

are not intended to limit the scope of the invention. Indeed, the invention may encompass a variety of aspects that may not be set forth below.

[0004A] According to a first aspect, there is provided a method comprising: inserting a running tool connected to a casing hanger and to a sleeve into a wellhead, wherein the running tool is connected to the casing hanger and to the sleeve such that, upon rotation of the running tool, torque is transmitted from the running tool to the casing hanger via the sleeve to cause the casing hanger and the sleeve to rotate synchronously with the running tool; engaging a first portion of the sleeve so as to inhibit rotation of the first portion of the sleeve within the wellhead while permitting rotation of a second portion of the sleeve, relative to the first portion of the sleeve, with the running tool and the casing hanger within the wellhead; rotating the running tool and the second portion of the sleeve while inhibiting rotation of the first portion of the sleeve to cause the sleeve to move axially along the running tool and to disengage from the casing hanger such that torque is no longer transmitted from the running tool to the casing hanger via the sleeve; and once the sleeve has disengaged from the casing hanger, rotating the running tool within the wellhead to disconnect the running tool from the casing hanger.

[0004B] According to a second aspect, there is provided a system comprising: a running tool; and an overshot sleeve including a first portion threaded onto the running tool and a second portion, wherein the first portion and the second portion are connected together in a manner that allows the first portion and the second portion to rotate with respect to one another, and the second portion of the overshot sleeve includes a projection extending axially through a slot in the outer surface of the running tool.

[0004C] According to a third aspect, there is provided a system comprising: a wellhead provided at a well; a running tool disposed within a bore of the wellhead and connected to a wellbore component within the bore; a sleeve connected to the running tool and in engagement with the wellbore component, the sleeve including a swivel that allows opposite ends of the sleeve to rotate with respect to one another; and a pin extending into the bore from the wellhead to engage one end of the sleeve and inhibit rotation of that one end;

wherein the wellhead includes a blowout preventer stack connected to a casing head, and wherein the sleeve and the running tool are configured to enable the sleeve to disengage from the wellbore component and the running tool to disconnect from the wellbore component without disconnecting the blowout preventer stack from the casing head.

[0005] Example relate to running tools for installing or otherwise interacting with wellbore components, such as casing hangers. In one example, an overshot sleeve is provided with a running tool to facilitate installation of a wellbore component and disconnection of the running tool from the wellbore component. The overshot sleeve can include a swivel that allows one end of the sleeve to rotate with respect to the other end. The running tool and the overshot sleeve can cooperate to translate rotational motion of the running tool into axial motion of the overshot sleeve. The overshot sleeve can transmit torque from the running tool to the wellbore component, and the axial motion of the overshot sleeve can be used to disengage the overshot sleeve from the wellbore component to facilitate disconnection of the running tool from the wellbore component.

[0006] Various refinements of the features noted above may exist in relation to various aspects of the present embodiments. Further features may also be incorporated in these various aspects as well. These refinements and additional features may exist individually or in any combination. For instance, various features discussed below in relation to one or more of the illustrated embodiments may be incorporated into any of the above-described aspects of the present disclosure alone or in any combination. Again, the brief summary presented above is intended only to familiarize the reader with certain aspects and contexts of some embodiments without limitation to the claimed subject matter.

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:

CLAIMS

1. A method comprising:

inserting a running tool connected to a casing hanger and to a sleeve into a wellhead, wherein the running tool is connected to the casing hanger and to the sleeve such that, upon rotation of the running tool, torque is transmitted from the running tool to the casing hanger via the sleeve to cause the casing hanger and the sleeve to rotate synchronously with the running tool;

engaging a first portion of the sleeve so as to inhibit rotation of the first portion of the sleeve within the wellhead while permitting rotation of a second portion of the sleeve, relative to the first portion of the sleeve, with the running tool and the casing hanger within the wellhead;

rotating the running tool and the second portion of the sleeve while inhibiting rotation of the first portion of the sleeve to cause the sleeve to move axially along the running tool and to disengage from the casing hanger such that torque is no longer transmitted from the running tool to the casing hanger via the sleeve; and

once the sleeve has disengaged from the casing hanger, rotating the running tool within the wellhead to disconnect the running tool from the casing hanger.

