

Blasting In Hong Kong

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Abstract

Hong Kong has some of the most restrictive practices regarding blasting than any place in the world. Regulations regarding vibration limitations are 1 in/sec for structures and 0.5 in/sec (or even less) for most utilities; with no recognition of frequency response or adjustment. The Hong Kong Geotechnical Engineering Office has one of the most conservative approaches and protective guidelines for pre-blast assessment of slopes subjected to blast vibration (SEE paper '96). The protective measures to control flyrock generally required by the Mines Division are additionally very stringent. It is not uncommon for the costs associated with protective measures or methods which must be employed to exceed the cost of the drilling and blasting itself - or to waiver blasting application unfeasible altogether. From these restrictions it can easily be imagined how blasting in this urban environment would be most challenging.

This paper covers some of the unique approaches in solving these problems. Discussed in the paper is the procedure for obtaining a blasting licence and permit to use explosives in Hong Kong. Specific projects outlining the restrictions imposed, methods employed to curb and curtail vibration, and flyrock protection measures are included. Common methods of flyrock control, such as general ground cover, vertical screens, blasting cages, and "roof-over" protection devices used in Hong Kong are demonstrated. Some of the ideas and protective measures demonstrated and procedures expressed in the paper may be helpful in similar applications or conditions encountered in other parts of the world.