

A PRACTICAL METHOD OF FIELD TESTING PLASTIC BOREHOLE LINERS FOR WATER PENETRATION

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ABSTRACT

To control direct blasting costs many open pit mines dewater and line wet blastholes before loading them with ANFO or Heavy ANFO blends of explosives. The plastic lay-flat tubing used for these liners can be punctured during loading and allow water to partly dissolve and desensitise the explosive column which reduces blasting performance.

This paper describes an inexpensive and easy way to test the effectiveness of borehole liners in the field. The method works on the principal that dissolved ammonium nitrate is conductive to electricity. Although this test gives an indication after the event that the liners are not performing properly, it has been used successfully in the field to pinpoint the reasons for poor blasting performance so that remedial action can be taken. It has also been used in field trials of new formulations when in-hole velocity of detonation measurements are taken, to check if water penetration has occurred during periods of long sleep times.