DETERMINATION OF THE INITIATION STRENGTH OF COMMERCIAL DETONATORS USING AN ADJUSTABLE-SENSITIVITY LIQUID EXPLOSIVE

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Ab ac

The B ea of Mine i de eloping a e o de e mine the initiating eng h of comme cial de ona o . Va io e of "de ona o eng h" a e in e, h man of them do no co ela e ell ih each o he , and o fa , he e i li le e idence ha an of them co ela e ell ih the ab ili of de ona o o initia e de ona ion in an e plo i e. The efo e, the B ea decided o a empt a mea emen of the ab ili of de ona o o initia e de ona ion. To hi end, an e plo i e mi u e of adj ab le en i i i , a de eloped. Thi mi u e a nio ome hane en i i ed ih e h lene diamine, the en i i i h eing "fine-u ned" by the addi ion of nio opa opane. Mo of the e e ing a done ih mili a J-2, comme cial No. 6 coppe - hell and comme cial No. 8 al min m- hell de ona o . Ea l e e l ih de ona o imme ed in the e plo i e indica ed ma ked di epancie ih o he eng h e e l and ih e pec a ion ba ed on the p e med eng h of the de ona o . Thi p ompted f he in e iga ion of di ec ional effec in the initia ion of e plo i e by de ona o . Fo the e additional e , de ona o e e fi ed: (a) imme ed in the e e plo i e, o ien ed a iall , (b) ih the ip of the de ona o j o ching face of the e plo i e, and (c) imme ed in the e plo i e an e el o ha the ip of the de ona o e ended o of the e plo i e. Ma kedl diffe en e e l e e ob ained in the e hree config a ion , indica ing ha the di ec ional effec a e impo an. Thi e plain h diffe en de ona o eng h e o do no co ela e ell ih each o he . Some e , ch a the and ba om and the nde a e e mea e the o al ene g o p , hile o he ch a the ide-on pla e-den e and the nail e mea e the ene g in the a ial di ec ion, and ill o he ch a the lead lock e mea e the ene g in the adial di ec ion. The e e l indica e the impo ance of cond c ing the e in the manne in hich the de ona o i ac all in ended o be ed.