CLAIMS

1. A choke having a cage having a plurality of openings extending therethrough, a first fluid port and a second fluid port, the openings in the cage fluidly interposed between the first and second fluid ports, and a selectively positionable blocking member positioned with respect to the openings to selectively overlie all of a portion of the openings,

wherein the surface of at least one of the openings extending through the cage comprises a single crystal material and the entirety of the exposed surface of the opening extending through the cage and which surrounds the at least one opening through the cage is an uncoated surface of a single crystal.

2. The choke of claim 1, wherein the cage consists of a single crystal.

3. The choke of claim 2, wherein the single crystal is sapphire.

4. The choke of claim 1, wherein the single crystal is ruby.

5. A choke having a cage having a plurality of openings extending therethrough, a first fluid port and a second fluid port, the openings in the cage fluidly interposed between the first and second fluid ports, and a selectively positionable blocking member positioned with respect to the openings to selectively overlie all of a portion of the openings, comprising:

an insert interconnected to the cage, the insert comprising at least a portion of the opening through the cage, the insert consisting of a single crystal of a single crystal material.

6. The choke of claim 5, further comprising a backing ring, wherein the insert is connected to the backing ring with a portion of the cage extending therebetween.

7. The choke of claim 6, wherein the insert is connected to the backing ring at a braise therebetween.

8. The choke of claim 6, wherein the insert includes first threads, and the backing ring contains corresponding mating second threads.

9. The choke of claim 5, wherein the cage includes a first opening, and the first opening is slightly smaller than the outer circumference, in the free state, of the insert, and the insert is received in the first opening and is under compressing stress within the first opening.

10. The choke of claim 1, wherein different openings through the cage have different flow profiles.

11. The choke of claim 1, wherein the blocking member is a plug disposed within the cage.

12. The choke of claim 1, wherein the blocking member is a sleeve located externally of the cage.

13. A choke, comprising:

a cage having openings therethrough;

a cap surrounding the cage, the cap including an outer circumferential wall, a cover portion, and an opening, the cage moveable inwardly and outwardly of the cap through the opening;

wherein the surface of at least one of the openings extending through the cage comprises a single crystal material and the entirety of the exposed surface of the opening extending through the cage and which surrounds the at least one opening through the cage is of an uncoated single crystal.

14. The choke of claim 13, further comprising an insert interconnected to the cage, the insert comprising at least a portion of the opening through the cage, the insert configured of a single crystal of a single crystal material.

15. The choke of claim 13, wherein the cage consists of a single crystal material.

16. The choke of claim 6, wherein the backing ring consists of a single crystal.

17. The choke of claim 5, wherein different openings through the cage have different flow profiles.

18. The choke of claim 5, wherein the blocking member is a plug disposed within the cage.

19. The choke of claim 5, wherein the blocking member is a sleeve located externally of the cage.