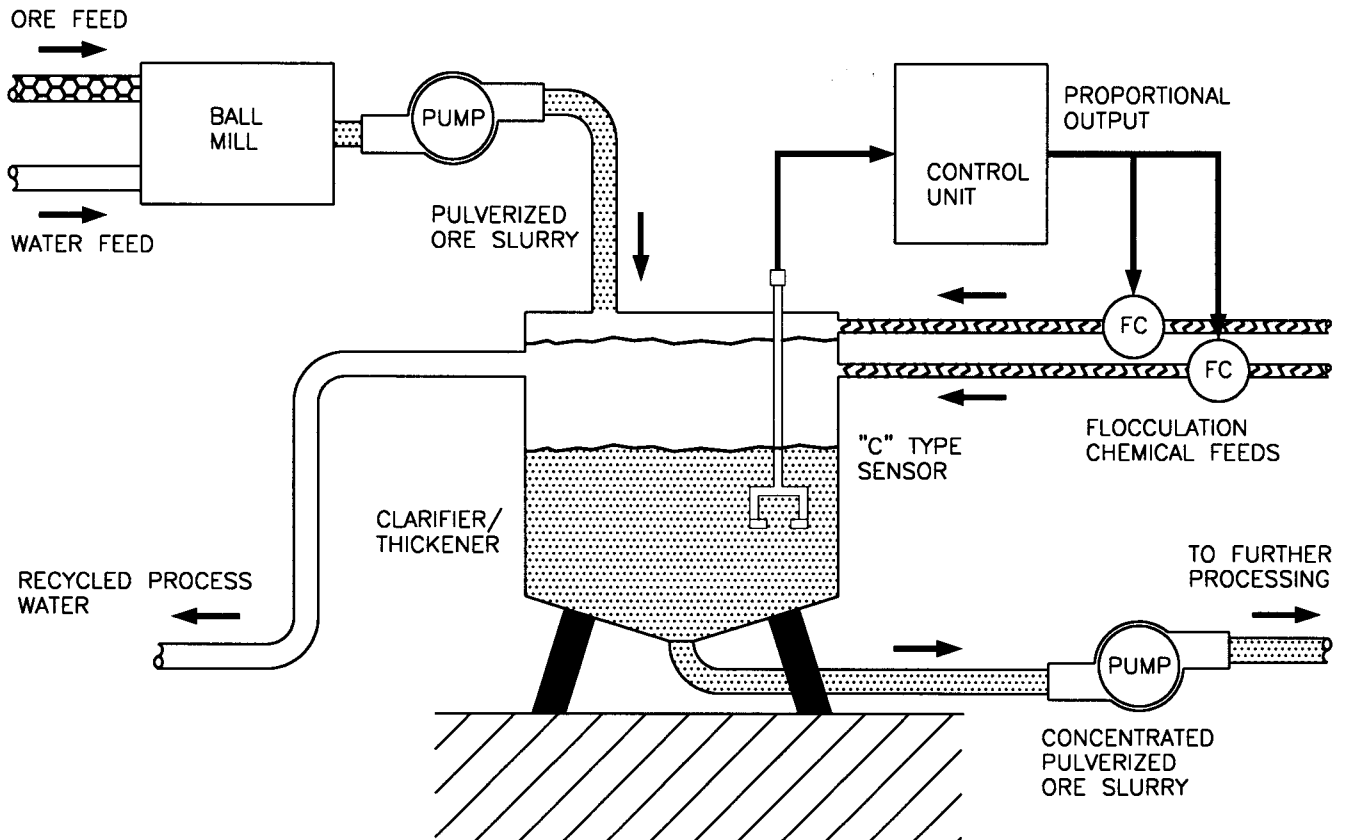




**FINE PULVERIZED ORE SLURRY  
DENSITY CONTROL**



**PROBLEM:** IN A FINE ORE THICKENER SYSTEM A METHOD OF DETERMINING CHEMICAL FEED RATE TO ASSIST MAXIMUM SETTLING OF ORE WAS NEEDED. THE ORE WAS TRANSPORTED IN WATER FROM THE BALL MILL AND ALLOWED TO SETTLE IN A CLARIFIER/THICKENER TANK.

**SOLUTION:** A COSENSE LL-394 SLUDGE BLANKET MULTIPOINT LEVEL CONTROL USED AS A DENSITY CONTROLLER WHICH WAS INSTALLED WITH A "C" TYPE SENSOR LOCATED IN THE CLARIFIER/THICKENER TANK. THE CONTROLLER OUTPUT WAS FED INTO CUSTOMER CONTROLLERS WHICH WERE USED TO CONTROL THE FLOCCULATION CHEMICAL FEED TO THE THICKENER. DURING OPERATION, THE SYSTEM MONITORED ORE DENSITY IN THE TANK AT DIFFERENT POINTS AND MAINTAINED FLOCCULATION CHEMICAL FLOW AS NECESSARY TO KEEP ORE SETTING RATE AT A PREDETERMINED VALUE.

THE FINAL RESULTS WERE BETTER SETTLING CHARACTERISTICS AND MORE EFFICIENT USE OF FLOCCULATION CHEMICALS.