CLAIMS

What is claimed is:

1. A method of making a well screen for filtering solids from production fluids at a subterranean well location, having a control line extending there through, the method comprising the steps of:

providing an elongated base pipe with connections on each end to connect the base pipe in fluid communication with a tubing string, the base pipe having perforations in the wall along a portion of the length of the base pipe;

attaching an annular-shaped filtering assembly around the perforated portion of the base pipe; the filtering assembly comprising an annular screen for filtering solids from production fluids; and

forming a longitudinally extending channel in the outer surface of the filtering assembly of a size and shape to receive the control line.

2. The method of **claim 1**, wherein the attaching step comprises crimping the ends of filtering assembly to the base pipe.

3. The method of **claim 1**, wherein the forming step comprises plastically deforming the filter assembly.

4. The method of **claim 1**, additionally comprising the steps of connecting the well screen to a tubing string and positioning the well screen at a subterranean location in a well, having a control line extending through the subterranean location and positioning the control line in the longitudinally extending channel whereby the control line extends past the well screen.

5. The method of **claim 1**, wherein the attaching step comprises attaching a filtering assembly, the filtering assembly comprises an annular screen for filtering solids from production fluids and an annular shroud positioned around the screen to protect the screen, the shroud having perforation in the wall.

6. The method of **claim 5**, wherein the attaching step comprises crimping the ends of filtering assembly to the base pipe.

7. The method of **claim 3**, wherein the attaching step comprises attaching a filtering assembly, the filtering assembly comprises an annular screen for filtering solids from production

fluids and an annular shroud positioned around the screen to protect the screen, the shroud having perforation in the wall.

8. The method of **claim 1**, wherein the attaching step comprises attaching a filtering assembly, the filtering assembly comprises an annular screen for filtering solids from production fluids, an annular shroud positioned around the screen to protect the screen and a drainage layer, the shroud having perforation in the wall.

9. The method of **claim 8**, wherein the attaching step comprises crimping the ends of filtering assembly to the base pipe

10. The method of **claim 8**, wherein the forming step comprises plastically deforming the filter assembly.

11. The method of **claim 1**, wherein the attaching step comprises attaching a filtering assembly, the filtering assembly comprises an annular screen for filtering solids from production fluids, an annular shroud positioned around the screen to protect the screen and drainage layers positioned between the screen and the base pipe and shroud, the shroud having perforation in the wall.

12. The method of **claim 11**, wherein the attaching step comprises crimping the ends of filtering assembly to the base pipe.

13. The method of **claim 11**, wherein the forming step comprises plastically deforming the filter assembly and compressing the drainage layers.

14. A well screen for filtering solids from production fluids at a subterranean well location, having a control line extending there through, the well screen comprising:

an elongated base pipe with connections on each end to connect the base pipe in fluid communication with a tubing string, perforations in the wall of a portion of the base pipe;

a tubular filter assembly comprising a screen mounted around the base pipe; and

a longitudinally extending channel in the outer wall of the well screen of a size and shape to receive a control line therein.

15. The screen according to **claim 14**, wherein the filter assembly in the longitudinally extending area below the channel comprises a plastically-deformed screen.

16. The screen according to **claim 14**, wherein the filter assembly is mounted on the base pipe by crimping the ends of the filter assembly onto the base pipe.

17. The screen according to **claim 14**, wherein the filter assembly comprises:

a tubular shroud mounted on the base pipe, forming the outer wall and defining an annular space between the interior of the shroud and the exterior of the base pipe, the shroud having perforations in the wall; and

a screen mounted in the annular space.

18. The screen according to **claim 17**, wherein the filter assembly is mounted on the base pipe by crimping the ends of the filter assembly onto the base pipe.

19. The screen according to **claim 14**, wherein the filter assembly comprises an annular screen for filtering solids from production fluids, an annular shroud positioned around the screen to protect the screen and drainage layers positioned between the screen and the base pipe and shroud, the shroud having perforation in the wall.

20. The screen according to **claim 19**, wherein the filter assembly in the longitudinally extending area below the channel comprises a plastically-deformed screen, plastically deformed shrouds and compressed drainage layers.

