

PATENT SPECIFICATION

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DRAWINGS ATTACHED



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(54) IMPROVEMENTS IN OR RELATING TO BUILDING LARGE FLOATABLE STRUCTURES

(71) I, JAMES ANDERSON, a British Subject, of Kayron, 5 The Craigs, Newark Street, Greenock, Scotland, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention concerns improvements in or relating to building large floatable structures.

According to the present invention there is provided a method of building a large floatable structure in a plurality of parts including building one part of the structure, making a record of the profile of an end of the one part by means of a template, building another part of the structure utilising said template so that an end of the other part conforms in profile to said template, launching the one part and the other part and joining the parts together at the ends of said parts which conform in shape to the template while they are afloat.

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawing, in which:—

Figs. 1a to 1e show diagrammatically the various stages of construction of a ship.

In the embodiment a large ship is built in two parts A and B which are launched independently from the same building berth. The stern part A of the ship is built first by any conventional shipbuilding techniques and on completion of this part of the hull, the profile of the end of the stern part which is subsequently to be joined to the bow part B is recorded by means of an adjustable template device T, this end being furthest away from the water. An adjustable template suitable for this purpose is described and claimed in our co-pending British Patent Application No. 54080/71 (Serial No. 1,295,544) which is divided out of this application.

To record this profile the template T is wheeled into position adjacent the end to be

subsequently joined to the bow part and the declivity, distance apart and other measurements are recorded at the same time (Fig. 1a). Further the position of the longitudinal, etcetra may be recorded by photogrammetric techniques.

The template is now wheeled away from the stern part and turned through 180° and fixed in position on the landward end of the building berth and adjusted so that the declivity and all other measurements correspond to those taken from the stern part of the ship.

From these measurements building of the bow part B of the ship is commenced (Fig. 1b), so that the end to be joined is furthest away from the water.

During the initial stages of building the hull of the bow part B, interior and other work can be carried out on the completed stern hull A, this work continuing until the stern part is launched and in the period after launch until bow part B is launched.

Further it may be convenient to move the portion of the bow part already built to a position on the berth nearer the water, (Fig. 1d) thereafter the bow part B may be completed following any conventional shipbuilding technique. The area at the landward end of the berth can then be utilised for the initial building steps of further ships (A, Fig. 1e).

After the bow part B has been launched the bow part B and stern part A are mated while afloat to join together to form the entire ship.

Alternatively, if the ship to be built comprises more than two parts, the third part of the ship can be commenced, this part having an end conforming to the other end of the second part B, this similarity in shape being achieved by use of the adjustable template T in a manner exactly similar to that described above.

With the method described above, it is unnecessary to transport large sections of a ship from one part of the berth to the other to ensure that the end portions subsequently

to be mated are in alignment. This practice is in some occasions dangerous as the transportation leads to distortion of the parts and thus alignment is not ensured. With the present method only the jig needs to be removed. Further the entire labour force of the yard can be utilised at one time as when the workment required for building the actual hull have completed the stern part they can be transferred to building the bow part, workmen concerned with the fitting and internal work continuing to operate on the stern part before it is launched.

WHAT I CLAIM IS:—

1. A method of building a large floatable structure in a plurality of parts, including building one part of the structure, making a record of the profile of an end of the one part by means of a template, building another part of the structure, utilising said template so that an end of the other part conforms in profile to said template, launching the one part and the other part and joining the parts together at the ends of said parts which conform in shape to the template while they are afloat.

2. A method as claimed in claim 1, wherein the building of said other part is commenced prior to launching the one part.

3. A method as claimed in claim 1 or claim 2, wherein both parts are built on the same berth, with the one part being located nearest to the water when both parts are in building on the berth.

4. A method as claimed in claim 1,

wherein the template is turned through 180° before the building of the other part is commenced so that if the parts comprise a bow part and a stern part, the parts will be launched bow and stern first respectively.

5. A method as claimed in any one of claims 1 to 4, wherein the template is adjustable.

6. A method as claimed in claim 1, wherein the building of a third part may be commenced after launching the one part but prior to launching the other part.

7. A method as claimed in claim 5, wherein the third part is a further part of the same floatable structure, in which case the template is adjustable and is used to record the profile of the other end of the other part and the end of the third part is built to conform to this template so that the profile of said end of the third part and said other end of the other part are similar.

8. A method as claimed in claim 6 or claim 7, wherein the third part is a part of a further floating structure.

9. A method of building a large floatable structure substantially as hereinbefore described with reference to Figs. 1a to 1e of the accompanying drawing.

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WHAT I CLAIM IS:—

- 15 1. A method of building a large floatable structure in a plurality of parts, including building one part of the structure, making a record of the profile of an end of the one part by means of a template, building another part of the structure, utilising said template so that an end of the other part conforms in profile to said template, launching the one part and the other part and joining the parts together at the ends of said parts which conform in shape to the template while they are afloat.
- 20 2. A method as claimed in claim 1, wherein the building of said other part is commenced prior to launching the one part.
- 25 3. A method as claimed in claim 1 or claim 2, wherein both parts are built on the same berth, with the one part being located nearest to the water when both parts are in building on the berth.
- 30 4. A method as claimed in claim 1,

wherein the template is turned through 180° before the building of the other part is commenced so that if the parts comprise a bow part and a stern part, the parts will be launched bow and stern first respectively.

5. A method as claimed in any one of claims 1 to 4, wherein the template is adjustable.

6. A method as claimed in claim 1, wherein the building of a third part may be commenced after launching the one part but prior to launching the other part.

7. A method as claimed in claim 5, wherein the third part is a further part of the same floatable structure, in which case the template is adjustable and is used to record the profile of the other end of the other part and the end of the third part is built to conform to this template so that the profile of said end of the third part and said other end of the other part are similar.

8. A method as claimed in claim 6 or claim 7, wherein the third part is a part of a further floating structure.

9. A method of building a large floatable structure substantially as hereinbefore described with reference to Figs. 1a to 1e of the accompanying drawing.

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