

Joint Technical Meeting
A rational methodology for setting blast vibration limits for structures
by Mr. Alan Richards

Date, Time & Venue:

Tuesday **16 August 2011**, 6:00pm (Registration and Networking); 7pm to 8pm (Seminar), The Australian Consulate General, Hong Kong, “The Wombat Hole”, 24/F Harbour Centre, 25 Harbour Road, Wanchai.

Synopsis:

It has been common practice to set blast vibration limits for structures using an observational” approach, in which limits are set at a level based on observations of damage, or the lack of damage, combined with a tendency to further reduce the permitted level due to uncertainty.

Damage to structures occurs when the induced stress level exceeds the strength of the structure. Induced stresses can be due to both blasting and non-blasting causes. Blast vibration is noticeable, whereas non-blasting causes such as expansive soils act slowly and are not felt the occupants of a structure.

Hence it is common for many cases of structural damage to be falsely attributed to blasting.

A rational methodology for setting blast vibration limits should consider:

- The stress induced into the structure by blast vibration
- The stress induced into the structure by causes other than blasting
- The strength of the structure
- An appropriate factor of safety.

Serviceability limits such as deflection will also provide guidance when setting blast vibration limits.

The proposed presentation provides examples investigations that have been carried out to determine the level of stress induced into structures, and to set vibration limits based on the strength of the structure and serviceability limits.

Speaker Biography:

Alan Richards is a Mining Engineer who commenced work in the outback mining area of Broken Hill, Australia, and has obtained First Class Metalliferous Mine Manager’s certificates for the States of Victoria and Queensland.

After spending five years as a specialist technical consultant to an explosives company, and a further five years as a Government regulator in the explosives field, Alan set up his own consultancy company (Terrock Pty Ltd), specialising in analysis and control of blasting hazards.

Alan has published numerous papers on ground vibration, airblast overpressure and flyrock, and is a worldwide authority on these subjects.

He is the author of GEO Report No. 232 “ Prediction and Control of Air Overpressure From Blasting in Hong Kong”.

Special Highlight

2 free soft drinks or beers will be served during the event to all attendees in this seminar.

Important Note, Registration & Enquiry

The seminar is free of charge. The Organizer(s) or the parties concerned do not accept any liability in connection with the above event. All participants should be responsible for their own safety and belongings. The organizer(s) shall not be held responsible for any losses or accidents caused to participants arising wholly or partly from their own fault, negligence or physical unfitness. Please complete and return the Registration Form to Simon Fan preferably by email: info@ieausthk.org (or fax: 2430 9080) before 14 August 2011.

Continuing Professional Development (CPD)

EA member will be issued a certificate acknowledging 1.5 hrs CPD.

Registration Form

SEMINAR: Setting Blast Vibration Limits

6pm to 8pm on 16 August 2011

To : Simon FAN

From

Name in Full : IEAust No.;

Email : Phone no.