

ABSTRACT FOR THE 2010 AFS MEETING

Dewatering of Ultrafine Clean Coal Slurries Using Modified Approaches

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Abstract

Economic dewatering of fine (<150 μm) coal to a low (<20%) moisture is difficult. Conventional techniques are not efficient in producing a low moisture filter cake. In this presentation novel fine coal dewatering approaches will be described, which involved either applying rhythmic breaks in the vacuum force, or applying a two stage combination of vacuum and pressure techniques. The vacuum break approach was able to improve reduction of filter cake moisture by about 34%. The two stage dewatering approach improved reduction of moisture by 64% using 3.4 bar pressure in the second stage.