

## Safety | **First Independent Responder Safe Transfer**

# FIRST – overall view on re



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**What do you get if you put together an industrial designer, a captain and a former captain turned project manager?**

**The answer is FIRST – First Independent Responder Safe Transfer – a new effective and safer system for rescuing people in distress from life rafts at sea, launched by The Swedish Sea Rescue Society (SSRS). There is still more testing to perform but so far they have received the answers they need to carry on the development.**

The results have been presented at several maritime conferences, for example at the IMO (International Maritime Organization) meeting in London last year where they received a positive response. Through this SSRS hopes to recommend the IMO to reform the international rules and regulations for mass evacuation.

### Lifting rafts aboard

In 2007, Fredrik Falkman, Industrial Design AB, Jörgen Lorén, Stena Line and Mikael Hinnerson, SSRS put their heads together and decided to do something to enhance the rescue procedures at sea. I met up with Mikael and Jörgen for an interview at World Maritime Day at Chalmers University on 29 September to hear more about the project.

“During the years we had experienced rescue situations and found parts in the

procedures that did not work as well as we had wished. This led us to discussing how we could improve the system and four years ago we started FIRST under the management of The Swedish Sea Rescue Society in Gothenburg,” Mikael tells.

“Despite severe accidents, the progress is slow when it comes to rescues in our industry. After the Estonia loss a lot happened concerning deck stability but very little as to the rest, says Jörgen. This led us to formulate the question: what can we, as a helping ship, do with the equipment available that makes the rescue operation safer, quicker and less complicated?”

The basic idea of the FIRST system is that any ship that happens to be first on the scene in a mass evacuation situation should be able to recover life rafts filled with people by lifting them directly to safety onboard. This means recovering raft-loads of up to 40

PHOTO: Rescue-Heli 901



A ship has been evacuated. Passengers and crew are at sea in rafts made for launch and recovery. The rescuing ship starts to circle the rafts, calming the sea inside the turn – a manoeuvre efficient in up to force 9 winds and 3-4 m waves.



The CRRC is used to connect rafts filled with survivors to a Multi Purpose Crane. It has the power to tow large rafts to the crane if needed.



A Close Range Rescue Craft, CRRC, is launched from the helping ship with a light weight Drive Thru Cradle.

## The rescuing process

# Rescue at sea

persons at a time rather than just one or a few, which is the case today with helicopters or other systems.

If a raft is lifted every six minutes – which is possible – you have 400 survivors rescued in just an hour! One of the greatest benefits is that you do not have to transfer people, which can be both time-consuming and hazardous even in calm waters. At the same time rafts are removed from the water and thereby makes it easier for the rescuing crew to keep track on which rafts in the water still have people inside and which are empty or rescued.

“Today’s life rafts are not designed to be lifted directly from the water when loaded. We believe that it would be a relatively small step to develop current Davit Launch Rafts to be lifted laden, given new regulatory demands” says Mikael.

## Less training needed

One of the main obstacles to overcome is the actual hooking up of distressed life rafts in bad weather. But the project has a solution for that as well!

“Our recommendation is to use what we call a Close Range Rescue Craft, CRRC, in our case a Rescuerunner, which is small and light enough to be launched undramatically and used for recoveries in most types of sea. It requires a crew of only one or two persons, it requires little training, and it is powerful enough to tow big rafts,” explains Jörgen.

The CRRC is not only easy to launch in all weathers, it is also easy to upright after a capsized, restart the engine and continue the work.

“This type of rescue craft creates better

confidence and keeps the crew safer during the rescuing process,” adds Jörgen.

The FIRST methods require less education and training than the systems used today.

“We have put a lot of time into simplifying the process. In a crisis situation it is important that there are as few actions required as possible and the system is easy to handle – there should not be any room for hesitation,” says Mikael.

This winter, FIRST will be tested with loaded life rafts in the cold Swedish waters, assisted by the Stena Jutlandica with Jörgen Lorén as captain. This will add some more knowledge to the project and hopefully we will see a quicker, more effective and safer rescuing process in the near future.

## Project FIRST in brief

FIRST stands for First Independent Responder Safe Transfer and is a co-operation between The Swedish Sea Rescue Society, Stena Line and Chalmers University for developing safe and effective equipment and methods for mass evacuation at sea. Necessary parts to realise the project:

### EQUIPMENT

- Close Range Rescue Craft, of Rescuerunner type
- Lifting cradle for the rescue boat – the construction makes it easier to handle and launch in bad weather
- Crane on aft part of the ship, where the wind turbulence is lesser, to take the rafts on board
- Liferrafts which are constructed to be recovered with a full load of people onboard

### TRAINING

The rafts used today, require a lot of training for a lot of crew. Some education of the crew is necessary with the FIRST system but overall it is easier to handle, includes fewer actions and takes less time to learn than the methods used today. The FIRST project estimates that there is a need of about 10 in the crew with this education on each voyage.

### AMENDMENT OF RULES

Rafts that should be lifted on board by a crane can not be too big (holding a maximum of around 40 persons). Today there is a demand for one of the crew to be on board each raft, which turns the industry more and more towards larger rafts taking 150-200 distressed. This standard has to be changed.

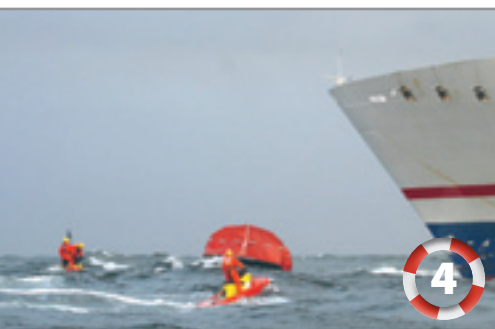
Web: [www.first-rescue.org](http://www.first-rescue.org)

## SSRS in brief

The Swedish Sea Rescue Society is a non-profit association founded by some real enthusiasts in 1907. More than 100 years later the enthusiasm still remains and they are always prepared to be of assistance when ever there is a need. In 2010 the Swedish Sea Rescue Society carried out 3274 missions. The society carries out 70% of all sea rescues in Sweden surviving solely on donations and memberships.

The organisation also works with preventative information, research and development, as for example the project FIRST which you can read about in this article.

Web: [www.ssrs.se](http://www.ssrs.se)



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The flexible construction, light weight and drive thru nature of the cradle makes launching less dramatic, even in bad weather.



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Rafts with survivors are lifted laden and lands on the deck. In this way up to 40 survivors can be rescued to the safety onboard in every lift. No transfer of survivors is done in the water.

PHOTOS (2-6): SSRS



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A positive side effect is that empty rafts can be lifted as well, reducing unnecessary use of search and rescue resources.