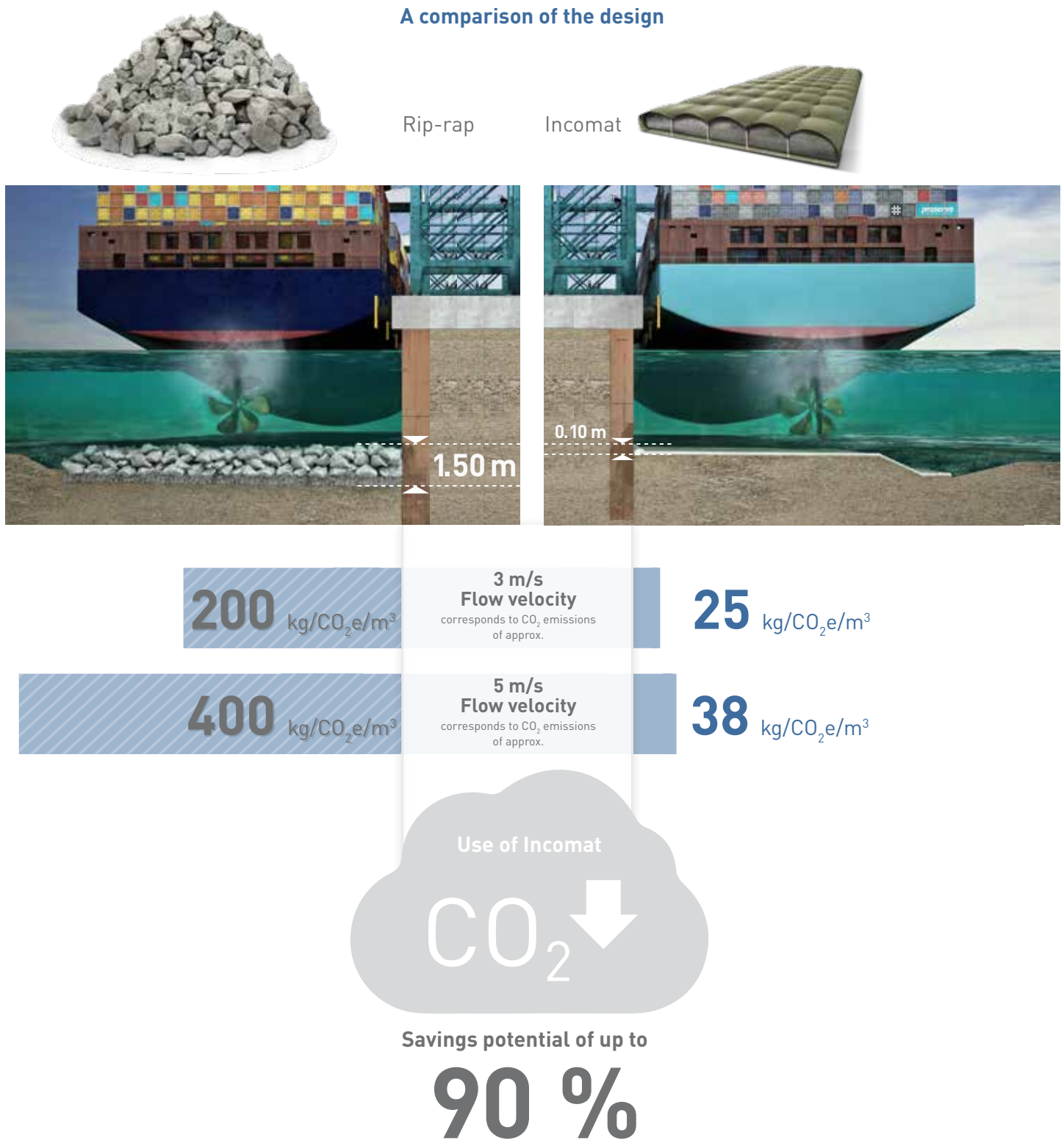


How Incomat® reduces CO₂ footprint hydraulic engineering project

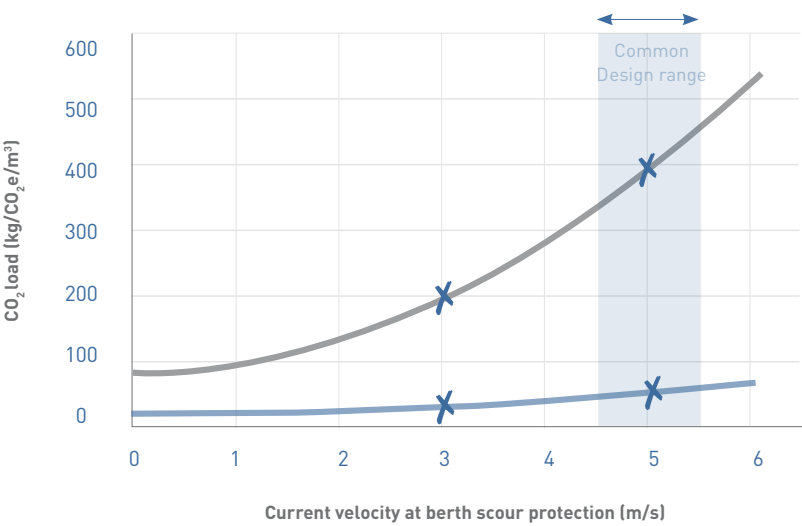
Surface sealing and erosion protection with water blocks or concrete mattress

The design with a concrete mattress and a rip-rap as a revetment are compared.

A comparison of the design



Comparison of the flow velocity *



Result

In the riverbed, CO₂ emissions are generally lower with the use of concrete mattresses compared to armourstones. Even if the construction method with concrete mattresses construction with a specific emission value of 242 kg CO₂e/m³ appears at first glance to have a higher CO₂ footprint than rip-rap with 160 kg CO₂e/m³, this comparison falls short.

The decisive factor is the amount of material actually required to fulfill the structural requirements – especially at higher flow velocities. Revetments made of water blocks are significantly thicker compared to the coherent structure of a concrete mattress due to the verification of the failure of the individual block.

Additional savings potential can be achieved through the use of an optimised modified concrete mix that is specifically designed to reduce the CO₂ balance. Overall, the comparison shows that concrete mattresses are a potentially more advantageous alternative, not only from an ecological point of view.



- Less CO₂ emissions
- Construction time and energy saving
- Space-saving transportation
- Savings on construction costs

