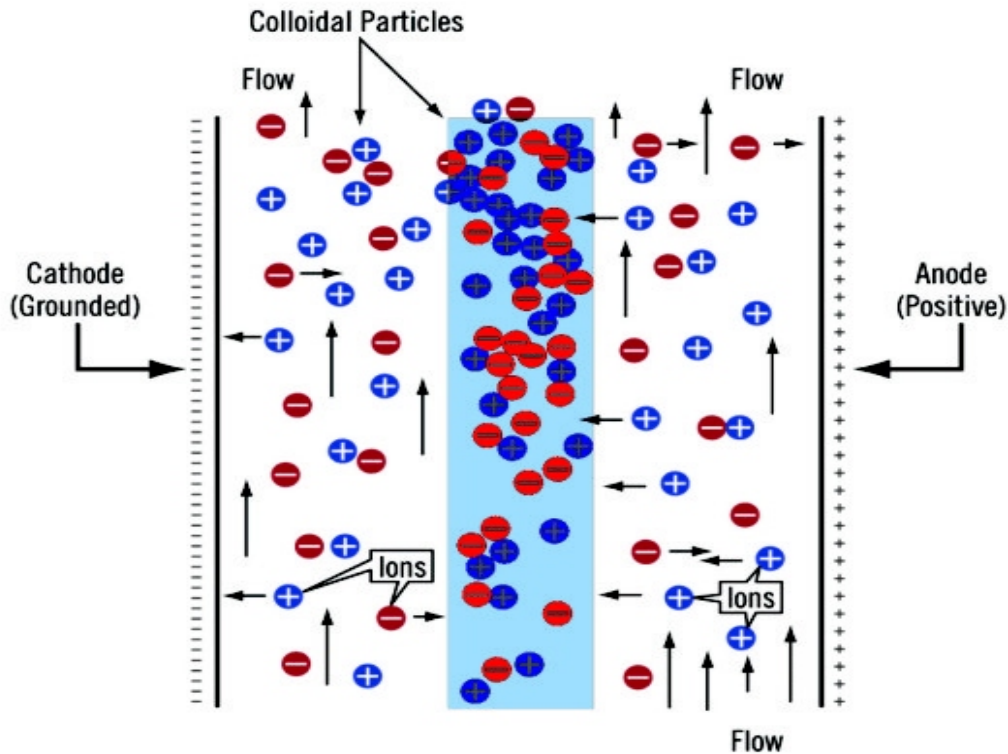


ElectroStatic Fluid Treatment Systems Colloidal Particle Formation



Electrostatic fluid treatment systems are effective in controlling scale through the formation of colloidal particles. As the water, bearing ions of calcium and carbonate, flow through the area between a charged electrode and a grounded plane, their direction of movement is pulled or pushed depending upon their charge. Negative ions are pulled toward the positively charged anode and positive ions are pulled toward the grounded cathode. As these particles come into contact with one another they will begin to form particles of calcium carbonate and will move from solution to suspension. In a suspended (colloidal particle state), they are now relatively stable particles that are not inclined to plate out or form deposits. They remain in suspension in the fluid until they are removed by blow-down or venting. As ions move from solution to suspension, the water is now able to carry or attract other ions into solution. As this occurs, existing scale deposits are re-dissolved and removed.