CLAIMS

1. A well comprising an inner well casing, an outer well casing, a clamping arrangement and a seal for sealing an annulus in the well, the annulus being formed between an outer surface of the inner well casing and the outer well casing wherein:

the inner well casing comprises:

a central longitudinal axis which extends along a longitudinal axis of the inner well casing; and

an outer clamping surface which is arranged to be secured and clamped in the outer well casing, the outer clamping surface being located at an initial radial distance from the central longitudinal axis of the inner well casing;

the clamping arrangement comprises:

a compression collar; and

a compression ring

wherein the compression ring and the compression collar have oppositely directed axially tapered annular surfaces so that relative axial movement between the compression collar and the compression ring, towards each other, reduces an internal diameter of the compression collar to distort the outer well casing inwards creating a clamping force which grips the inner well casing;

characterized in that

the seal comprises a flexible metal sealing lip which projects radially outwardly and away from the central longitudinal axis of the inner well casing, from a support surface of the inner well casing and wherein the support surface is of a reduced diameter relative to the diameter of the clamping surface of the inner well casing, the metal sealing lip having a distal sealing surface for sealing against an inner surface of the outer well casing; and

wherein, the compression ring is arranged to exert sufficient radial force to distort the compression collar and the outer well casing inwardly to flex the sealing lip; and

the sealing lip extends towards the side of the annulus to be sealed and a projection angle is defined between a pressure containing surface of the sealing lip and a support surface of the inner well casing, and the projection angle of the

sealing lip is arranged to decrease as the sealing lip is flexed inwardly by the clamping force and wherein the projection angle is urged towards a greater projection angle as the sealing lip is energised by the pressure in the annulus acting on the pressure containing surface which is arranged to urge the sealing surface towards the inner surface of the outer well casing.

2. The well according to Claim 1 in which, prior to use, the sealing surface locates at an initial radial distance relative to the central longitudinal axis which is less than or equal to the initial radial distance of the outer clamping surface of the inner well casing.

3. The well according to any preceding claim in which the sealing lip is arranged to flare outwardly by pressure of a fluid in the annulus.

4. The well according to any preceding claim in which the clamping force of the outer well casing is arranged to flex the sealing lip to create a seal between the inner well casing and the outer well casing and wherein the clamping force is arranged to compress the inner well casing in a clamping zone and in which the seal is located in the clamping zone.

5. The well according to any preceding claim in which the inner well casing comprises a hanger which is arranged, in use, to suspend a casing string and wherein the hanger is arranged to be clamped in a wellhead and for a casing string to be suspended below the wellhead.

6. The well according to any preceding claim in which the outer clamping surface comprises a metal-to-metal sealing surface.

7. The well according to any preceding claim in which the sealing lip comprises a plastically deformable material.

8. The well according to any preceding claim in which the sealing lip extends radially outwardly from a base towards a sealing tip and in which the sealing lip

extends radially to the same extent/distance as the outer clamping surface of the inner well casing and the sealing lip is arranged to move inwardly as the outer clamping surface of the inner well casing moves inwardly as the inner well casing is clamped within the clamping arrangement of the well.

9. The well according to any preceding claim in which the inner well casing is freely moveable through the clamping surface of the outer well casing when the clamping arrangement is inactive and there is no inwardly directed clamping force being applied by or to the outer well casing.

10. The well according to any preceding claim in which the sealing lip projects from a support surface of the inner well casing and wherein the support surface is of a reduced diameter relative to the diameter of the outer clamping surface of the inner well casing.

11. The well according to any preceding claim in which the sealing lip locates within a groove.

12. The well according to Claim 11 in which the groove locates within or adjacent to the outer clamping surface of the inner well casing.

13. The well according to any preceding claim in which the seal provided on the seal is provided on a sealing member and in which the sealing member is securable to the inner well casing.

14. The well according to Claim 13 in which the sealing member comprises a first seal and a second seal and wherein the first seal is arranged to seal the annulus from above and the second seal is arranged to seal the annulus from below.

15. A method of sealing an annulus in a well, the annulus being formed between an outer surface of an inner well casing and an outer well casing of the well; wherein said well comprising a clamping arrangement and a seal, and

wherein the inner well casing comprises:

a central longitudinal axis which extends along a longitudinal axis of the inner well casing; and

an outer clamping surface which is arranged to be secured and clamped in the outer well casing, the outer clamping surface being located at an initial radial distance from the central longitudinal axis of the inner well casing;

the clamping arrangement comprises:

a compression collar; and

a compression ring

wherein the compression ring and the compression collar have oppositely directed axially tapered annular surfaces so that relative axial movement between the compression collar and the compression ring towards each other reduces an internal diameter of the compression collar to distort the outer well casing inwards creating a clamping force which grips the inner well casing;

characterized in that

the seal comprises a flexible metal sealing lip which projects radially outwardly and away from the central longitudinal axis of the inner well casing, from a support surface of the inner well casing and wherein the support surface is of a reduced diameter relative to the diameter of the clamping surface of the inner well casing, the metal sealing lip having a distal sealing surface for sealing against an inner surface of the outer well casing;

wherein the compression ring is arranged to exert sufficient radial force to distort the compression collar and the outer well casing inwardly to flex the sealing lip; and the sealing lip extends towards the side of the annulus to be sealed and a projection angle is defined between a pressure containing surface of the sealing lip and a support surface of the inner well casing, and the projection angle of the sealing lip is arranged to decrease as the sealing lip is flexed inwardly by the clamping force and wherein the projection angle is urged towards a greater projection angle as the sealing lip is energised by the pressure in the annulus acting on the pressure containing surface which is arranged to urge the sealing surface towards the inner surface of the outer well casing; and

the method comprising clamping the inner well casing in the outer well casing with the clamping arrangement and compressing the inner well casing and

flexing the sealing lip radially inwardly.