



香港聲學學會

Hong Kong Institute of Acoustics

RAILWAY NOISE CONTROL SERIES – SEMINAR 1
Vibration From Rail Track – Can It Be Predicted And Controlled?

(A Joint Function of HKIOA, ME & BSE Dept of PolyU)

Date, time & Venue:

15 June 2006 (Thur), 18:30 – 20:00 at Room Y305, The Hong Kong Polytechnic University

Description:

In the coming year, HKIOA will organize a series of seminars on Railway Noise Control to promote professional knowledge. This is the 1st seminar of the series.

Urban railway planners are increasingly looking for ways to reduce ground borne vibration from rail track. Structural vibration and re-radiated noise in the critical frequency range 10Hz to 400Hz can cause considerable disturbance in railway tunnels and on bridges or viaducts. The primary method of reducing the transmission of vibration from rail traffic, within the track itself, is by means of adding mass and/or reducing the dynamic stiffness of the track support. The latter can be achieved by installing low stiffness rail fasteners on concrete slab. In a number of cases worldwide where these track fasteners have been installed there has been the opportunity to monitor slab vibration. Data has been obtained before and after installation of the low stiffness trackform. Results indicate that low stiffness rail supports offer significant reductions in slab vibration. The degree of insertion loss is shown to be largely dependent on the degree of stiffness change between the original and replacement fastener. This has led to the development of a prediction model for track slab vibration. The subjects discussed will include slab track types, methods of vibration isolation, methods of recording data and how the accumulated data can be used to develop a simple model to predict slab vibration

Guest Speaker: Mr Steve Barlow:

Qualified as a Materials Engineer in 1984 and spent 8 years working as a Polymer Chemist. In 1992 whilst working for Tiflex in the UK, became the Product Specialist for anti-vibration track support systems for the Railway industry. This involved specifying ballast mats, undersleeper pads and other resilient track support products. In 2000 he moved to Pandrol in Perth Australia working as Track Support Engineer. His main role is to provide technical back-up to users of low stiffness rail supports. Now working extensively in SE Asia developing track designs for urban metro systems. Steve is a Member of the Australian Acoustical Society

Registration and Enquiries:

The Seminar is free of charge to HKIOA members but non-members will be charged at HK\$150 per head to cover administrative costs. For registration, please send a blank e-mail to: reg1@wal.hk. A confirmation of the registration will be returned within 3 working days. Enquiries please send to the undersigned by who@wal.hk.

Wilson Ho
Chairman of Activities Sub-committee, HKIOA
1 June 2006