

In further embodiments, the second set of fibers comprises fibers that do not comprise residual strain after the prosthetic valve is expanded to the expanded configuration from the collapsed configuration.

[008] In embodiments wherein the outer skirt comprises the self-expandable fabric comprising fibers made of shape memory material, the self-expandable fabric can comprise a weave of warp fibers and weft fibers, wherein one or more of the weft fibers comprise the fibers made of shape memory material. The weave of warp and weft fibers can comprise a combination of multiple weave patterns. For example, the weave of warp and weft fibers can comprise a combination of a plain weave pattern comprising warp fibers and weft fibers made of non-shape memory material, and a satin weave pattern comprising warp fibers made of non-shape memory material and weft fibers made of the shape memory material. In some embodiments, the shape memory material can be a nickel titanium alloy, for example, the fibers made of the shape memory material can be nickel titanium wires comprising a diameter of from 0.5 to 15 Mils.

[008a] In one aspect, there is provided an assembly for implanting a prosthetic heart valve in a patient's body comprising:

a delivery apparatus comprising an elongated shaft; and

the prosthetic heart valve as disclosed herein mounted on the shaft in a radially collapsed configuration for delivery into the body.

[009] An exemplary embodiment of an assembly for implanting a prosthetic heart valve in a patient's body comprises a delivery apparatus comprising an elongated shaft and a radially expandable prosthetic heart valve mounted on the shaft in a radially collapsed configuration for delivery into the body.

[010] In some embodiments, a method of crimping a prosthetic valve comprises partially inserting the prosthetic valve in the expanded configuration into the crimping jaws of a crimping device, wherein a portion of the prosthetic valve comprising an outer skirt extends outside of the crimper jaws. The prosthetic valve is then crimped to a first partially collapsed configuration, after which the prosthetic valve is fully inserted into the jaws of the crimping device. The prosthetic valve is then crimped to a second partially collapsed configuration, and optionally crimped to a fully collapsed configuration, before removal from the crimping device.

[011] The foregoing and other features and advantages of this disclosure will become more apparent from the following detailed description of several embodiments which proceeds with reference to the accompanying figures.

a plain weave pattern comprising fibers made of non-shape memory material; and
a satin weave pattern comprising the fibers made of the shape memory material.

12. The valve claim 11, wherein the satin weave pattern comprises warp fibers made of non-shape memory material and weft fibers made of the shape memory material.

13. The valve of any one of claims 1 or 9-12, wherein the shape-memory material is a nickel titanium alloy.

14. The valve of any one of claims 1 or 9-13, wherein the fibers made of shape memory material comprise a diameter of from 0.5 to 15 Mils.

15. The valve of any of the preceding claims, wherein the annular frame comprises a plurality of leaflet attachment portions; and the leaflet structure is secured to the leaflet attachment portions of the frame.

16. An assembly for implanting a prosthetic heart valve in a patient's body comprising:

a delivery apparatus comprising an elongated shaft; and

the prosthetic heart valve of any of claims 1-15 mounted on the shaft in a radially collapsed configuration for delivery into the body.