CLAIMS

WHAT IS CLAIMED IS:

1. An apparatus for obtaining feedback of the location of a well component comprising:

   a wellhead assembly with a bore; and

   a port leading through the wellhead assembly into the bore to provide a path fora fluid to flow into the bore from an external location;

   a tool for performing an operation in a well;

   a feedback member mounted to the tool, the feedback member having a portion adapted to block the port leading through the wellhead assembly and having a passage adapted to provide a path for fluid to flow from the port through the feedback member; and

   a pressure reading device adapted to establish pressure of the fluid.

2. The apparatus of claim 1, wherein the wellhead assembly is a blowout preventer.

3. The apparatus of claim 1, wherein the port leading into the bore is coupled to a choke-and-kill line.

4. The apparatus of claim 3, wherein the pressure reading device is coupled to the choke-and-kill line.

5. The apparatus of claim 1, wherein the tool for performing an operation in the well is a running tool for running casing, landing a casing hanger, and setting an annular seal.

6. The apparatus of claim 1, wherein the feedback member has a cylindrical body with an outer diameter slightly smaller than the inside diameter of the wellhead assembly.

7. The apparatus of claim 1, wherein the feedback member is selectively secured to a tool stem.

8. The apparatus of claim 1, wherein the passage in the feedback member has an inlet in the form of a circumferential groove on the exterior of the feedback member.

9. The apparatus of claim 1, wherein the passage in the feedback member has an outlet that vents to the bore in the wellhead assembly and communicates with an inlet on the passage.

10. The apparatus of claim 1, wherein the feedback member has a plurality of passages traversing the body of the feedback member vertically to allow fluid to flow through the body of the feedback member.

11. An apparatus for performing an operation in a well comprising:

a tool adapted to be lowered into a bore of a wellhead member;

the tool having an annular feedback member with a cylindrical exterior mounted to the tool for close reception with bore; and

a feedback member having a passage therein with an inlet on its exterior and an outlet from the cylindrical exterior of the feedback member for reducing pressure in a port in the wellhead member when passage aligns with the port.

12. The apparatus of claim 11, wherein the tool is a running tool for running casing, landing a casing hanger, and setting an annular seal.

13. The apparatus of claim 11, wherein the tool comprises a stem, a body, and a sleeve;

the stem and sleeve able to move down relative to body in response to fluid pressure; and

the feedback member is mounted to stem above sleeve.

14. The apparatus of claim 11, wherein the inlet of the passage in the feedback member is in the form of a circumferential groove on the exterior of the feedback member.

15. The apparatus of claim 11, wherein the feedback member has a plurality of passages traversing the body of the feedback member vertically to allow fluid to flow through the body of the feedback member.

16. A method for performing an operation in a well comprising:

coupling a feedback member to a tool;

the feedback member having a cylindrical exterior for close reception with a bore of a wellhead member to enable the cylindrical exterior to block a port extending through the wellhead member into the bore,

and the feedback member having a passage therein with an inlet facing the wellhead member and an outlet leading into the bore of the wellhead member to provide a path for fluid to flow from the port in the wellhead member to the bore when the inlet is aligned with the port;

lowering the tool into the bore of the wellhead member;

producing a flow of fluid into the bore through the port of the wellhead member;

identifying an increase in pressure of the fluid; and

observing a reduction in pressure as the passage on the feedback member aligns with the port to confirm the location of a well component placed in the well during the well operation.

17. The method of claim 16, wherein the rotation of the well component placed in the well during the well operation is confirmed by rotating the feedback member and observing a

further reduction in pressure as the outlet of the passage on the cylindrical exterior of the feedback member aligns with the port.

18. A tool for locating a component in reference to a wellhead assembly having a bore, comprising:

a cylindrical portion adapted to occupy the bore of the wellhead assembly; and

a recessed portion displaced axially from the cylindrical portion, the recessed portion defining one end of a passage extending through the tool from a side facing the wellhead assembly to the bore of the wellhead assembly.

19. The tool as recited in claim 18, wherein the recessed portion extends circumferentially around the tool.

20. The tool as recited in claim 19, wherein the passage comprises a radial passage coupled to the recessed portion and configured to face the wellhead assembly.

21. A method for disposing a component in a bore of a wellhead assembly, comprising:

establishing a distance from a fluid port in the wellhead assembly to a desired location in the wellhead assembly for the component; and

securing a feedback member to a tool string adapted to support the component in the wellbore, wherein the feedback member is secured on the tool string at a distance from the component wherein a passage through the feedback member is aligned with the fluid port in the wellhead assembly when the component is located at the desired location in the wellhead assembly.

22. The method as recited in claim 21, comprising:

initiating a flow of fluid through the fluid port in the wellhead assembly, wherein fluid flows from the port through passage in the feedback member and feedback member is

adapted to block the flow of fluid from the fluid port when the passage through the feedback member is not aligned with the fluid port in the wellhead assembly.

23. The method as recited in claim 21, comprising:

initiating a flow of fluid through the fluid port in the wellhead assembly, wherein the feedback member is adapted to block the flow of fluid from the fluid port when the passage through the feedback member is not aligned with the fluid port in the wellhead assembly.

