



Unique opportunity for air safety training in Sweden

SSTCAB – first in the world with the third generation HUET, MWH*

Scandinavian Safety Training Centre AB, SSTCAB, is the first and so far only Swedish company to offer air safety training with a focus on UWE, underwater escape, for crews and passengers. In the last three years, the company has provided training for, among others, FFK, Voluntary Flying Corps, the Swedish Coast Guard's RIB group and the Swedish Police Service's National Task Force. A simpler single-seat simulator the "SWET chair" has been used so far but now we have taken the next step up.

The company has not only built its own training facility, which includes accommodation for course attendees, classrooms and a specially equipped training pool. The facility on the island of Kåringön on the Swedish West Coast now also includes the world's first generation III HUET, the so-called MWH-6 simulator for Helicopter Underwater Escape Training (HUET).

"Our vision doesn't end with helicopter crews. Aircraft, boats and other craft can also be hit by the same problems, which is why we have introduced the concept 'cabin underwater escape'. It is more in line with what we are doing here", says Stefan Nilsson, the head of training at the company. Our most frequent customers are the voluntary pilots who carry out aerial marine surveillance for the Swedish Navy.

Until 25 May 2009, Swedish pilots had to go abroad to get this type of training, using the older generation of HUET simulators. Now that the company has a generation III HUET, Swedish pilots can get their training in Sweden, and in Swedish, says Stefan.

SSTCAB had studied the market for new and used HUET simulators for several years before it came into contact with a company in Finland, Lamor Subsystems, which had developed the third generation of simulators for this type of air safety training.

"When we summarised all the advantages and disadvantages in a comparison between a new untried product and traditional simulators, the choice was a simple one. MWH is outstanding when it comes to creating realistic scenarios and carrying out training and drills in a pedagogical, effective and safe way", says MD Rolf Karlsson.

* MWH – Multi-Way HUET. (HUET – Helicopter Underwater Escape Training)

MWH nominated for SEA AWARD

Together with the manufacturer, Lamor Subsea, SSTCAB has entered the MWH-6 for this year's SEA AWARD. It has so far been nominated in the category "*innovation*" as well as the category "*training*".

Greater awareness of the problems and new experiences can be gained

Only a person who has trained or tested to see how you react during rotation in the dark and underwater knows how difficult it is and the problems that are faced. Problems caused by the ingress of cold water and a cabin that is moving and will probably roll over or risk sinking result in disorientation and lead to irrational behaviour – behaviour that could reduce the chances of survival in an emergency situation. In the world of aviation, this is a well-known problem, in particular for helicopter crews. Persons who often fly offshore are given regular training to handle this, both individually and in groups in a cabin environment.

MWH provides a very realistic simulation of the situations that can arise when a helicopter or aircraft is forced to make an emergency landing in the sea. Being able to handle such a situation could make the difference between life and death. The conventional simulators can only simulate a cabin that is lowered into the water and can rotate on one axis, from one side to the other. Many experienced pilots have said that this does not add to their knowledge and experience because there is an element of predictability in how the traditional simulator will rotate and fill with water.

MWH can rotate in every direction – one of many advantages

The new MWH-6's movements are more unpredictable for the person undergoing training, but the instructor is still in control. The MWH has the following unique features:

