The invention claimed is:

1. A fluid flow control apparatus for use in an oilfield tubular positioned in a wellbore extending through a subterranean formation, the oilfield tubular for flowing fluid therethrough, the apparatus comprising:

a tubular defining a fluid passageway;

a port positioned in the passageway;

a rotational, fluid-driven valve member, the valve member mounted for rotation about a longitudinal axis in the passageway, fluid flow through the fluid passageway imparting rotation to the valve member, wherein the valve member comprises a plurality of balance members mounted for radial movement in response to rotation of the valve member; and

a valve restriction member movably mounted to the valve member and movable to restrict flow through the port.

2. The apparatus as in claim 1, the valve restriction member mounted to move longitudinally in the tubular passageway.

3. The apparatus as in claim 2, wherein the valve restriction member moves between an open position wherein flow through the port is unrestricted and a closed position wherein flow through the port is restricted.

4. The apparatus as in claim 1, wherein the rotation rate of the valve member is responsive to changes in a fluid flow characteristic.

5. The apparatus as in claim 4, wherein the fluid flow characteristic is viscosity, velocity, flow rate, or density.

6. The apparatus as in claim 5, wherein fluid flow through the port is restricted when the fluid reaches a preselected viscosity.

7. The apparatus as in claim 6, wherein the fluid flow is restricted at a lower viscosity and fluid flow is unrestricted at a higher viscosity.

8. The apparatus as in claim 1, wherein the balance members are pivotally mounted to move radially in response to rotation of the valve member.

9. The apparatus as in claim 1, wherein radial movement of the balance members causes longitudinal movement of the valve restriction member.

10. The apparatus as in claim 1, wherein the valve restriction member moves in response to centrifugal force exerted on the valve member.