Abstract

The present invention is a rub rail assembly for mounting on a surface of a vessel, the assembly having a coextruded rigid portion and flexible portions with grooves for receiving an insert.
RUB RAIL WITH INTEGRAL FLEXIBLE AND RIGID PORTIONS FOR SHOCK ABSORBING AND ANTI-FLARING

INDEX TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Non-Provisional Application Ser. No. 12/486,277, filed on Jun. 17, 2009, entitled RUB RAIL WITH INTEGRAL FLEXIBLE AND RIGID PORTIONS FOR SHOCK ABSORBING AND ANTI-FLARING which claims the benefit of U.S. Provisional Application 61/073,049, filed Jun. 17, 2008, entitled RUB RAIL WITH INTEGRAL FLEXIBLE AND RIGID PORTIONS FOR SHOCK ABSORBING AND ANTI-FLARING; the prior applications are herewith incorporated by reference in their entirety.

BACKGROUND AND RELATED ART

[0002] The present invention pertains to a rub rail for attaching to a deck and/or hull of a boat. The rub rail of the present invention provides the unique combination of having rigid and flexible portions in a single extruded rub rail. The rub rail is constructed and arranged to receive a removable insert that protects the rub rail.

[0003] In a preferred embodiment, a rub rail assembly for mounting on a surface of a vessel, the assembly comprising:

a. an extruded base having a rigid portion and a flexible portion;

b. a pair of longitudinal grooves on said base; and

c. an insert fastened to said base in said longitudinal grooves.

[0007] The rub rail longitudinal grooves extend substantially the length of the assembly.

[0008] The rub rail assembly has a rigid portion that is contiguous with said flexible portion by way of coextrusion.

[0009] In one embodiment, the rigid portion is a rigid vinyl and the flexible portion is a flexible vinyl. However, the rub rail may be formed of any suitable materials that allow for formation of a contiguous coextruded rub rail having rigid and flexible portions as described herein.

[0010] The rub rail insert has a first end and a second end with a body comprising the distance between the two ends. The end portions of the insert are placed within the longitudinal grooves of the rub rail base. The ends of the insert contact the base at any of the flexible portion, the rigid portion, or combinations thereof.

[0011] The insert positioned in said pair of longitudinal grooves may contact a flexible portion of the base in at least one point.

[0012] Additionally, the base is constructed and arranged such that the pair of longitudinal grooves prevent flaring of said insert when said insert is placed in said longitudinal grooves. The insert is attached to the base in the grooves by any acceptable fastening. Fastening is by screws, clips, brackets, friction fit, combinations thereof or other fastening methods as are known.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] The embodiments of the invention are illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings in which like reference numerals refer to similar elements. In the drawings:

[0014] FIG. 1 is a cross sectional view of the rub rail according to the invention.

[0015] FIG. 2 is a cross sectional view of the rub rail according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] In the following description, numerous specific details are set forth. However, it is understood that embodiments of the invention may be practiced without these specific details. In other instances, well-known structures and techniques have not been shown in detail in order not to obscure the understanding of this description.

[0017] Rub rail 11 includes a rigid portion 12 and a flexible portion 13. Optionally, there may be a first flexible tip 14 and/or a second flexible tip 15. Rub rail 11 has a first groove cavity 17 and second groove cavity 18 integrally formed therein which are constructed and arranged to receive the longitudinal edges of replaceable insert 16 therein. Each of the first cavity 17 and second cavity 18 form the longitudinal grooves in the rub rail assembly. Insert 16 is preferably formed of stainless steel or alternatively, any metal, combinations of metals, or other hard material to protect rub rail 11. Insert 16 may also be formed as a curved hollow back insert.

[0018] In an environment of use, one or more rub rails of the present invention are positioned and secured to a desired vessel.

[0019] Rub rail 11 may be made of any appropriate material that may include but would not be limited to, vinyls, plastics, composites, combinations thereof, and the like. In a preferred embodiment, the rigid portion is formed of a rigid vinyl compound and the flexible portion is formed of a flexible vinyl compound.

[0020] In a preferred embodiment, rub rail 11 is coextruded with both flexible portion 13 and rigid portion 14 formed as a single extrudate. The coextrusion produces a rub rail 11 in which flexible portion 13 and rigid portion 14 are integrally formed and dependent on one another. Flexible portion 13 is formed of flexible vinyl and rigid portion 14 is formed of rigid vinyl.

[0021] The flexible portion 13 imparts a shock absorbing character on rub rail 11 that also assists in preventing flaring and distortion of rub rail insert 16. The anti-flaring characteristic of rub rail insert 16 when attached to a boat, usually by screws or other mechanical attachment fasteners ensures there is minimal shape distortion of rub rail 11 after repeated use. Insert 16 can be color matched to a boat as desired.

[0022] While the invention has been described in its preferred form or embodiment with some degree of particularity, it is understood that this description has been given only by way of example and that numerous changes in the details of construction, fabrication, and use, including the combination and arrangement of parts, may be made without departing from the spirit and scope of the invention.

What is claimed is:

1. A rub rail assembly for mounting on a surface of a vessel, the assembly comprising:

a. an extruded base having a rigid portion and a flexible portion;

b. a pair of longitudinal grooves on said base; and

c. an insert fastened to said base in said longitudinal grooves.
2. The rub rail assembly of claim 1 wherein said longitudinal grooves extend the length of the assembly.

3. The rub rail assembly of claim 1 wherein said rigid portion is contiguous with said flexible portion.

4. The rub rail assembly of claim 1 wherein said rigid portion is arranged and configured to be contiguous with said flexible portion by way of coextrusion.

5. The rub rail assembly of claim 1 wherein said rigid portion is a rigid vinyl.

6. The rub rail assembly of claim 1 wherein said flexible portion is flexible vinyl.

7. The rub rail assembly of claim 1 wherein either or both of said rigid portion and said flexible portion are plastic.

8. The rub rail of claim 1 wherein end portions of said insert contact the flexible portion, the rigid portion, or combinations thereof.

9. The rub rail of claim 1 wherein said insert positioned in said pair of longitudinal grooves contacts said flexible portion in at least one point.

10. The rub rail of claim 1 wherein said pair of longitudinal grooves are constructed and arranged to prevent flaring of said insert when said insert is placed in said longitudinal grooves.

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