** Steering Simulator for Helmsman



# IS INTENDED FOR TRAINING OF:

- RATINGS FORMING PART OF A NAVIGATIONAL WATCH and ABLE SEAFARERS DECK
- OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH





- SSH is a new generation simulator, developed with the usage of the most advanced computer technologies.
- High quality visualization of exercise area and physical models of ships allows the students to work out exercises in conditions, close to reality.
- Ergonomics and ease of interface of instructor workplace allows mastering the functionality of the software and begin the educational process in the shortest time.
- SSH is a means of exercising of practical skills according to the Module "Bravo" of the "STORM-M" Technology and is a part of a class of complex training of the ratings forming part of the navigational watch of the sea and inland waterways vessels.





# **Purpose**

"SSH" Simulator is developed to provide the "Mandatory minimum requirements for certification of ratings forming part carrying a navigational watch" (Section A-II/4 of the STCW Code) and is dedicated to:

- training of ratings forming part of a navigational watch of sea-going and river vessels to gain their competence, knowledge, understanding and professionalism needed for performing the function "Navigation at the subsidiary level" (columns 1 and 2 of the Table A-II/4 of STCW Code);
- demonstration of competence obtained in the training or approved in-service experience (column 3 of the Table A-II/ 4 of the STCW Code);
- competency assessment in accordance with the criteria listed in the column 4 of the Table A-II/4 of the STCW Code.

In accordance with Regulation II-5 of the Convention able seafarer deck should meet the requirements for certification of the rating forming part of a navigational watch. That's why "SSH" Simulator may be used as e-learning means for training able seafarers deck.

List of basic knowledge and skills, worked out with the use of the simulator according to those in Section A-II/4 and described in the Table A-II/4 of the STCW Code:

- 1. Steering and executing helm orders including commands submitted in English.
- 1.1. Executing helm orders submitted in national language.
- ${\it 1.2. Executing helm orders \ submitted in English} \ .$
- 1.3. Transition to automatic steering.
- 1.4. Change-over to hand steering.
- 1.5. Hand steering in the "Tracking" mode.
- 1.6. Hand steering in the "Common" mode.
- 2. Performance of necessary visual and aural monitoring.
- 2.1. Visual identification of the object at daylight.
- 2.2. Visual identification of the object at night.
- 3. Facilitate monitoring and safe management of manned.
- 3.1. Training procedures to intercession on watch.
- 3.2. Training procedures to maintain a watch.
- 3.3. Training procedures to hand-over watch.
- 3.4. Training procedures to relief of watch.



#### Simulated models

The simulator includes the following models:

Active models:

1 model of merchant vessels more 4000 GRT.

Target models:

3 models of merchant vessels more 4000 GRT.

Cutter, Motor boat, Sailing Yacht, Scooter, Marine Patrol Vessel.

#### **Exercise areas**

"SSH" contains the following navigable:

- Marine area passage of the narrows;
- District approach from the sea port;
- High sea area.

## Configuration

The simulator consists of the Instructor WorkPlace (IWP) software and one or several Students WorkPlaces (WPS). WPS can be presented in base or compact configuration.

Base configuration includes steering stand with built-in steering wheel and sensor control panel, and visualization system on the LCD panel(s).

Compact configuration includes steering stand and visualization system of the surfaced plant which come out on the display of the monitor. Steering is carried out with the help of joystick and mouse.

#### Documentation

The simulator is supplied with a set of technical and operational documentation, including training and guidance on practical training.





### Instructor WorkPlace (IWP)

Instructor WorkPlace (IWP) manages the process of training the student.

The instructor provides:

- choice of exercises and adjusting the initial parameters (area of navigation, hydrometeorological conditions, time of the day, placement and trajectory of the target vessels, overload situations, installation of navigation signs);
- entry of new targets;
- visual control of the students exercising with the help of virtual cameras:
- getting under way the active vessel and setting its speed,
- active management of the students vessel,
- recording of the exercise for the debriefing.

In order to provide conformity with US Coast Guard recommendations (MERPAC RECOMMENDATIONS ON THE SPECIFICATIONS FOR SIMULATORS TO BE USED TO TRAIN AND/OR ASSESS APPLICANTS FOR CERTIFICATION AS AN RFPNW) Instructor can enter the following situations:

- implementation of gyro-compass, steering pump and steering motor failure function;
- implementation of the steering alarms functions.

For assessment of competence of RFPNW in accordance with "ASSESSMENT OF COMPETENCE RATING FORMING PART OF A NAVIGATIONAL WATCH. (USCG 16721 NMC Policy Letter No. 14-02 24 July 2002)" STORM has developed SSH Simulator contents exercises for demonstrating of competence.



# Students workplace (WPS)

WPS provides the student with the opportunity of multiple fulfillment of the exercises set by Instructor's Workplace and improving practical skills.

Students workplace (WPS) imitates:

- steering stand including:
  - "autopilot" simulator in the "analog" and "digital" versions with the operational modes:
    - "Manual",
    - "Tracking",
    - "Auto",
  - steering wheel,
  - magnetic compass,
  - gyro compass repeater,
  - helm,
  - direction finder,
  - course recorder,
  - binocular
- visualization of the surrounding surface situation.







