## CLAIMS

What is claimed is:

1. A speed retarding device for a rotary nozzle comprising:

a hollow cylindrical housing;

a rotatable tubular shaft rotatably carried by the housing, the shaft having a drag sleeve portion in the housing and having a shaft end extending through at least one end of the housing, wherein the shaft end is adapted to receive a rotary nozzle thereon;

a pair of lubricated support bearings sandwiching the drag sleeve portion of the shaft in the housing;

an annular axial inner seal between each of the support bearings and the drag sleeve portion, wherein the inner seals sandwich the drag sleeve portion therebetween and isolate the drag sleeve portion from the support bearings, and wherein the inner seals, the housing and the drag sleeve portion define a cavity within the housing; and

a viscous fluid confined within the cavity.

2. The retarding device according to claim 1 further comprising an outer annular seal on the shaft adjacent to each support bearing whereby each support bearing is sandwiched between inner and outer annular seals in the housing and separated from the viscous fluid in the cavity.

3. The retarding device according to claim 1 further comprising a plurality of removable centralizing vanes radially extending outward from the housing.

4. The retarding device according to claim 3 wherein the housing has a plurality of axially extending outwardly open slots each receiving one of the plurality of removable centralizing vanes therein.

5. The retarding device according to claim 1 further comprising the shaft having an inner end in the housing facing an inlet nut threaded into one end of the hollow cylindrical housing and a high pressure face seal assembly captured between the inlet nut and the inner end of the shaft.

6. The retarding device according to claim 5 wherein the high pressure face seal assembly comprises a pair of nut flanged tubular face seals.

7. The retarding device according to claim 6 wherein one face seal of the pair of face seals is a nut flanged tubular rear face seal received within a recess in the inlet nut and the other one face seal of the pair of face seals is a nut flanged tubular front face seal received within a recess within a rear end of the tubular shaft.

8. A speed retarding device for a rotary nozzle comprising:

a hollow cylindrical housing;

a rotatable tubular shaft rotatably carried by the housing, the shaft having a drag sleeve portion in the housing and having a shaft end extending through at least one end of the housing, wherein the shaft end is adapted to receive a rotary nozzle thereon;

a pair of lubricated support bearings supporting and sandwiching the drag sleeve portion of the shaft between the bearings in the housing;

an annular axial inner seal between each of the support bearings and the drag sleeve portion isolating the drag sleeve portion from the support bearings, wherein the inner seals, the housing and the drag sleeve portion define a cavity within the housing;

a viscous fluid confined within the cavity; and

a plurality of centralizing vanes radially extending outward from the housing.

9. The device according to claim 8 wherein the centralizing vanes are removable.

10. The retarding device according to claim 9 wherein each of the plurality of centralizing vanes is slidably captured within a slot formed in the exterior surface of the housing.

11. The retarding device according to claim 10 wherein the centralizing vanes are made of a plastic material.

12. The retarding device according to claim 8 further comprising an outer annular seal on the shaft adjacent to each support bearing whereby each support

bearing is sandwiched between inner and outer annular seals in the housing and separated from the viscous fluid in the cavity.

13. The retarding device according to claim 8 further comprising a plurality of removable centralizing vanes radially extending outward from the housing.

14. The retarding device according to claim 13 wherein the housing has a plurality of axially extending outwardly open slots each receiving one of the plurality of removable centralizing vanes therein.

15. The retarding device according to claim 8 further comprising the shaft having an inner end in the housing facing an inlet nut threaded into one end of the hollow cylindrical housing and a high pressure face seal assembly captured between the inlet nut and the inner end of the shaft.

16. In a high pressure water blasting tool assembly having a rotatory nozzle for cleaning inside surfaces of a piping system, a speed retarding device connected between a hose and the rotary nozzle, the retarding device comprising:

a hollow cylindrical housing;

a rotatable tubular shaft rotatably carried by the housing, the shaft having a drag sleeve portion in the housing and having a shaft end extending through at least one end of the housing, wherein the shaft end is adapted to receive a rotary nozzle thereon;

a pair of lubricated support bearings on the shaft supporting and sandwiching the drag sleeve portion of the shaft in the housing;

an annular axial inner seal between each of the support bearings and the drag sleeve portion isolating the drag sleeve portion from the support bearings, wherein the inner seals, the housing and the drag sleeve portion define a cavity within the housing around the drag sleeve portion;

a viscous fluid confined within the cavity; and

an outer axial annular seal on the shaft adjacent to each support bearing whereby each lubricated support bearing is sandwiched between inner and outer annular seals in the housing and separated from the viscous fluid in the cavity.

17. The retarding device according to claim 16 wherein the drag sleeve portion has a central bore, at least one outwardly open helical groove therearound and a plurality of axially extending bores around the central bore.

18. The retarding device according to claim 16 further comprising a plurality of removable centralizing vanes extending radially outward from the housing.

19. The retarding device according to claim 18 wherein the housing has a plurality of axially extending outwardly open slots each receiving one of the plurality of removable centralizing vanes therein.

20. The retarding device according to claim 16 further comprising the shaft having an inner end in the housing facing an inlet nut threaded into one end of the hollow cylindrical housing and a high pressure face seal assembly captured between the inlet nut and the inner end of the shaft.