

SUPPORT FOR VESSEL SAILS

DESCRIPTION

5 **Object of the invention**

The present invention relates to a support for vessel sails, which allows for a transition between a rigid sail, for example, of elliptical cross-section, and a pedestal of the vessel deck, for example, of circular cross-section.

10

Background of the invention

The use of rigid sails for the propulsion of vessels is known, comprising an elongated main body situated vertically on the vessel deck.

15

For its attachment to the vessel deck, a pedestal is usually used, typically of circular cross-section, which is fastened to the deck, and upon which a support is placed, which performs the transition between the sail and the pedestal.

20

Usually, these supports are complex elements with a high economic cost, mainly in cases where the cross-sections of the rigid sail and the pedestal do not coincide, for example, when the cross-section of the rigid sail is elliptical, as is common in suction sails.

25

Description of the invention

Therefore, an objective of the present invention is to provide a support for vessel sails that serves as a transition between the sail and a pedestal of the vessel deck that is as simple and economical as possible.

30

With the support for vessel sails of the invention, the aforementioned drawbacks are resolved, presenting other advantages that will be described below.

The support for vessel sails according to the present invention is described in claim 1,

and the dependent claims include additional features that are optional.

In particular, the support for vessel sails comprises a first flange and a second flange, which are joined together by a transition element.

5

According to two alternative embodiments, the transition element is formed by a plurality of flat plates or by a plurality of curved plates.

10

According to a preferred embodiment, the first flange is elliptical in shape and the second flange comprises a circular central hole.

Furthermore, the second flange preferably has an octagonal external shape.

15

Advantageously, the plates are preferably arranged in one or more rows, with one row of plates in contact with the first flange and another row of plates in contact with the second flange.

20

According to a preferred embodiment, the plates in one row have larger dimensions than the plates in another row.

Furthermore, preferably, each of the rows of plates comprises end plates that are rectangular in shape, intermediate plates in the shape of a parallelogram, and central plates of trapezoidal shape.

25

Brief description of the drawings

30

For a better understanding of what has been stated, some drawings are attached in which, schematically and only by way of a non-limiting example, a practical case of embodiment is represented.

Figure 1 is a perspective view of the support for vessel sails according to the present invention, according to a first embodiment;

Figure 2 is a plan view of the support for vessel sails according to the present invention,

according to the first embodiment;

Figure 3 is a perspective view of the support for vessel sails according to the present invention, according to the first embodiment, installed between a rigid sail and a pedestal of a vessel deck; and

Figure 4 is a perspective view of the support for vessel sails according to the present invention, according to a second embodiment.

Description of a preferred embodiment

The figures show the support for vessel sails according to the present invention. It should be noted that the vessel sail with which the support according to the present invention is used is preferably a rigid sail, such as, for example, a suction sail, a Flettner rotor, or any other type of rigid sail.

Furthermore, it should also be noted that the sail is preferably formed by an elongated main body, which may have a circular or elliptical cross-section.

The support according to the present invention is specially designed to be placed between the sail and a pedestal placed on a vessel deck.

The support according to the present invention comprises a first flange (1) and a second flange (2), the first flange (1) being, in its position of use, fixed to the sail (3) and the second flange (2) being, in its position of use, fixed to the pedestal (4).

According to the represented embodiment, the first flange (1) has an elliptical shape, although it could have a circular shape or any other suitable shape.

Also according to the represented embodiment, the second flange (2) has a circular central hole and externally has an octagonal shape.

According to the first embodiment, the first and second flanges (1, 2) are joined together by a transition element (5) formed by a plurality of flat plates (11, 12, 13, 21, 22, 23),

which are preferably welded together by their edges.

5 According to the first represented embodiment, the plates are arranged in a first row (10) and a second row (20), although they could be arranged in a single row, the plates of the first row (10) being those joined to the first flange (1) and the plates of the second row (20) being those joined to the second flange (2).

10 The first row of plates (10) comprises end plates (11) that are rectangular in shape, intermediate plates (12) in the shape of a parallelogram, and central plates (13) of trapezoidal shape.

15 In particular, according to the preferred embodiment, it comprises four end plates (11), grouped in pairs, four central plates (13), also grouped in pairs, and four intermediate plates (12), each located between the end plates (11) and the central plates (13).

The second row of plates (20) comprises end plates (21) that are rectangular in shape, intermediate plates (22) in the shape of a parallelogram, and central plates (23) of trapezoidal shape.

20 In particular, according to the first preferred embodiment, it comprises four end plates (21), grouped in pairs, four central plates (23), also grouped in pairs, and four intermediate plates (22), each located between the end plates (21) and the central plates (23).

25 As can be seen in the figures, the plates of the first row (10) have larger dimensions than the plates of the second row (20).

30 In this way, a support for vessel sails is achieved that is simple and inexpensive to manufacture, which fulfills the function of performing the transition between the sail (3) and the pedestal (4), even when the sail (3) and the pedestal (4) have different cross-sections.

Figure 4 shows a second embodiment according to the present invention, the difference of which with respect to the first embodiment is that the transition element (5) is formed

by a plurality of curved plates (6), for example, two curved plates joined together by their lateral edges.

5 It should be noted that the transition element (5) can be manufactured by casting, welding, 3D printing, or similar.

10 Despite reference having been made to a specific embodiment of the invention, it is evident to an expert in the field that the described support for vessel sails is susceptible to numerous variations and modifications, and that all mentioned details may be substituted by others that are technically equivalent, without departing from the scope of protection defined by the attached claims.

CLAIMS

- 5 1. Support for vessel sails, characterized in that it comprises a first and second flanges (1, 2), which are joined together by a transition element (5).
2. Support for vessel sails according to claim 1, wherein the transition element (5) is formed by a plurality of flat plates (11, 12, 13, 21, 22, 23).
- 10 3. Support for vessel sails according to claim 1, wherein the transition element (5) is formed by a plurality of curved plates (6).
4. Support for vessel sails according to claim 1, wherein the first flange (1) is elliptical in shape.
- 15 5. Support for vessel sails according to claim 1, wherein the second flange (2) comprises a circular central hole.
6. Support for vessel sails according to claim 1 or 5, wherein the second flange (2) has an octagonal external shape.
- 20 7. Support for vessel sails according to claim 2 or 3, wherein the plates are arranged in one or more rows (10, 20), one row of plates (10) being in contact with the first flange (1) and another or the same row of plates (20) being in contact with the second flange (2).
- 25 8. Support for vessel sails according to claim 7, wherein the plates in one row (10) have larger dimensions than the plates in another row (20).
- 30 9. Support for vessel sails according to any one of the preceding claims, wherein each row of plates (10, 20) comprises end plates (11, 21) that are rectangular in shape, intermediate plates (12, 22) in the shape of a parallelogram, and central plates (13, 23) of trapezoidal shape.