

Claims

1. A managed pressure drilling system comprising:
a rotating sealing device; and
a drill string comprising a plurality of drill pipe members wherein each drill pipe member has a first tool joint having a first tool joint outer diameter;
a second tool joint having a second tool joint outer diameter; and
a tubular body between the first and second tool joints having a tubular body outer diameter;
wherein in at least one section of the drill string the first tool joint outer diameter, the second tool joint outer diameter and the tubular body outer diameter are substantially the same; and
wherein the rotating sealing device is configured to form a fluid seal against at least a part of the at least one section of drill string.
2. The system according to claim 1 wherein the rotating sealing device is a rotary control device (RCD), wherein the rotary control device comprises at least one sealing element configured to form and/or maintain a fluid seal against at least a part of the at least one section of the drill string.
3. The system according to claim 1 or claim 2 wherein the at least one section of the drill string has an outer diameter that is substantially uniform along its longitudinal length.
4. The system according to any preceding claim wherein the at least one section of the drill string is configured to be located in a substantially vertical portion or section of a wellbore in a riser, liner and/or casing.
5. The system according to any preceding claim wherein the at least one section of the drill string is an upper drill string section.
6. The system according to any preceding claim wherein the system comprises a lower drill string section wherein the first tool joint outer diameter and/or the second tool joint outer diameter is larger than the tubular body outer diameter in each drill pipe member in the lower drill string section.

7. The system according to claim 6 wherein a first or second tool joint of the upper drill string section is configured to connect to a first or second tool joint of the lower drill string section to connect the upper and lower drill string sections together.
8. The system according to claim 6 or 7 wherein the first tool joint and/or the second tool joint of the drill pipe members in the lower drill string portion has an external upset and/or an internal upset.
9. The system according to any of preceding claim wherein the first tool joint and/or the second tool joint of the drill pipe members has an internal upset.
10. The system according to any of claims 6 to 9 wherein the lower drill string section is connected to or configured to be connected to a drill bit.
11. The system according to any of claims 6 to 10 wherein the lower drill string section is configured to be located in a substantially non-vertical, horizontal and/or deviated portion or section of the wellbore.
12. The system according to any preceding claim wherein the system is configured for use in managed pressure drilling in a subsea well wherein the system comprises a riser and the rotating sealing device is configured to form a fluid seal between the at least one section of drill string passing through the rotating sealing device and the riser.
13. The system according to any of claims 1 to 11 wherein the system is configured for use in managed pressure drilling in an onshore well wherein the system comprises a casing and the rotating sealing device is configured to form a fluid seal between the at least one section of drill string passing through the rotating sealing device and the casing.
14. A drill string assembly for managed pressure drilling comprising:
 - a plurality of drill pipe members wherein each drill pipe member has a first tool joint having a first tool joint outer diameter;
 - a second tool joint having a second tool joint outer diameter; and

a tubular body between the first and second tool joints having a tubular body outer diameter;

wherein the first tool joint outer diameter and the second tool joint outer diameter are substantially equal to the tubular body outer diameter in each drill pipe member in at least one section of the drill string.

15. The drill string assembly according to claim 14 wherein the at least one section of the drill string is an upper drill string section.
16. The drill string assembly according to claim 14 or claim 15 comprising a lower drill string section wherein the first tool joint outer diameter and/or the second tool joint outer diameter is larger than the tubular body outer diameter in each drill pipe member in the lower drill string section.
17. A method for managed pressure drilling, the method comprising:
providing a managed pressure drilling system, the system comprising:
a rotating sealing device; and
a drill string comprising a plurality of drill pipe members;
wherein each drill pipe member comprises;
a tubular pipe body with connectors at either end thereof;
wherein the connectors and the tubular pipe body of the drill pipe member in at least one section of the drill string have substantially the same outer diameter;
lowering the drill string into a tubular connected to a well;
forming a fluid seal between the at least one section of the drill string and the tubular;
passing at least one part of the drill string through the rotating sealing device; and
drilling the wellbore.
18. The method according to claim 17 wherein the at least one section of the drill string is an upper drill string which is connected to a lower drill string connected to a drill bit.
19. The method according to claim 17 or claim 18 comprising locating the at least one section of the drill string in a substantial vertical section of the tubular and/or well.

20. The method according to claim 18 or claim 19 comprising drilling a non-vertical or deviating wellbore by deviating the lower drill string from the vertical.
21. A method for drilling a well, comprising:
 - providing a drilling system, the system comprising:
 - a rotating sealing device; and
 - a plurality of drill pipe members comprising first drill pipe members and second drill pipe members;
 - wherein each drill pipe member comprises a tubular pipe body with connector joints at either end thereof;
 - wherein first drill pipe members have connector joint outer diameters which are larger than the outer diameter of the tubular pipe body;
 - wherein second drill pipe members have connector joint outer diameters which are substantially the same as the outer diameter of the tubular pipe body;
 - wherein the first drill pipe members are configured to be connected to form a first drill string section and the second drill pipe members are configured to be connected to form a second drill string section;
 - drilling a first section of the well using the first drill string section comprising a plurality of first drill pipe members;
 - connecting second drill pipe members to the first drill string section;
 - forming a fluid seal between a tubular connected in the well and an outer surface of at least part of a second drill pipe member in the second drill string section;
 - passing at least part of the second drill string through the rotating sealing device; and
 - drilling a second section of the well at a pre-determined fluid annular pressure.
22. The method according to claim 21 comprising drilling a first section of the well using conventional drilling and drilling the second section of the well using managed pressure drilling.
23. The method according to claim 21 or claim 22 comprising drilling a third section of the well using conventional drilling or managed pressure drilling.
24. The method according to claim 23 comprising drilling a third section of the well by connecting a third drill string section comprising a plurality of third drill pipe members to an upper portion of the second drill string section.

25. The method according to claim 24 wherein the third section of the well is drilled using conventional drilling wherein the rotating sealing device is removed or deactivated and the third drill pipe members in third drill string section comprise connector joints which are larger than the outer diameter of the tubular pipe body of the third drill pipe members in the third drill string section.