

Straddle carrier simulator



A red-faced learner steps out of the cabin of a straddle carrier. He has been concentrating hard when putting ten containers neatly at the correct places high above the harbour site without making mistakes, well within the time limit, while it was really hectic at the terminal. 'You are ready for the exam,' the lecturer calls to him from the control room. The learner feels confident, too. He knows he can manage in actual practice.

In the centre of the STC-Group building is an impressive space in which the straddle carrier simulator was built. Neatly integrated projections that cover about 320 degrees simulate the loading and offloading of containers at a terminal. During the simulations, the learner sits in a real cabin and carries out instructions. The lecturer can follow him by means of a camera and monitor.

Unique

The straddle carrier simulator of the STC-Group is unique. Nowhere in the world a straddle carrier or crane simulator is used where the image is projected against the inside of a spherical space. Consequently, this simulator is fully occupied with great regularity for 24 hours from Monday to Friday and not seldom at the weekends, too.

The STC-Group itself has had this innovative engine developed. An expensive matter, the more so because fifteen different projectors are required to project the images on the spherical screen. Similarly, the motion base is unique in its kind and ensures that the cabin can move and tilt to all sides. At the top, the cabin is secured to a computer-guided frame. The movements that the learner sees around him are synchronised with the movements that he feels.



Advantages

Working with the simulator presents great advantages compared to practising on straddle carriers on location. One of the most important advantages is that the training is considerably cheaper. Moreover, real straddle carriers are seldom available for training purposes. In the past, when training on real carriers, it happened regularly that training had to be stopped because a ship was coming in. Training must not interfere with the real work. Another advantage of the simulator is that the learner can make mistakes without negative consequences. When the straddle carrier collides with a pile of containers, the motion base ensures that the impact is properly perceptible in the cabin. The collision is also accompanied by a loud noise. Of course, real damage will not be caused, but the learner is certainly aware of the mistake he has made.

The course

A rotation system with four learners is used. They begin the course with fairly easy exercises and end with the most difficult assignments. People with long work experience on the straddle carrier have developed the lecture material and the scenarios. The learner is briefed before the simulation. An assignment can be, for example, to move a number of containers according to a strict time schedule. During the simulation, the instructor pays attention to the precision with which the learner works and the time he needs to complete the assignment. A camera system films all the actions. An advantage over training on the job is that the lecturer need not intervene when something threatens to go wrong. Thus, the learner retains the possibility to prevent a dangerous situation at the last moment. Communication with the lecturer occurs via the radio. The lecturer is not present in the cabin, which contributes to the reality experience of the learner. Afterwards, the lecturer and learner watch the films together and discuss mistakes and possible solutions.

Assessments

Special assessments with more complex scenarios have been compiled for advanced learners. Think of simulations in which a container crane and two straddle carriers are linked together and a work team performs a combined exercise. The separate actions of the crane and the straddle carriers appear on the environmental images of the others. In this way, the whole cycle from offloading a ship to loading the terminal trucks can be simulated. During the assessments, various scenarios are presented in which various factors that can affect the work are added: weather conditions like mist, rain and strong wind or a site that is so full of containers that the view is obstructed. Variations in the weight of containers or in the amount of work traffic at the terminal can also be effected. Industries that take career planning and counselling seriously show much interest in these assessments.

Furthermore, assessments are also useful before a learner is enrolled for a course. A brief evaluation to see whether a learner is suitable for the training may avoid disappointment (and costs) for all parties.

Further information

For further information about this and other simulators, you can contact STC B.V. STC B.V. is a subsidiary division of the STC-Group and responsible for non-subsidised activities. STC B.V. provides standard courses as well as courses that are tailor-made for your industry. Included in STC B.V. are the contract education division of the Shipping and Transport College, Maritime Simulation Rotterdam B.V. (MSR), Dynamar Consultancy B.V. and the International Maritime Transport Academy (IMTA).

STC B.V. is situated at the main location of the STC-Group:
Lloydstraat 300, 3024 EA Rotterdam, The Netherlands.
Telephone: +31 10 44 86 000. E-mail: info.co@stc-r.nl