



TEST FILTER PRESS









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A SELF CONTAINED TEST UNIT: FILTRATION FEED PRESSURE TO 7 BAR (100PSI), SQUEEZE PRESSURE TO 20 BAR (295PSI), CAKE WASHING, CORE WASH/BLOW, CAKE AIR DRYING, CAKE MOISTURE ANALYSIS, CAKE THICKNESS CAPA-BILITY OF 30, 40 AND 50MM USING EITHER A RECESSED PLATE OR MIXED PACK MEMBRANE CONFIGURATION. THE LASTA MC TEST UNIT IS SPECIFICALLY DESIGNED FOR ON SITE EVALUATIONS AND IS INTENDED TO ACCURATELY

DETERMINE THE FILTRATION RESULTS THAT MAY THEN BE SCALED UP TO LARGER MACHINES. THIS EQUIPMENT MAY BE OPERATED ON SITE PROVIDED MINE PERSONNEL ARE FAMILIAR WITH FILTER PRESS APPLICA-

TIONS. HOWEVER, IF UNFAMILIAR WITH FILTER PRESSES IT IS RECOMMENDED THAT MICRONICS PROVIDE A TECHNICIAN TO DEMONSTRATE THE TESTING PROCEDURES TO ACHIEVE THE SPECIFIC PRODUCTION GOALS REQUIRED.

STEPS OF OPERATION:

- i. The filter feed is accomplished by pressurizing the slurry tank or by pumping from the tank with recirculation, the latter method being chosen for heavy slurries where mixing is required.
- II. FILTRATE FLOW AND CLARITY SHOULD BE MONITORED AT PRE-DETERMINED SET POINTS TO DEVELOP A FILTRATION CURVE AND VOLUMETRIC DATA. ADDITIONAL PLATES PROVIDE A MEANS FOR TESTING DIFFERENT CAKE THICK-NESSES WHICH WILL FINE TUNE THE FILTERS PERFORMANCE.
- iii. CORE WASHING AND CORE BLOWING REQUIRE MONITORING TO DETERMINE THE OPTIMUM TIME AND PRESSURE
- IV. MEMBRANE SQUEEZE PRESSURE IS ACHIEVED USING NITROGEN AND ADJUSTED TO THE MOST SUITABLE PRESSURE DETERMINED DURING TESTING (MAX 20 BAR, 290PSI). IF A CAKE WASH IS REQUIRED THEN A PRE-SQUEEZE CYCLE SHOULD BE INCORPORATED TO CONSOLIDATE THE FILTER CAKE PRIOR TO WASH LIQUOR. AFTER THE WASH CYCLE THE MEMBRANES ARE INFLATED AT HIGHER PRESSURE TO FULLY DRY THE FILTER CAKE.
- V. TO AIR BLOW THE CAKE REQUIRES AN AIR RECEIVER, REGULATOR AND COMPRESSOR TO MEASURE THE TOTAL FLOW AND PRESSURE NEEDED TO ACHIEVE A DESIRED RESULT (NORMALLY AVAILABLE AT SITE NOT SUPPLIED WITH THE UNIT).
- vi. FILTER CLOTH WITH DIFFERING CAPABILITIES ARE SUPPLIED. CHANGING THE CLOTH IS SIMPLE AND SHOULD BE CON-DUCTED AFTER THE FILTER RESULTS HAVE BEEN OPTIMIZED. DURING THIS ANALYSIS VISIBLY EXAMINE THE FILTER CAKE RELEASE AND MONITOR THE VARIATION IN FILTRATE CLARITY.



Air blow line 20 Vacuum pump Remaining liquid Sample Feed Nitrogen cylinder 9 return line Squeeze line washing line 21 7(11 eed-in line Hydraulic (7) pressure Air tank pump 14 1 18 (15) **X**19 Wash (5)Ø water Mass meter Back wash line Compressor Feed tank Wash water tank Feed wash water Secondary squeezing continues Forming Membrane Core wash Ø cake water Diaphragm Primary squeezing continues Cake wash liquor Air tank CAKE WASH CORE WASH AND THRU WASH CAKE AIR BLOW

TEST ARRANGEMENT:

- FILTRATION AREA 0.2 M. SQ. (2.15 SQ. FT.)
- VOLUME OF 30MM CAKE 2.4 LITERS (0.085 CU.FT.)
- MAXIMUM FEED PRESSURE 7 BAR (100 PSI), MAXIMUM SQUEEZE 20 BAR (290 PSI)
- SHIPPING SIZE 217 x 149 x 186 CM (86" x 59" x 73")
- WEIGHT 1,370 KGS (3,000 LBS)

