

A NEW LABORATORY DEVICE FOR BOTH STANDARD RECESS & MEMBRANE FILTER  
PRESS DEWATERING

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ABSTRACT

A laboratory filter press testing device (Refs. 1,2) was developed about 12 years ago which has been shown to be quite useful for membrane press scaleup. This device was named an R-Meter (Ref. 1) after extensive modifications of the old Passavant R-Meter, which was limited to simple compressed air dewatering of poured-in sludges. The major modification was insertion of a double o-ring piston for cake expression and washing, but scaleup was limited to membrane filter presses. Although attempts were made to simulate a standard recess filter press, the resulting scaleup was problematic and somewhat open to interpretation. As a consequence, a new R-Meter was developed that can simulate both standard recess and membrane presses; and incorporates sludge pumping (rather than pouring) to exactly simulate the deliquoring mechanism. This paper will discuss this new R-Meter and present some test results to show its utility for laboratory filter press testing and scaleup.