CLAIMS

What is claimed is:

1. A nitration system characterised by:

a plurality of filter elements ~~(10)~~ comprising multiple layers of fiber ~~(12)~~ wound on a backing surface ~~(14)~~, which has a radial centerline, in a direction perpendicular to ~~the backing's~~said radial centerline ~~(16)~~, and comprising a filter element filtration outlet ~~(17)~~, said filter elements ~~(10)~~ forming a plurality of filter discs ~~(18)~~ stacked along a conduit ~~(20)~~ to form filter stacks ~~(22)~~ distributed about a ~~cleaning system~~ rotation center ~~(24)~~; each filter disc comprising at least one filter element and said filter element filtration outlet being inserted in a hole in said conduit; and

a plurality of cleaning heads ~~(26)~~ in fluid communication with a manifold ~~(28)~~ for directing flow of a cleaning fluid via said filter element filtration outlets into said conduit ~~(20)~~ and out of the system.

2. The filtration system according to claim 1, wherein said manifold ~~(28)~~ rotates said cleaning heads ~~(26)~~ about a longitudinal axis ~~(32)~~.

3. The filtration system according to claim 1, wherein said filtration outlet ~~(17)~~ is received in said conduit ~~(20)~~ and a spacer-retaining ring ~~(34)~~ secures said filter elements ~~(10)~~ radially and laterally from both sides of said elements ~~(10)~~.

4. The filtration system according to claim 1, wherein a strap ~~(36)~~ is inserted in a groove ~~(38)~~ formed on a perimeter of said filter elements ~~(10)~~.

5. The filtration system according to claim 1, wherein said conduit ~~(20)~~ is a central conduit ~~(20)~~ that serves as a structural member to transmit rotational torque and hold said filter elements ~~(10)~~ rigidly in place.

6. The filtration system according to claim 1, wherein each of said filter elements ~~(10)~~ comprises ribs ~~(40)~~ that form flow channels by supporting fiber layers at a distance away from said backing surface ~~(14)~~.

7. The filtration system according to claim 1, wherein each of said filter elements ~~(10)~~ comprises multiple filtrate collection zones ~~(42)~~.