- Five participants can train simultaneously under the leadership of a Pilot in Command at the same time as they are monitored by the instructor.
- The spherical structure is suspended from two axes, one horizontal and one vertical. Because it is spherical, the simulator can move in all directions at the same time, which means that it is able to make very realistic movements. These movements can be locked or slowed down when needed by means of two brakes, one for each axis.
- In the base of the MWH there are four ballast tanks that can be filled with water or air via a remote control. These, together with cargo placement (including persons), determine how the MWH moves.
- The cabin structure – sides, floor and doors – is so watertight that it takes longer to fill although filling the cabin with water is still realistic and takes a relatively short time. To keep the persons inside the cabin, it is equipped with 2-point and 4-point safety belts. These can easily be released with an emergency handle.
- The Swedish MWH is equipped with doors that are as similar as possible to those on a Sikorsky 76. There are three hinged doors, one sliding door, removable windows in the rear doors and a jettison handle.
- Seat placement can easily be changed to simulate different types of helicopters and fixed-wing aircraft. Additionally, in the future, it will be possible to install other door versions.
- The innovative design means that the outer ring can easily be removed, thus transforming the MWH into a freefall simulator.
- Safety solutions such as emergency buttons inside the cabin that switch on lights and emit a sound signal, digital video recording of events inside the cabin, release handles on the outside of the doors and emergency exit lighting are standard.

- MWH is ideal for all types of basic training and skills training in both daylight and at night. Evacuation on the surface, when underwater and inverted can take place with a high level of safety. In Sweden, we train Swedes in Swedish just like foreign participants get their training in English.



The third generation simulator for evacuation training on the surface and underwater.



The instructor (white helmet) going through the safety and drill procedures before beginning the drill. All the participants are wearing 1-hour rescue suits and a helmet despite the fact that the drill is being held indoors in 22° C salt water.



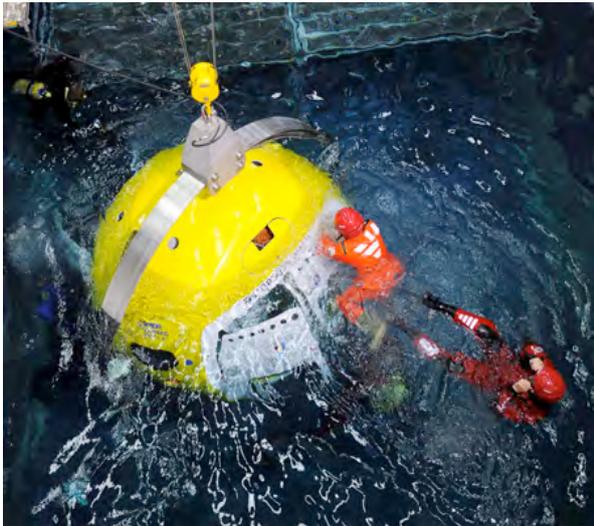
The participants strap themselves in and give the go-ahead to the instructor. A video camera with a wide-angle lens, which is mounted in the ceiling of the MWH, records what happens during the drill. The film sequences are used in the theoretical section of the training program and can also be used in an evaluation of the drills. The “green lines” are emergency exit lighting.



The crane operator plays an important role in the safety aspects of the drills. He guides the MWH to the position where it is to be launched. The ballast tanks are filled and emptied via a remote control.



The drills begin with surface evacuation drills where routines for doors and safety belts are practised. This is followed by evacuation from a sinking but upright cabin environment.



The difficulty of the drills is gradually increased and the cabin is allowed to rotate and fill with water before evacuation takes place via doors that are opened in the normal way or with an emergency handle, or via removable windows. To guarantee safety, there are always safety divers in the water who can provide air and help.

For more information on the MWH-6 and air safety training course, contact Anders Henriksson, tel. +46-76 10 99 273 or email anders.henriksson@sstcab.se.

Scandinavian Training Centre

Scandinavian Safety Training Centre AB (publ) has an overall approach to safety training programs, which it provides in several locations in Sweden. We offer courses in fire protection, medical care/first aid, emergency preparedness, survival techniques, crisis management, maritime safety, environmental safety and air safety.

Our courses and drills are characterised by a modern, pedagogical safety philosophy where both quality and technological standard are high. We make exacting demands on our instructors and our quality system ensures that their skills and competence are continuously maintained and developed by means of education/training and service in realistic environments. Their total experience represents a unique body of competence in Sweden.

For more information about the company contact Rolf Karlsson, tel. +46-76 10 99 270 or email rolf.karlsson@sstcab.se.