Claims

What is claimed is:

1. A screen assembly, comprising:

a base pipe having an axial bore formed therethrough;

an axial rod positioned radially-outward from the base pipe;

a screen positioned radially-outward from the axial rod, wherein the screen comprises a wire wrapped helically around the base pipe on the axial rod;

a housing positioned radially-outward from the base pipe and axially adjacent to the axial rod, the screen, or both, wherein a first annulus is formed between the housing and the base pipe;

a first opening formed through the base pipe and radially-inward from the housing;

a second opening formed through the base pipe and radially-inward from the housing, wherein the second opening is axially offset from the first opening;

a third opening formed through the axial rod; and

a valve disposed within the first annulus and positioned axially between the first and second openings, wherein the valve allows a fluid to flow axially therethrough when in an open position and prevents the fluid from flowing axially therethrough when in a closed position.

~~2. The screen assembly of claim 1, wherein the axial rod has a third opening formed therethrough.~~

~~3~~2. The screen assembly of ~~claim 2~~ claim 1, wherein a longitudinal axis through the third opening is substantially perpendicular to a longitudinal axis through the axial rod.

~~4~~3. The screen assembly of claim 1, wherein a height of the axial rod varies between a first height, at which an inner surface of the axial rod is in contact with an outer surface of the base pipe, to a second height, at which the inner surface of the axial rod is spaced apart from the outer surface of the base pipe, thereby forming an opening between the inner surface of the axial rod and the outer surface of the base pipe.

~~5~~4. The screen assembly of claim 1, further comprising an annular drainage layer positioned radially between the base pipe and the axial rod, wherein the drainage layer is adapted to have a fluid flow therethrough.

~~6~~5. The screen assembly of claim 1, wherein an outer surface of the base pipe has a groove formed therein, and wherein the groove is positioned radially inward from the axial rod.

~~7~~6. The screen assembly of claim ~~6~~5, wherein the groove is an area of reduced outer diameter in the base pipe, and wherein the groove extends around a circumference of the base pipe.

~~8~~7. The screen assembly of claim 1, further comprising a second housing positioned radially-outward from the base pipe, wherein a second annulus is formed between the second housing and the base pipe, and wherein the axial rod is positioned axially between the first and second annuli.

~~9~~8. The screen assembly of claim 1, wherein the second opening has an inflow control device disposed therein to restrict fluid flow therethrough.

~~10~~9. The screen assembly of claim 1, wherein a height of the axial rod is between about 10 mm and about 20 mm.

~~11~~10. A screen assembly, comprising:

a base pipe having an axial bore formed therethrough;

an axial rod positioned radially-outward from the base pipe;

a screen positioned radially-outward from the axial rod, wherein the screen comprises a wire wrapped helically around the base pipe on the axial rod, wherein first and second axial channels are formed between the screen and the base pipe, wherein the axial rod is positioned between the first and second axial channels, wherein an opening is formed through the axial rod, between the axial rod and the base pipe, or both, and wherein the opening provides a path of fluid communication between the first and second axial channels;

a housing positioned radially-outward from the base pipe and axially adjacent to the axial rod, the screen, or both, wherein an annulus is formed between the housing and the base pipe;

a radial opening formed through the base pipe and radially-inward from the housing;

an inflow control device formed in the base pipe and radially-inward from the housing, wherein the inflow control device is axially offset from the radial opening; and

a valve disposed within the annulus and positioned axially between the radial opening and the inflow control device, wherein the valve allows a fluid to flow axially therethrough when in an open position and prevents the fluid from flowing axially therethrough when in a closed position.

~~12~~11. The screen assembly of claim ~~11~~10, wherein the opening is formed through the axial rod.

~~13~~12. The screen assembly of claim ~~11~~10, wherein the opening is formed between the axial rod and the base pipe.

~~14~~13. The screen assembly of claim ~~13~~12, wherein a height of the axial rod varies between a first height, at which an inner surface of the axial rod is in contact with an outer surface of the base pipe, to a second height, at which the inner surface of the axial rod is spaced apart from the outer surface of the base pipe, thereby forming the opening between the inner surface of the axial rod and the outer surface of the base pipe.

~~15~~14. The screen assembly of claim ~~13~~12, wherein the opening is a groove formed in an outer surface of the base pipe.

~~16~~15. A method of gravel packing an annulus between a screen and a wall of a wellbore, comprising:

flowing a gravel slurry into the annulus between the screen and the wall of the wellbore, wherein the gravel slurry comprises a plurality of gravel particulates and a carrier fluid;

flowing the carrier fluid through the screen and into a first axial channel formed between the screen and a base pipe positioned radially-inward therefrom, wherein the first

axial channel is circumferentially offset from a second axial channel, ~~and~~ wherein an axial rod is positioned between the first and second axial channels, and wherein the screen comprises a wire wrapped helically around the base pipe on the axial rod;

flowing a portion of the carrier fluid from the first axial channel to the second axial channel through an opening formed through the axial rod, between the axial rod and the base pipe, or both;

flowing the portion of the carrier fluid through the second axial channel and into an annulus formed between a housing and the base pipe, wherein the housing is axially offset from the axial rod, the screen, or both;

flowing the portion of the carrier fluid axially through a valve disposed within the annulus formed between the housing and the base pipe; and

flowing the portion of the carrier fluid through a first radial opening formed in the base pipe and into an axial bore formed through the base pipe.

~~17~~16. The method of claim ~~16~~15, further comprising actuating the valve to a closed position after the portion of the carrier fluid has flowed therethrough, wherein additional fluid is prevented from flowing through the valve when the valve is in the closed position.

~~18~~17. The method of claim ~~17~~16, wherein the additional fluid comprises hydrocarbons.

~~19~~18. The method of claim ~~17~~16, further comprising flowing the additional fluid through a second radial opening formed in the base pipe and into the axial bore, wherein the second radial opening is positioned axially between the axial rod and the first radial opening.

~~20~~19. The method of claim ~~19~~18, wherein the second radial opening has an inflow control device disposed therein.