24. A method for establishing rotation of a component in a bore of a wellhead assembly, comprising:

securing a feedback member to a tool string adapted to support the component in the wellbore, wherein the feedback member comprises a first radial portion adapted to restrict fluid flow into the bore of the wellhead assembly from a fluid port in a sidewall of the wellhead assembly and a second radial portion adapted to restrict fluid flow into the bore of the wellhead assembly from the fluid port in the sidewall of the wellhead assembly less than the first radial portion; and

establishing a number of rotations of the feedback tool based on a reduction in pressure in the fluid flow to the fluid port as the second radial portion is rotated to face the fluid port from the first radial portion.

CLAIMS

WHAT IS CLAIMED IS:

1. An apparatus for obtaining feedback of the location of a well component comprising:
a wellhead assembly with a bore;

port leading through the wellhead assembly into the bore to provide a path for a fluid to flow into the bore from an external location; and

a tool for performing an operation in a well comprising;

an elongated stem,

a body circumscribing the stem,

a feedback member mounted to the stem, the tool moveable from a position so that an outer surface of the feedback member blocks the port, and

a passage in the feedback member adapted to provide a path for fluid to flow from the port through the feedback member, wherein the passage in the feedback member has an inlet in the form of a circumferential groove on the exterior of the feedback member; and

a pressure reading device adapted to establish pressure of the fluid, so that when the tool is moved to register the passage with the port, a pressure measured with the pressure reading device is less than a pressure measured with the pressure reading device when the outer surface of the feedback member blocks the port.

2. The apparatus of claim 1, wherein the wellhead assembly is a blowout preventer.

3. The apparatus of claim 1, wherein the port leading into the bore is coupled to a choke-and-kill line.

4. The apparatus of claim 3, wherein the pressure reading device is coupled to the choke-and-kill line.

5. The apparatus of claim 1, wherein the tool for performing an operation in the well is a running tool for running casing, landing a casing hanger, and setting an annular seal.

6. The apparatus of claim 1, wherein the feedback member has a cylindrical body with an outer diameter smaller than the inside diameter of the wellhead assembly.

7. The apparatus of claim 1, wherein the feedback member is selectively secured to a tool stem.

8. The apparatus of claim 1, wherein the passage in the feedback member has an outlet that vents to the bore in the wellhead assembly and communicates with an inlet on the passage.

9. The apparatus of claim 1, wherein the feedback member has a plurality of passages traversing the body of the feedback member vertically to allow fluid to flow through the body of the feedback member.

10. An apparatus for performing an operation in a well comprising:
a running tool selectively insertable into a well casing and having a stem and a body circumscribing the stem;

an annular feedback member with a cylindrical exterior mounted around the stem and above the body;

an outlet passage in the feedback member extending between an outer surface of the feedback member and an upper end of the feedback member distal from the body;

a vertical passage axially formed through a sidewall of the feedback member, and wherein the tool is moveable from a position where the outer surface of the feedback member is adjacent an exit of a fluid line that communicates to surface to a position where the exit of the fluid line registers with the outlet passage.

11. The apparatus of claim 10, wherein a pressure measured in the fluid line when the outer surface of the feedback member adjacent an exit of a fluid line is greater than a pressure measured in the fluid line when the exit of the fluid line registers with the outlet passage.

12. A method for performing an operation in a well comprising:
coupling a feedback member to a tool;
the feedback member having a cylindrical exterior for close reception with a bore of a wellhead member to enable the cylindrical exterior to block a port extending through the wellhead member into the bore,

and the feedback member having a passage therein with an inlet facing the wellhead member and an outlet leading into the bore of the wellhead member to provide a path for fluid to flow from the port in the wellhead member to the bore when the inlet is aligned with the port;

lowering the tool into the bore of the wellhead member;

producing a flow of fluid into the bore through the port of the wellhead member;

identifying an increase in pressure of the fluid;

observing a reduction in pressure as the passage on the feedback member aligns with the port to confirm the location of a well component placed in the well during the well operation; and

wherein rotation of the well component placed in the well during the well operation is confirmed by rotating the feedback member and observing a further reduction in pressure as

the outlet of the passage on the cylindrical exterior of the feedback member aligns with the port.

13. A tool for locating a component in reference to a wellhead assembly having a bore, comprising:
an elongated tool stem having an upper end selectively coupled with a downhole string;

a tool body circumscribing the tool stem and having a lower end selectively coupled with a casing hanger;

a cylindrical portion mounted on the stem above the body that is adapted to occupy the bore of the wellhead assembly; and

a recessed portion displaced axially from the cylindrical portion that defines one end of a passage extending through the tool from a side facing the wellhead assembly to the bore of the wellhead assembly, wherein the recessed portion extends circumferentially around the tool, and wherein the passage comprises a radial passage coupled to the recessed portion and configured to face the wellhead assembly.

14. A method for establishing rotation of a component in a bore of a wellhead assembly, comprising:
securing a feedback member to a tool string adapted to support the component in the wellbore, wherein the feedback member comprises a first radial portion adapted to restrict fluid flow into the bore of the wellhead assembly from a fluid port in a sidewall of the wellhead assembly and a second radial portion adapted to restrict fluid flow into the bore of the wellhead assembly from the fluid port in the sidewall of the wellhead assembly less than the first radial portion; and

establishing a number of rotations of the feedback tool based on a reduction in pressure in the fluid flow to the fluid port as the second radial portion is rotated to face the fluid port from the first radial portion.