

VP—VACUUM PULSE FILTER PRESS CAKE DRYING

THE **MICRONICS VP** VACUUM PULSE DRYING FILTER PRESS WILL PRODUCE FILTER CAKES WITH A GREATER SOLIDS CONTENT THAN CONVENTIONAL FILTERS. THE INITIAL STEP IS ACHIEVED BY PRESSURE FILTRATION AT UP TO 7 BAR. SLURRY IS PUMPED INTO THE FILTER CHAMBERS, PUMP CONTROL USES PRESSURE AND FLOW CONTROL TO ACHIEVE AN OPTIMUM FILTRATION CURVE. THE FILTRATE IS DISCHARGED VIA THE FILTER PRESS MANIFOLD WHERE VALVES ON THE MANI-



FILTER PRESS

FOLD ARE ALSO AUTOMATICALLY CONTROLLED TO ENSURE AN EVEN FILLING OF THE CHAMBERS. AFTER THE FILTER CAKES HAVE BEEN FORMED HOT WATER IS INTRODUCED INTO THE FILTER PLATES BEHIND A SUITABLE BLADDER MATERIAL (*PROCESS CONDITION SPECIFIC*) TO DISCHARGE AIR AND ACHIEVE FULL FACE HEAT CONTACT, THE FLOW IS THEN REVERSED AND CONTINUES AT A CONTROLLED TEMPERATURE TO START CAKE DRYING.

A VACUUM IS CREATED WITHIN EACH CHAMBER TO FLASH OF MOISTURE, WHICH IS HIGHLY EFFICIENT BECOMING LESS EFFICIENT AS TIME PROGRESSES. AT THIS TIME, WHICH VARIES BY MATERIAL TYPE, ATMOSPHERE IS ALLOWED TO RETURN TO THE CHAMBER AND THEN VACUUM IS REAPPLIED. THIS PULSING SEQUENCE IS REPEATED UNTIL THE REQUIRED FILTER CAKE DRYNESS IS ACHIEVED.

THE PLATE FACE (BLADDER) MAINTAINS CONTACT WITH THE FILTER PLATE BY CONTROLLED EXTENSION AS THE FILTER CAKE SHRINKS.

THE **MICRONICS VP** VACUUM PULSE SYSTEM ACHIEVES THE CORRECT LEVELS OF MOISTURE QUICKER THAN A FIXED VACUUM APPROACH AND IN SOME CASES IS THE ONLY EFFECTIVE MEANS OF DRYING A FILTER CAKE ECONOMICALLY.

THE **MICRONICS** SYSTEM REDUCES THE AMOUNT OF DRY



VACUUM SKID



HEATER SKID

SOLIDS TO BE DISPOSED OF IN LANDFILLS, ALLOWS SOLIDS TO BE DISPOSED OF AT A LOWER COST AND IN SOME CASES CAN BE BURNED ADDING TO THE FILTRATION SYSTEMS ECONOMY.

HANDLING OF THE FILTER CAKE IS REDUCED TO ONE PROCESS REDUCING LABOR AND THE NEED FOR ADDITIONAL DRYING UNITS.

EXCESS HEAT FROM THE PLANT OPERATION IS THE MOST ECONOMIC APPROACH BUT THE SYSTEM IS AVAILABLE AS A STAND ALONE UNIT.

THE **VP** SYSTEM MAY BE FULLY AUTOMATED AND RUN WITHOUT OPERATOR INTERVENTION, FOR THIS TYPE OF COMPLETELY OPERATOR FREE AUTOMATIC APPLICATION IT IS ESSENTIAL THE **MICRONICS** PROCESS TECHNICIANS CONDUCT TESTS AT THE PROPOSED SITE.

