

# Ensuring the successful sea trial of the novel VIKING LifeCraft™ System

Using physical model testing during the development process



Our physical model tests pinpointed issues that VIKING had not considered before



With this information, VIKING could rapidly modify and test design improvements



The physical model tests eventually sped up the entire process towards authority approval

## Challenge

Manufacturers of lifesaving crafts like the LifeCraft™ must ensure that the equipment passes mandatory sea trials before they could be launched in the market. The expensive testing process means that manufacturers want to be sure that they are able to clear sea trials without problems at the very first attempt.

## Solution

We conducted physical model testing in our offshore wave tank to simulate real sea state conditions the LifeCraft™ would face. We helped VIKING analyse the data from the tests and recommended improvements to their system. This enabled VIKING to obtain the most information possible, giving them valuable insight into whether their system worked as intended – within a short timeframe.

VIKING visited our testing facilities several times to conduct physical model tests. They examined different aspects of their new concept, focusing mainly on:

- the stability and general behaviour of the LifeCraft™ system when moored to the mother ship (the ship from which people evacuate) under different wind, current and sea state conditions
- the forces on the bousing lines (responsible for holding the LifeCraft™ system together as well as ensuring that they can only move a small distance away and alongside the mother ship during evacuation)

The latter is especially important because the LifeCraft™ has a chute system (a tube in which people slide down from the mother ship). If LifeCraft™ moves too much along the side of the ship, evacuation could become unsafe or even impossible. The tests conducted in our offshore wave tank helped VIKING gain confidence that their development process was going in the right direction from an early stage.



*'We are proud that our new and innovative LifeCraft™ Survival System has now officially passed the sea trials. The physical model test we did in DHI's wave tank was extremely helpful during the design process and saved us time and money.'*

Jens Nielsen,  
Senior R&D Engineer, VIKING Life-Saving Equipment A/S, Denmark



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