

What is claimed is:

1. A valve, comprising:
 - valve body including a first fluid port opening from the valve body, a second fluid port opening from the valve body, and an interior passage fluidly connecting the first fluid port and the second fluid port;
 - a bore extending inwardly of a first wall of the valve body and having an annular first seat securement surface extending around the an interior passage intermediate of the first fluid port and the second fluid port, the second fluid port fluidly connected to the bore;
 - a cage disposed in the bore, the cage having an annular second seat securement surface and an opposed first annular surface, the annular second seat securement surface facing the annular first seat securement surface;
 - a cover extending over the first wall of the valve body and the opening of the bore thereof, the cover including a cage engagement surface contacting the first annular surface; and
 - an annular seat having a main body having an opening therethrough and a first seat surface facing and contacting the annular first seat securement surface of the valve body and a second seat surface, facing away from the first seat surface, the second seat surface comprising a first annular region having a first elevation and a second annular region different than the first annular region, and the second annular region comprises at least one projection projecting from the annular seat to an elevation greater than the first elevation and contacting the annular second seat securement surface.
2. The valve of claim 1, wherein the at least one projection extends circumferentially around the opening in the annular seat.
3. The valve of claim 2, wherein the at least one projection includes at least one secondary arcuate projecting therefrom in a direction away from the first annular surface.
4. The valve of claim 3, wherein at least one secondary arcuate projecting therefrom in the direction away from the first annular surface comprises at least two

arcuate projections, each arcuate projection spaced from another of the arcuate projections with a gap therebetween.

5. The valve of claim 4, wherein the at least one projection is triangular in section having a tip extending distal the first annular surface.
6. The valve of claim 1, further including a seal sleeve disposed within the cage between the cage engagement surface of the cover and the annular seat.
7. The valve of claim 6, wherein the seal sleeve comprises an annular projecting portion extending from a surface thereof facing away from the cage engagement surface of the cover.
8. The valve of claim 7, wherein the first annular region of the annular seat is interposed between the opening of the annular seat and the second annular region of the annular seat.
9. The valve of claim 1, wherein the bore has a maximum depth from the first wall of the valve body to the annular first seat securement surface of H_{1+} and a minimum depth from the first wall of the valve body to the annular first seat securement surface of H_{1-} ;
the cage has a maximum height between the annular second seat securement surface and the opposed first annular surface of H_{2+} and a minimum height between the annular second seat securement surface and the opposed first annular surface of H_{2-} ;
the annular seat has a maximum thickness t_{3+} between the first seat surface and the first annular region of the second seat surface and a minimum thickness t_{3-} between the first seat surface and the first annular region of the second seat surface; and
the at least one projection in an uncompressed state has a maximum elevation height of t_{1+} above the first annular surface, and a minimum elevation height of t_{1-} above the first annular surface, wherein;
 $H_{1+} \leq (H_{2-} + H_{2-} + t_{1-})$.

10. The valve of claim 9, wherein $H_{1-} \leq (H_{2+} + H_{2+} + t_{1+})$, and the at least one projection is compressible inwardly of the main body of the annular seat by at least a difference between H_{1-} and a sum of $(H_{2+} + H_{2+} + t_{1+})$.

11. A valve, comprising:

a valve body including a first fluid port opening from the valve body, a second fluid port opening from the valve body, and an interior passage fluidly connecting the first fluid port and the second fluid port;

a bore extending inwardly of a first wall of the valve body and having an annular first seat securement surface extending around the an interior passage intermediate of the first fluid port and the second fluid port, the second fluid port fluidly connected to the bore;

a cage disposed in the bore, the cage having an annular second seat securement surface and an opposed first annular surface, the annular second seat securement surface facing the annular first seat securement surface;

a cover extending over the first wall of the valve body and the opening of the bore thereof, the cover including a cage engagement surface contacting the first annular surface; and

an annular seat having a main body having an opening therethrough and a first seat surface facing and contacting the annular first seat securement surface of the valve body and a second seat surface, facing away from the first seat surface, the second seat surface comprising a first annular region having a compressibility and a second annular region different than the first annular region having a greater compressibility than the first annular region.