What is claimed is:

1. An apparatus for enhancing propulsion efficiency, comprising:

a duct disposed in front of a propeller, having an arc shape and generating thrust; and

a plurality of pre-swirl stator blades supporting the duct on a stern boss portion and generating a swirling flow in a direction opposite to a rotating direction of the propeller,

wherein the duct has a camber of a convex shape in a direction toward the stern boss portion,

the plurality of pre-swirl stator blades have a camber of a convex shape in the rotating direction of the propeller,

a first end portion of the duct in the rotating direction of the propeller and a first outer pre-swirl stator blade located at a last position in the rotating direction of the propeller among the plurality of pre-swirl stator blades are interconnected,

the camber of the duct gradually disappears toward a boundary where the first end portion of the duct and the first outer pre-swirl stator blade are interconnected, and

the camber of the first outer pre-swirl stator blade gradually disappears toward a boundary where the first end portion of the duct and the first outer pre-swirl stator blade are interconnected.

2. The apparatus of claim 1, further comprising:

a first connection part interconnecting the first end portion of the duct and the first outer stator blade; and

a second connection part interconnecting a second end portion of the duct in a direction opposite to the rotating direction of the propeller and a second outer pre-swirl stator blade located at a last position in the direction opposite to the rotating direction of the propeller among the plurality of pre-swirl stator blades,

wherein the first connection part has a shape continuously connecting the first outer pre-swirl stator blade and the first end portion of the duct having different camber shapes, and

the second connection part has a shape continuously connecting the second outer pre-swirl stator blade and the second end portion of the duct having the same camber shape.

3. The apparatus of claim 1, wherein the duct has an arc shape extending from a lower left area to an upper right area with respect to a center line of an arc formed by the duct, and

the plurality of pre-swirl stator blades are disposed to be spaced apart from each other in a region from the lower left area to the upper right area with respect to the center line of the arc formed by the duct.

4. The apparatus of claim 1, wherein the propeller rotates clockwise when viewed from a rear side, and

the number of pre-swirl stator blades located on a port side of a hull among the plurality of pre-swirl stator blades is greater than the number of pre-swirl stator blades located on a starboard side of the hull.

5. The apparatus of claim 1, wherein the center line of the arc formed by the duct is located above a rotation axis of the propeller.

6. The apparatus of claim 1, wherein a distance between the center line of the arc formed by the duct and the rotation axis of the propeller is 0.1 times or more and 0.4 times or less a radius of the propeller.

7. The apparatus of claim 1, wherein the duct is located within a rotational region of the propeller.