In 2010 Wärtsilä made a retrofit on the ferry M/S Hammerodde to install Energopac efficiency rudders and new propeller blades. The vessel is now able to maintain the same speed, despite a large extension of the vessel’s lane metres.

– In addition to the increased speed of the vessel, the manoeuvring capabilities have improved significantly thanks to the new efficiency rudders, says Bent Boris Hansen, Superintendent, BornholmerFærgen part of Danske Færger A/S.

Danske Færger A/S is a Danish company running domestic ferry services. The company is divided into five regional ferry businesses within Denmark operating a total of 13 ferries. BornholmerFærgen operates the vessel M/S Hammerodde to provide a ferry connection between Køge (located south of Copenhagen) and the island of Bornholm.

The 130-metre-long M/S Hammerodde is a RORO passenger ship built in 2005. The vessel operates on the basis of a five-year service contract (every five years the Danish government puts the ferry services
“We managed to maintain speed or even increase it slightly without installing more power”

<table>
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<tr>
<th>Challenges</th>
<th>Solution</th>
<th>Benefits</th>
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<td>– The vessel needed to maintain speed despite increased weight</td>
<td>– Replacing the existing propellers and rudders with Wärtsilä’s Energopac, a high efficiency integrated rudder and propeller</td>
<td>– Maintained or even slightly increased speed</td>
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<td>– Improving the vessel’s manoeuvring capabilities</td>
<td></td>
<td>– Significantly improved manoeuvrability</td>
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<tr>
<td>– First retrofit of a Wärtsilä Energopac system</td>
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<td>– Fulfilled tender requirements for the ferry services</td>
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Wärtsilä’s contribution to the overall solution was to replace the existing propellers and rudders with high efficiency, energy-saving rudders. This is a well-proven technology that Wärtsilä has used since the 1990s – the Energopac, where the propeller and rudder are completely integrated.

– We managed to maintain speed or even increase it slightly without installing more power. Taking into consideration that the ship is heavier, the speed actually increased by a knot or two. This fulfilled our original goal with the investment, so all in all, this was a great success, says Hansen.

SAFE MANOEUVRING IN HARBOURS
Danske Færger is very satisfied with the benefits they have experienced so far with the installed equipment on M/S Hammerodde. Energopac includes a sophisticated full-spade flap rudder that provides excellent rudder balance and manoeuvring performance.

– In addition to the increased speed of the vessel, the manoeuvring capabilities have improved significantly. Thanks to the new efficiency rudders we are now able to maneuver the vessel safely in and out of the harbours, says Hansen.

IMPRESSIVE REFERENCE LIST BECAME THE DETERMINING FACTOR
M/S Hammerodde was originally equipped with CPP propellers and bow thrusters from Wärtsilä. The Energopac retrofit was, however, the first of its kind for Wärtsilä. Nevertheless, Wärtsilä managed to win the contract. Technically, it was a close race with the competing suppliers.

– It was more or less the impressive reference list that Wärtsilä had for the Energopac that made us believe in the project, says Hansen.

He goes on by saying that the total installation work took about two months to finalize and that there were some challenges along the way, as in all demanding projects.

– This was the first retrofit of this type and after a problematic start we managed to continuously improve the situation, which ultimately led to a successful end result.

– I would not hesitate to recommend Wärtsilä’s products and services for other ship owners looking for similar improvements. I think it is impressive that we were able to increase the speed of the vessel by installing new integrated efficiency rudders and propellers, concludes Bent Boris Hansen of Danske Færger A/S.