CLAIMS

1. A cladding for a ship hull comprising:

at least one airbag comprising a plenum that comprises substantially open space which is pressurised with air in use;

wherein said airbag is formed from a material comprising a reinforcing fabric that is substantially sealed with a sealant;

the airbag further comprising an outer surface layer adapted to be water-expelling, the outer surface layer connected to the plenum via at least one restrictor hole in the airbag through which air from the plenum can pass to provide pressurised air in the water-expelling layer having a pressure level substantially equal to, or greater than, an adjoining hydrostatic pressure,

wherein the outer surface layer comprises closely packed air pockets, and wherein diameter of each air pocket is less than capillary length of water.

2. The cladding of claim 1, wherein said airbag is sealed with a vulcanised rubber.

3. The cladding of claim 2, wherein said vulcanised rubber is selected from at least one of CSM, CR, EPDM, Polyurethane or silicone.

4. The cladding of claim 1, wherein said airbag is sealed with a thermoplastic polymer.

5. The cladding of claim 4, wherein said thermoplastic polymer is selected from at least one of thermoplastic CSM or thermoplastic polyurethane.

6. The cladding of claim 1, wherein said reinforcing fabric comprises a woven fabric.

7. The cladding of claim 6, wherein said airbag comprises at least two layers of reinforcing fabric and drop stitching between said at least two layers of said reinforcing fabric.

8. The cladding of any preceding claim, wherein said reinforcing fabric comprises a fiber selected from at least one of polyester, para-aramid, meta-aramid, glass fiber, polyamide, polypropylene, PEEK, UHMPE, steel, or carbon fiber.

9. The cladding of any preceding claim, wherein said material comprises a laminate comprising at least one fabric-reinforced layer.

10. The cladding of any preceding claim, wherein said at least one restrictor hole is formed by mechanical perforation.

11. The cladding of any of claims 1 to 9, wherein said at least one restrictor hole is formed by laser drilling.

12. The cladding of any of claims 1 to 9, wherein said at least one restrictor hole is formed by feeding at least one hollow fiber through the airbag material such that one end of each hollow fiber terminates in said plenum, and the other end of each hollow fiber terminates in the water-expelling outer surface layer.

13. The cladding of any preceding claim, wherein radius of each air pocket is less than twice the capillary length of water, and wherein each air pocket is connected to said plenum by at least one restrictor hole.

14. The cladding of any of claims 1 to 12, wherein said outer surface layer comprises loops of hydrophobic fiber woven into the reinforcing fabric of said airbag material.

15. The cladding of any of claims 1 to 12, wherein said outer surface layer comprises a layer of hydrophobic loops attached to an outer side of said reinforcing fabric by adhesion bonding.

16. The cladding of claim 15 wherein said layer of hydrophobic loops of fiber is formed by means of one of weaving, knitting or electrospinning.

17. The cladding of any of claims 1 to 12, wherein said outer surface layer is adapted to be water-expelling by forming hooks on said upper surface layer, and separately forming a layer of hydrophobic loops of fiber by means of weaving or knitting or electrospinning, and attaching said hydrophobic loops to said hooks by pressing them together so they interlock and form a mechanical bond with each other.

18. The cladding of claim 14, 15, 16 or 17 wherein said hydrophobic loops are made of a material selected from one of ePTFE, polyester, polyamide, polypropylene, polyethylene or other hydrophobic polymer.

19. The cladding of claim 14, 15, 16 or 17 wherein said hydrophobic loops comprise a hydrophilic or weakly-hydrophobic fiber which is treated with a coating so as to increase its hydrophobicity.

20. The cladding of claim 19 wherein said fiber is selected from at least one of polyester, para-aramid, meta-aramid, glass fiber, polyamide, polypropylene, PEEK, UHMPE, steel, or carbon fiber.

21. The cladding of claim 19 wherein said coating is selected from one of PTFE, PFA, or wax.