

DIAPHRAGM SQUEEZE

Using diaphragm squeeze filter plates may result in significant additional fluid removal and/or cycle time reduction if the filter cake is compressible. In a typical filter press application, approximately 80% of the solids are pumped into the press in the first half of the cycle, with the remaining half considered the consolidation stage. With diaphragm squeeze, the cycle is shortened and the cake moisture content is reduced (see fig.1). The result is increased throughput and better liquid recovery. Adding diaphragm squeeze to a filter press requires a specialized plate stack, a squeeze water manifold, and a filter plate pressurization system. A 225psi diaphragm squeeze is recommended for most applications, which requires a high pressure filter press frame design. Typically, diaphragm plates are alternated with standard chamber plates in a "mixed pack" as shown in fig.2. Diaphragm squeeze plates also may improve cake washing efficiencies.

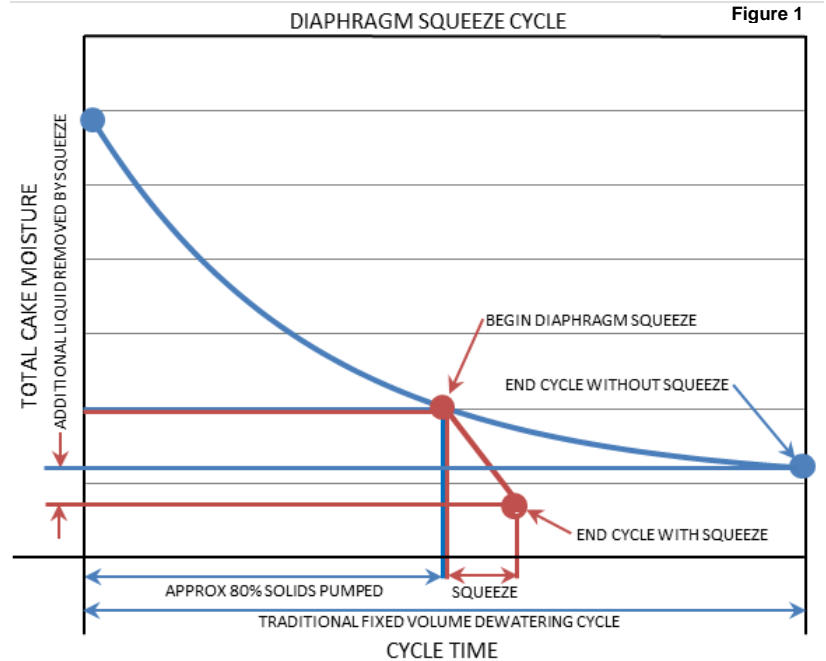


Figure 1



Figure 2

Diaphragm squeeze press with "mixed pack" plate stack.