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## ON THE DECK STRUCTURAL LAYOUT OF MEGAYACHT

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The growing increase in length of super and megayachts has driven structural designer to adopt longitudinal layouts as a main point in the structural scantlings. By the way, the optimization of weights, strength, deformations and dynamic behaviour has to be assessed one off for each new units because of peculiar and unique characteristics of each vessel.

For this assessment, in particular considering the dynamic behaviour of ribbed plates, the use of numerical software based on the Finite Element (FE) Methods is largely used up to the early design stages in order to highlights benefit and weakness of a particular structural design.

In this paper, two different structural layout for a superyacht deck have been studied and tested by using a FE software: the first one has been created with longitudinal and transversal stiffeners with the same cross section. In the second layout, transversal stiffeners are smaller in dimension but with lower span. The comparison has been made in terms of maximum strength, deformation and dynamic behaviour.

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