

Claims

1. Use of fiber-coated material on the underwater surface of structures for reducing residual drag, wherein said material comprises or consists of fibers having an average fiber length between
5 0.3 and 4 mm and an average fiber thickness between 5 and 80 μm .
2. Use according to claim 1, wherein said underwater surface of structures is the hull of a (self-)movable or moving vessel, or the underwater part of static structures such as offshore wind monopiles and off-shore rigs.
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3. Use according to claim 1 or 2, for reduction of fuel consumption of a nautical vessel passing through water.
4. Use according to any one of the preceding claims, wherein the average fiber length is in
15 the range of 0.5 and 3.5 mm, preferably between 0.5 and 3 mm, more preferably less than 2.5 mm, even more preferably less than 2 mm, most preferably less than 1 mm, most preferably in the range of 0.5 and 1 mm.
5. Use according to any one of the preceding claims, wherein the average fiber thickness is
20 between 5 and 75 μm , preferably between 5 and 70 μm , more preferably between 5 and 50 μm , most preferably between 5 and 30 μm .
6. Use according to any one of the preceding claims, wherein the fibers have a thickness-to-length ratio (based on average fiber length and average fiber thickness) at or below 0.05, preferably
25 below 0.04, more preferably below 0.03, and preferably at least 0.005, more preferably at least 0.009, most preferably at least 0.01.
7. Use according to any one of the preceding claims, wherein the fiber flock density is between 3 and 25%.
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8. Use according to any one of the preceding claims, wherein at least 5% of the submerged surface of the vessel is covered by said fiber-coated material.
9. Use according to any one of the preceding claims, wherein the fibers are synthetic fiber
35 material and are selected from polyester, polyamide, polyethylene, polypropylene, polyacrylate, polysiloxane, fluoropolymer and combinations thereof.
10. Use according to any one of the preceding claims, wherein the fibers provide ease of cleaning of deposits.
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11. Use according to claim 10, wherein the fibers have an average fiber length of at least 1 mm, more preferably at least 2 mm, more preferably at least 2.5 mm, most preferably at least 3 mm.
12. Use according to any one of the preceding claims, for reducing overall drag of a nautical
5 vessel passing through water.
13. A method for reducing residual drag of a structure immersed in water, wherein at least part of the underwater surface of a structures is provided with a soft fiber-coated material, wherein said material comprises or consists of fibers having an average fiber length between 0.3 and 4 mm and
10 an average fiber thickness between 5 and 80 μm .
14. A fiber-coated material on the underwater surface of a movable or moving nautical structure for reducing residual drag, wherein said material comprises or consists of fibers having an average fiber length between 0.3 and 4 mm and an average fiber thickness between 5 and 80 μm .
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15. The fiber-coated material according to claim 14, wherein the average fiber length is in the range of 0.5 and 3 mm, more preferably less than 2.5 mm, even more preferably less than 2 mm, most preferably less than 1 mm, most preferably in the range of 0.5 and 1 mm.
- 20 16. The fiber-coated material according to any one of claims 14 or 15, wherein the fibers have a thickness-to-length ratio (based on average fiber length and average fiber thickness) at or below 0.05, preferably below 0.04, more preferably below 0.03, and preferably at least 0.005, more preferably at least 0.009, most preferably at least 0.01.