2. The method of claim 1, wherein rotating the running tool and the second portion of the sleeve while inhibiting rotation of the first portion of the sleeve causes a projection of the sleeve to be withdrawn from a recess of the casing hanger.

3. The method of claim 2, comprising:

connecting the running tool to the casing hanger;

aligning a slot of the running tool with the recess of the casing hanger after connecting the running tool to the casing hanger; and

connecting the sleeve to the running tool, wherein connecting the sleeve includes inserting the projection of the sleeve through the slot of the running tool and into the recess of the casing hanger in a manner that enables the projection to transmit torque from the running tool to the casing hanger.

4. The method of claim 3, wherein connecting the running tool to the casing hanger includes threading the running tool onto the casing hanger by rotating the running tool in a first direction with respect to the casing hanger and connecting the sleeve to the running tool includes threading the first portion of the sleeve onto the running tool by rotating the first portion of the sleeve in a second direction opposite the first direction.

5. The method of claim 1, wherein engaging the first portion of the sleeve so as to inhibit rotation of the first portion of the sleeve while permitting rotation of the second portion of the sleeve with the running tool and the casing hanger includes extending a pin in the wellhead to engage a slot in the first portion of the sleeve so as to inhibit rotation of the first portion of the sleeve.

6. The method of claim 1, comprising rotating both the first portion and the second portion of the sleeve with the running tool before engaging the first portion of the sleeve so as to inhibit rotation of the first portion of the sleeve while permitting rotation of the second portion of the sleeve with the running tool and the casing hanger.

7. The method of claim 1, wherein rotating the running tool within the wellhead to disconnect the running tool from the casing hanger includes rotating the running tool in the same direction as when rotating the running tool and the second portion of the sleeve to cause the sleeve to move axially along the running tool and to disengage the casing hanger.
8. A system comprising:
a running tool; and
an overshot sleeve including a first portion threaded onto the running tool and a second portion, wherein the first portion and the second portion are connected together in a manner that allows the first portion and the second portion to rotate with respect to one another, and the second portion of the overshot sleeve includes a projection extending axially through a slot in the outer surface of the running tool.
9. The system of claim 8, wherein the running tool and the overshot sleeve are configured to selectively convert rotation of the running tool into axial motion of the overshot sleeve with respect to the running tool.
10. The system of claim 8, wherein the first portion of the overshot sleeve includes a castellated end.
11. The system of claim 8, comprising an additional component connected to the running tool, wherein the projection of the second portion of the overshot sleeve also extends into a recess in the additional component.
12. The system of claim 11, wherein the additional component includes a casing hanger.

13. The system of claim 8, wherein the first portion and the second portion of the overshot sleeve are connected together by ball bearings.
14. The system of claim 13, comprising a protective sleeve positioned about the overshot sleeve radially outward from the ball bearings.
15. A system comprising:
- a wellhead provided at a well;
 - a running tool disposed within a bore of the wellhead and connected to a wellbore component within the bore;
 - a sleeve connected to the running tool and in engagement with the wellbore component, the sleeve including a swivel that allows opposite ends of the sleeve to rotate with respect to one another; and
 - a pin extending into the bore from the wellhead to engage one end of the sleeve and inhibit rotation of that one end;
- wherein the wellhead includes a blowout preventer stack connected to a casing head, and wherein the sleeve and the running tool are configured to enable the sleeve to disengage from the wellbore component and the running tool to disconnect from the wellbore component without disconnecting the blowout preventer stack from the casing head.
16. The system of claim 15, wherein the wellbore component includes a casing hanger.