

Claims:

1. An assembly for engaging an inner wall of a pipe, the assembly comprising:
first and second end plates adapted to be coaxially aligned when in use, the first and second end plates each comprising one or more members extending from a first surface thereof;
an annular ring provided between the end plates, the annular ring comprising one or more first slots at one end thereof to be aligned with and for receiving the one or more members of the first end plate, and one or more second slots at the other end thereof to be aligned with and for receiving the one or more members of the second end plate;
a first resilient sealing member provided around the one or more members of the first end plate, between the first end plate and the annular ring;
a second resilient sealing member provided around the one or more members of the second end plate, between the annular ring and the second end plate; and
an urging mechanism adapted to urge the first and second end plates towards the annular ring to deform the first and second resilient sealing members to engage the inner wall of the pipe.
2. The assembly of claim 1, wherein the annular ring comprises a beveled edge on at least one of the ends thereof for directing the deformation of a corresponding one of the first and second resilient sealing members.
3. The assembly of claim 2, wherein the annular ring comprises a first beveled edge on the one end for directing the deformation of the first resilient sealing member, and a second beveled edge on the other end for directing the deformation of the second resilient sealing member.
4. The assembly of any one of claims 1 to 3, wherein at least one of the end plates comprises a beveled edge for directing the deformation of a corresponding one of the first and second resilient sealing members.
5. The assembly of claim 1, wherein the urging mechanism comprises a series of circumferentially and equidistantly spaced tie rods engaged with a series of corresponding circumferentially and equidistantly spaced holes in one of the end plates, the tie rods

extending through the annular ring and the other of the end plates for tightening the end plates to the annular ring using a series of nuts.

6. The assembly of claim 5, wherein the holes in one of the end plates are blind holes.
7. The assembly of claim 1, wherein the annular ring comprises at least one coupler for directing a fluid to a port extending to a surface thereof.
8. The assembly of claim 1, wherein the first and second resilient sealing members are O-rings.
9. The assembly of claim 1, wherein the one or more members of the first and second end plates are provided as a circumferential flange extending from each of the first and second end plates.
10. The assembly of claim 1, wherein multiple differently sized sealing members can be accommodated by the one or more members of the first and second end plates.
11. An isolation tool comprising the assembly of any one of claims 1 to 10.
12. A testing tool further comprising the isolation tool of claim 11.
13. A method of engaging an inner wall of a pipe using the assembly of claim 1, the method comprising:
 - placing the first and second resilient sealing members over the one or more members of the first and second end plates;
 - coupling the first and second end plates to the annular ring in a loose manner using the urging mechanism to prepare the assembly;
 - inserting the assembly into an interior of the pipe; and
 - operating the urging mechanism to deform the first and second resilient sealing members outwardly into engagement with the inner wall.
14. The method of claim 13, wherein the first and second resilient sealing members circumferentially engage the inner wall to isolate a first segment of the pipe on one side of the assembly from a second segment of the pipe on an opposite side of the assembly.

15. The method of claim 13, further comprising selecting the first and second resilient sealing members according to a schedule for the pipe, wherein multiple differently sized sealing members can be accommodated by the one or more members of the first and second end plates.
16. An assembly for engaging an inner wall of a pipe, the assembly comprising:
first and second end plates adapted to be coaxially aligned when in use;
an annular ring provided between the end plates;
each end of the annular ring comprising one or more members extending from a surface thereof;
each of the first and second end plates comprising one or more slots at one end thereof to be aligned with and for receiving the one or more members of the corresponding end of the annular ring;
a first resilient sealing member provided around the one or more members of the first end of the annular ring, between the first end plate and the annular ring;
a second resilient sealing member provided around the one or more members of the second end of the annular ring, between the annular ring and the second end plate; and
an urging mechanism adapted to urge the first and second end plates towards the annular ring to deform the first and second resilient sealing members to engage the inner wall of the pipe.
17. The assembly of claim 16, wherein the annular ring comprises a beveled edge on at least one of the ends thereof for directing the deformation of a corresponding one of the first and second resilient sealing members.
18. The assembly of claim 17, wherein the annular ring comprises a first beveled edge on the one end for directing the deformation of the first resilient sealing member, and a second beveled edge on the other end for directing the deformation of the second resilient sealing member.
19. The assembly of any one of claims 16 to 18, wherein at least one of the end plates comprises a beveled edge for directing the deformation of a corresponding one of the first and second resilient sealing members.

20. The assembly of claim 16, wherein the urging mechanism comprises a series of circumferentially and equidistantly spaced tie rods engaged with a series of corresponding circumferentially and equidistantly spaced holes in one of the end plates, the tie rods extending through the annular ring and the other of the end plates for tightening the end plates to the annular ring using a series of nuts.
21. The assembly of claim 20, wherein the holes in one of the end plates are blind holes.
22. The assembly of claim 16, wherein the annular ring comprises at least one coupler for directing a fluid to a port extending to a surface thereof.
23. The assembly of claim 16, wherein the first and second resilient sealing members are O-rings.
24. The assembly of claim 16, wherein the one or more members of the ends of the annular ring are provided as a circumferential flange extending from each end of the annular ring.
25. The assembly of claim 16, wherein multiple differently sized sealing members can be accommodated by the one or more members of the first and second end plates.
26. An isolation tool comprising the assembly of any one of claims 16 to 25.
27. A testing tool further comprising the isolation tool of claim 26.
28. A method of engaging an inner wall of a pipe using the assembly of claim 16, the method comprising:
placing the first and second resilient sealing members over the one or more members of the ends of the annular ring;
coupling the first and second end plates to the annular ring in a loose manner using the urging mechanism to prepare the assembly;
inserting the assembly into an interior of the pipe; and
operating the urging mechanism to deform the first and second resilient sealing members outwardly into engagement with the inner wall.

29. The method of claim 28, wherein the first and second resilient sealing members circumferentially engage the inner wall to isolate a first segment of the pipe on one side of the assembly from a second segment of the pipe on an opposite side of the assembly.

30. The method of claim 28, further comprising selecting the first and second resilient sealing members according to a schedule for the pipe, wherein multiple differently sized sealing members can be accommodated by the one or more members of the first and second end plates.