CLAIMS

1. A method of making a well screen for filtering solids from production fluids at a subterranean well location, having a control line extending there through, the method comprising the steps of:

providing an elongated base pipe with connections on each end to connect the base pipe in fluid communication with a tubing string, the base pipe having perforations in the wall along a portion of the length of the base pipe;

attaching an annular-shaped filtering assembly around the perforated portion of the base pipe; the filtering assembly comprising:

an annular screen for filtering solids from production fluids; and

an inner annular shroud positioned between the annular screen and the base pipe, wherein the inner annular shroud comprises an annular wall, wherein a first portion of the annular wall engages the base pipe and a second portion of the annular wall is offset from the base pipe to form a first drainage layer between the second portion of the wall and the base pipe when the filtering assembly is in an uncompressed position; and

compressing, to a compressed position, the annular-shaped filtering assembly inward against the base pipe to form a longitudinally extending channel in the outer surface of the filtering assembly of a size and shape to receive the control line and to plastically deform the filtering assembly such that the second portion of the annular wall engages the base pipe;

wherein the first portion of the annular wall is different from the second portion of the annular wall.

2. The method of claim 1, wherein attaching the annular-shaped filtering assembly around the perforated portion of the base pipe comprises crimping the ends of filtering assembly to the base pipe.

3. The method of claim 1, further comprising:

connecting the well screen to the tubing string and positioning the well screen at the subterranean well location, wherein the control line extends through the subterranean well location; and

positioning the control line in the longitudinally extending channel whereby the control line extends past the well screen.

4. The method of claim 1, wherein the filtering assembly further comprises an outer annular shroud positioned around the screen to protect the screen, the outer annular shroud having perforations formed therethrough.

5. The method of claim 4, wherein attaching the annular-shaped filtering assembly around the perforated portion of the base pipe comprises crimping the ends of the filtering assembly to the base pipe.

6. The method of claim 1, wherein the filtering assembly further comprises an outer annular shroud positioned around the annular screen to protect the annular screen and the first drainage layer, the outer annular shroud having perforations formed therethrough.

7. The method of claim 6, wherein attaching the annular-shaped filtering assembly around the perforated portion of the base pipe comprises crimping the ends of the filtering assembly to the base pipe.

8. The method of claim 1, wherein the filtering assembly further comprises an outer annular shroud positioned around the annular screen to protect the annular screen and a second drainage layer formed between the annular screen and the outer annular shroud, the outer annular shroud having perforations formed therethrough.

9. The method of claim 8, wherein attaching the annular-shaped filtering assembly around the perforated portion of the base pipe comprises crimping the ends of the filtering assembly to the base pipe.

10. The method of claim 8, wherein compressing the annular-shaped filtering assembly inward against the base pipe comprises compressing the first and second drainage layers.

11. A well screen for filtering solids from production fluids at a subterranean well location, having a control line extending there through, the well screen comprising:

an elongated base pipe with connections on each end to connect the base pipe in fluid communication with a tubing string, perforations in the wall of a portion of the base pipe;

a tubular filter assembly that is compressible from an uncompressed position to a compressed position, the assembly comprising:

a screen mounted around the base pipe; and

an inner annular shroud positioned between the screen and the base pipe, the inner annular shroud comprising an annular wall, wherein a first portion of the annular wall engages the base pipe;

wherein, when the filter assembly is in the uncompressed position, a second portion of the annular wall is offset from the base pipe to form a first drainage layer between the second portion of the annular wall and the base pipe; and

wherein, when the filter assembly is in the compressed position, the second portion of the annular wall engages the base pipe; and

a longitudinally extending channel in the tubular filter assembly of a size and shape to receive a control line therein;

wherein the longitudinally extending channel corresponds with a portion of the inner annular shroud in which the second portion of the annular wall engages the base pipe when the filter assembly is in the compressed position; and

wherein the first portion of the annular wall is different from the second portion of the annular wall.

12. The well screen according to claim 11, wherein the filter assembly is mounted on the base pipe by crimping the ends of the filter assembly onto the base pipe.

13. The well screen according to claim 11, wherein the filter assembly further comprises an outer annular shroud mounted on the base pipe and around the screen,wherein the outer annular shroud is a perforated annular shroud having an exterior surface that forms an outer wall of the well screen; wherein an annular space is formed between an interior surface of the outer annular shroud and an exterior surface of the base pipe; and wherein the screen is mounted in the annular space.

14. The well screen according to claim 13, wherein the filter assembly is mounted on the base pipe by crimping the ends of the filter assembly onto the base pipe.

15. The well screen according to claim 11, wherein the screen is an annular screen for filtering solids from production fluids, and wherein the outer annular shroud is positioned around the annular screen to protect the annular screen and the first drainage layer and a second drainage layer formed between the annular screen and the outer annular shroud, the outer annular shroud having perforations formed therethrough.

16. The well screen according to claim 15, wherein the annular screen is a plastically-deformed screen; and wherein the second drainage layer is compressed.