

with certain aspects and contexts of some embodiments without limitation to the claimed subject matter.

[0006A] According to a first aspect, there is provided an apparatus including: a wellhead hanger running tool including: a piston disposed in a body of the wellhead hanger running tool; and a locking segment disposed in the body of the wellhead hanger running tool and positioned with respect to the piston to allow the locking segment to be selectively driven by the piston to secure the wellhead hanger running tool to a wellhead hanger when the wellhead hanger is received by the wellhead hanger running tool.

[0006B] According to a second aspect, there is provided a system including: a tubing hanger; a running tool coupled to the tubing hanger, the running tool including an inner body, an outer body, a piston disposed between the inner body and the outer body, and a locking segment connected to the outer body, wherein the piston is positioned between the locking segment and the outer body and the locking segment is biased toward an unlocked position but held in a locked position against the tubing hanger by the piston.

[0006C] According to a third aspect, there is provided a method including: aligning a wellhead hanger and a running tool; moving the wellhead hanger and the running tool into engagement; and locking the running tool to the wellhead hanger by actuating a piston of the running tool to drive a locking segment of the running tool against a mating surface of the wellhead hanger.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] These and other features, aspects, and advantages of certain embodiments will become better understood when the following detailed description is read with reference to the accompanying drawings in which like characters represent like parts throughout the drawings, wherein:

[0008] FIG. 1 generally depicts various components, including one or more tubular strings and associated hangers, that can be installed at a well in accordance with one embodiment of the present disclosure;

[0009] FIG. 2 is a partial section view of a hanger assembly including a wellhead hanger and a running tool for installing the wellhead hanger in a wellhead housing in accordance with one embodiment;

[0010] FIG. 3 is another section view of the hanger assembly of FIG. 2 showing additional details, such as locking segments of the running tool driven into engagement with the wellhead hanger by a piston, and an outer sleeve of the running tool retaining a locking ring in a collapsed position, in accordance with one embodiment;

[0011] FIG. 4 is a section view showing the hanger assembly of FIG. 3 lowered into a wellhead housing in accordance with one embodiment;

[0012] FIG. 5 is a section view of the hanger assembly in the wellhead housing of FIG. 4, but with the outer sleeve moved to a position that releases the locking ring and allows the locking ring to engage the wellhead housing to secure the wellhead hanger within the housing in accordance with one embodiment; and

[0013] FIG. 6 is a section view of the hanger assembly in the wellhead housing that differs from FIG. 5 in that the piston has been retracted to allow the locking segments to disengage from the wellhead hanger in accordance with one embodiment.