CLAIMS

1. A device for recovering a vessel at sea from a surface station, the recovery device comprising:
- a cradle with negative buoyancy, intended to support the vessel,
- a lifting device comprising an upper frame and a set of hangers connecting the cradle to the upper frame , lengths of the hangers being variable so as to make it possible to raise and lower the cradle, a guide float capable of having a predetermined positive buoyancy, the guide float being interposed between the cradle and the upper frame so that the cradle is intended to support the guide float during the raising of the cradle, the guide float being configured and connected to the cradle in order to guide the vessel toward a front part of the guide float when the guide float has the predetermined positive buoyancy, the guide float being in connection with three degrees of freedom in rotation with the cradle, and
- a connecting member with three degrees of freedom in rotation, which is capable of mechanically connecting the bow of the vessel to the front part of the guide float.

2. The recovery device as claimed in the preceding claim, wherein the float is mobile in translation relative to the cradle along an axis z associated with the upper frame, the axis z being vertical in a calm sea state.

3. The recovery device as claimed in any one of the preceding claims, wherein the guide float is resiliently deformable so as to dampen shocks between the vessel and the guide float.

4. The recovery device as claimed in any one of the preceding claims, wherein the set of hangers comprises a first connecting hanger passing through a first opening formed in the float, the first opening fully enclosing the first connecting hanger radially.

5. The recovery device as claimed in the preceding claim, wherein the front part of the float is defined along an axis x which is associated with the upper frame and is horizontal in a calm sea state, the set of hangers comprising a second connecting hanger passing through a second opening formed in the float, the second opening fully enclosing the second connecting hanger radially, the first connecting hanger exerting on the cradle a vertical traction at a point, at a distance along an axis y which is associated with the upper frame, is perpendicular to the axis x and is horizontal in a calm sea state, from another point at which the second connecting hanger exerts a vertical traction on the cradle when the first connecting hanger and the second connecting hanger are under tension.

6. The recovery device as claimed in any one of the preceding claims, wherein the front part of the float is defined along an axis x which is associated with the upper frame and is horizontal in a calm sea state, the guide float having an overall U-shape comprising a bottom arranged substantially next to the front of the cradle and two lateral parts which each extend longitudinally from the bottom to a rear end located behind the bottom along the axis x, the lateral parts being separated in a calm sea state by a vertical plane comprising the axis x and passing through the bottom.

7. The recovery device as claimed in any one of the preceding claims, comprising:
- a first connecting piece in connection with three degrees of freedom in rotation with the cradle,
- a guide making it possible to guide the first connecting piece in translation with respect to the upper frame, during a variation of the lengths of the hangers, along an axis z associated with the upper frame.

8. The recovery device as claimed in the preceding claim, comprising a first connecting member connecting a front region of the cradle to the first connecting piece.

9. The recovery device as claimed in any one of the preceding claims, comprising:
- a second connecting piece in connection with three degrees of freedom in rotation with the guide float,
- another guide making it possible to guide the second connecting piece in translation with respect to the upper frame, during a variation of the lengths of the hangers, along an axis z associated with the upper frame.

10. The recovery device as claimed in the preceding claim, comprising a second connecting member connecting a front region of the float to the second connecting piece.

11. The recovery device as claimed in either of claims 9 and 10, wherein the second connecting piece is the first connecting piece and the other guide is the guide.