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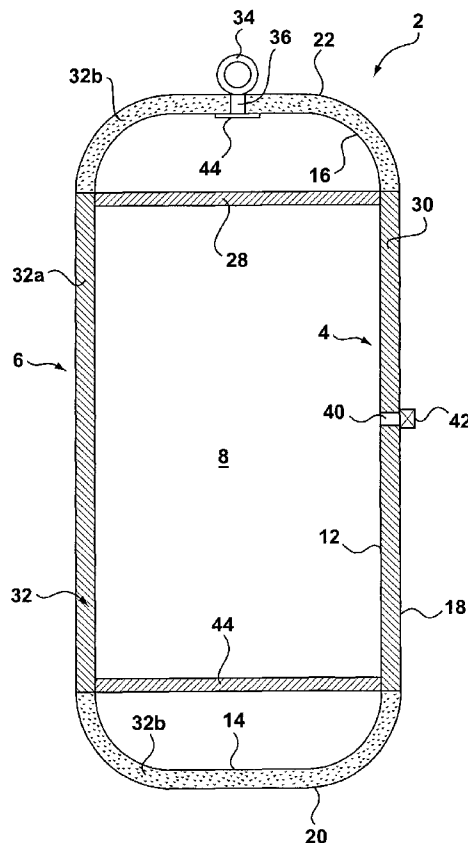
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[Continued on next page]

(54) **Title: UNDERWATER ENCLOSURE APPARATUS AND METHOD FOR CONSTRUCTING THE SAME**



(57) **Abstract:** Apparatus for providing an enclosure, for example as a housing or to provide buoyancy, at underwater locations is disclosed comprising an inner shell and an outer shell, with a structural filler disposed between the two. The shells are prepared from fibre-reinforced plastic, with the fibres being oriented to provide resistance to both longitudinal and radial stresses induced in the apparatus by the hydrostatic pressure. The filler may be a structural filler comprising structural members extending between the inner and outer shells and occupying less than 60% of the volume of the cavity between the two shells. Alternatively, the filler may be a substantially void-free structural filler, such as a polyester resin. Methods of fabricating the apparatus are disclosed. In addition, a method of deballasting a buoyancy module is disclosed, in which the ballast, for example water, is withdrawn from the module by means of reduced pressure. Apparatus for deballasting is also disclosed.

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