Life Cycle report for Coast Guard vessel Aluminium vs. Composite

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1 Results

The result from the Eco Audit review can be seen below, in figure 1 we can see the contributions for the Aluminium hull and in figure 2 we can see the contributions for the composite hull.

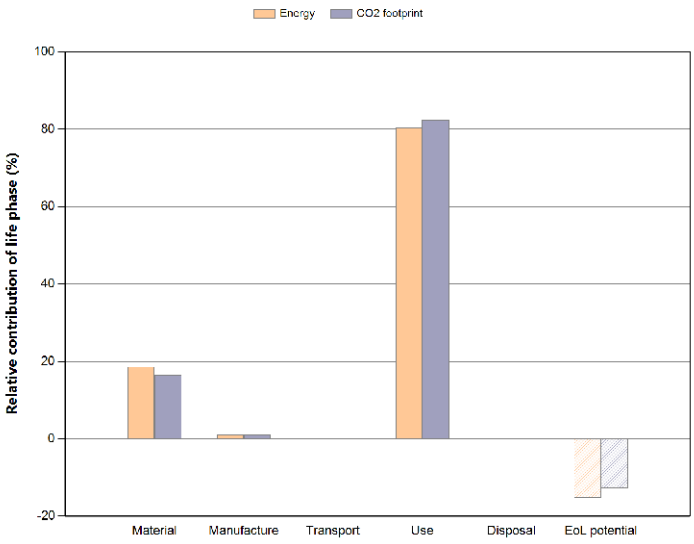

Figure 1: Energy consumption and CO_2 footprint in the different faces of the products life for the Aluminium hull

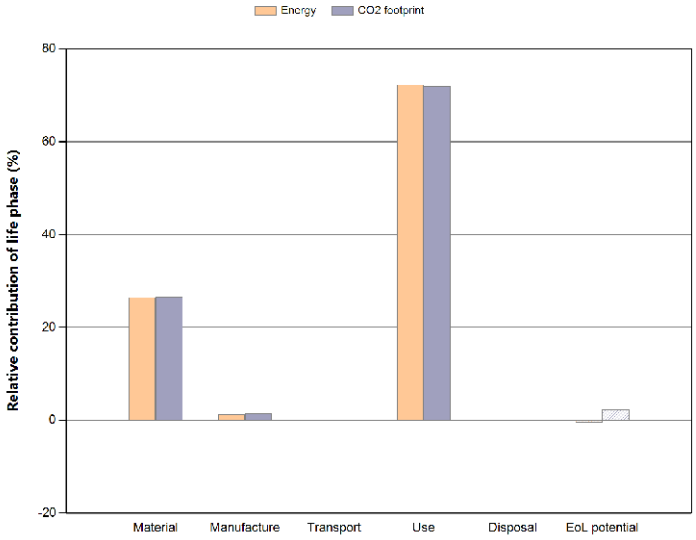

Figure 2: Energy consumption and CO_2 footprint in the different faces of the products life for the composite hull

2 Analysis

When looking at figure 1 and 2 it is clear that the largest contribution towards the CO_2 footprint and the energy consumption is during the usage phase. For the aluminium hull the materials production is 18.5% compared to the usage phase contributing to 80.5% of the total. This is analogue for the composite hull where the materials stands for about 26.4% and the usage 72.2. For the CO_2 footprint we can see almost the same values for material, 16.5% and 24.5% for aluminium and composite respectively. The consumption and footprint during the manufacturing phase is negligible in comparison.

The biggest difference between the two is that for the aluminium there is a recyceling possibility that is as large as 75% of the materials consumption. This is not the case for the composite hull.