

CLAIMS

What is claimed is:

1. A system for performing subterranean operations comprising:
an expandable liner hanger positioned within a casing string, wherein the expandable liner hanger comprises a spiked portion having ~~one or more~~ a plurality of anchoring ridges, each of the ~~one or more~~ plurality of anchoring ridges extending in a circular ring along an outer perimeter of the expandable liner hanger; wherein the ~~one or more~~ plurality of anchoring ridges are tapered to a flat portion, wherein at least one of the ~~one or more~~ plurality of anchoring ridges are expandable, and wherein the flat portion of each of the ~~one or more~~ plurality of anchoring ridges is operable to deforms the casing string when the anchoring ridge is in the expanded position, wherein each of the one or more anchoring ridges provides a seal between the expandable liner hanger and the casing string when the anchoring ridge is in the expanded position; and
one or more weep holes are positioned in a space between adjacent ones of the ~~one or more~~ plurality of anchoring ridges.
2. The system of claim 1, wherein the one or more weep holes comprise two weep holes that are disposed 180 degrees apart.
3. The system of claim 1, wherein each of the one or more weep holes have a diameter about five percent of the space between ~~the~~ a first anchoring ridge and ~~the~~ a second anchoring ridge.
4. The system of claim 1, wherein the one or more weep holes comprise two weep holes that are disposed 45 degrees apart.
5. The system of claim 1, wherein the ~~one or more~~ plurality of anchoring ridges are made from a material selected from a group consisting of aluminum, steel, and a combination thereof.
6. The system of claim 1, wherein expanding the ~~one or more~~ plurality of anchoring ridges couples the liner hanger to the casing.
7. The system of claim 1, wherein an anchoring ridge angle of the ~~one or more~~ plurality of anchoring ridges is selected such that the one or more anchoring ridge is substantially normal to the expandable liner hanger when the anchoring ridge is in the expanded position.
8. The system of claim 1, further comprising a sealing element, wherein the sealing element is positioned at a distal end of the spiked portion.
9. The system of claim 8, wherein the sealing element is selected from a group consisting of rubber, polymeric materials, and ductile metals.

10. The system of claim 1, wherein the ~~one or more~~ plurality of anchoring ridges comprise a first anchoring ridge positioned at a first axial location along the expandable liner hanger and a second anchoring ridge positioned at a second axial location along the expandable liner hanger.

11. A method for coupling a liner to a casing string of a cased wellbore in a subterranean formation comprising:

coupling an expandable liner hanger to the liner, wherein the expandable liner hanger comprises a spiked portion having a plurality of anchoring ridges tapered to a flat portion and wherein one or more weep holes are disposed between adjacent ones of the plurality of anchoring ridges;

inserting the liner and the expandable liner hanger downhole through the casing string;
and

expanding the plurality of anchoring ridges such that the plurality of anchoring ridges causes deformation of the casing string and provide a seal between the expandable liner hanger and the casing string, and wherein expanding the plurality of anchoring ridge couples the expandable liner hanger to the casing string.

12. The method of claim 11, wherein the one or more weep holes comprise two weep holes disposed 180 degrees apart.

13. The method of claim 11, wherein each of the one or more weep holes have a diameter about five percent of the space between the first anchoring ridge and the second anchoring ridge.

14. The method of claim 11, wherein the one or more weep holes comprise two weep holes that are disposed 45 degrees apart.

15. The method of claim 11, further comprising a sealing element, wherein the sealing element is selected from a group consisting of rubber, polymeric material, and ductile metals.

16. The method of claim 11, wherein an anchoring ridge angle of one or more of the plurality of anchoring ridges is selected such that the one or more of the plurality of anchoring ridges is substantially normal to the expandable liner hanger when in the expanded position.

17. The method of claim 11, further comprising a sealing element, wherein the sealing element is positioned at a distal end of the spiked portion.

18. The method of claim 11, wherein the plurality of anchoring ridges extend in a circular ring along an outer perimeter of the expandable liner hanger, wherein one of the plurality of anchoring ridges is positioned at a first axial location along the expandable liner hanger and a

second of the plurality of anchoring ridges is positioned at a second axial location along the expandable liner hanger.

19. The method of claim 11, wherein at least one of the plurality of anchoring ridges is formed by machining.

20. The method of claim 11, wherein at least one of the plurality of anchoring ridges is made from a material selected from a group consisting of aluminum, steel, and a combination thereof.