

FIRST

First Independent Responder Safe Transfer

Research and development for efficient mass evacuations at sea

Mass Rescue - Beyond Evacuation

Presentation of the FIRST-Project at IMO/DE54, London, 26/10 2010

The goal of the FIRST-project is to develop a system that enables ships to help each other in a safe and efficient way in mass evacuation situations.

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 the safety onboard. This would mean recovering raft loads of possibly up to 50 persons at a time rather than just one or a few, which is what can be done today with helicopters, FRB:s or other systems.

Today's life rafts are not designed to be lifted directly 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.

One of the main obstacles to overcome is the actual hooking up of distressed life rafts in bad weather. One solution is to use what we suggest calling a Close Range Rescue Boat, CRRB, in our case a Rescuerunner, which is small and light enough to be undramatic to launch, use and recover in most sea states. It requires a crew of only one or two, it requires little training, and it is powerful enough to tow big rafts.

A Future Mass Rescue Scenario



A ship has been evacuated. Passengers and crew are at sea in rafts made for laden launch and recovery.

A ROPAX ferry happens to be first on the scene.

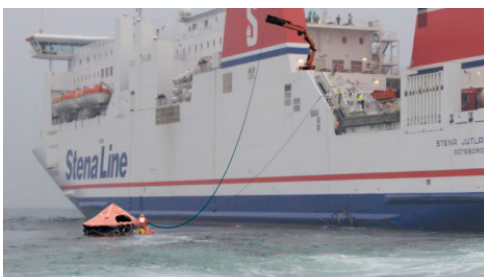
It starts to circle the rafts, effectively calming the sea inside the turn - a maneuver we have showed so far efficient in up to force 9, 3-4 m waves.



A Close Range Rescue Boat, CRRB, is launched from the helping ship.

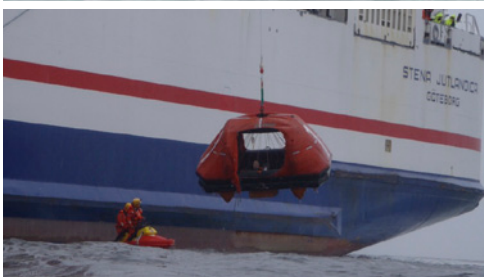
The CRRB, in this case a Rescuerunner, is launched with a light weight Drive Thru Cradle.

The flexible construction, low weight and the drive thru nature of the cradle makes launching surprisingly undramatic even in bad weather.



The CRRB is used to connect rafts filled with survivors to a Multi Purpose Crane.

The CRRB has power to tow big rafts to the crane if needed.



Rafts with survivors are lifted and landed on deck. In this way up to 50 survivors are rescued to the safety onboard in every lift. If a raft is lifted every 6 minutes - that's 10 lifts - 500 survivors per hour.

No transfer of survivors is done in the water. Passengers and crew walk on the raft, survivors walk off.

A positive side effect is that empty rafts can be lifted as well, minimizing unnecessary use of SAR resources.

FIRST-Project Preliminary Recommendations

- **Mandate that ships carry Davit Launch & Recovery Rafts - With practical size limits**
- **Mandate that ships carry a Multi Purpose Crane for Raft Recovery**
- **Allow or mandate Close Range Rescue Boats, CRRB - e.g. Rescuerunners - to be used alongside or instead of today's SOLAS Rescue Boats**

FIRST-Project affiliations

The FIRST-project is a cooperation founded by the Swedish Sea Rescue Society - SSRS, and Stena Line.

The Swedish Sea Rescue Society, SSRS, is a volunteer based organization which operates a fleet of 160 rescue boats around the Swedish coastline. SSRS is an independent Charity which was founded in 1907.

The FIRST-Project has received generous funding from The Swedish Mercantile Marine Foundation and the Goteborg Seaman Society.

The Rescuerunner was developed by the SSRS but has been spun off to a private company.

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