



# Rail Damper Latest Development - Reduction of Noise Radiation and Corrugation Growth

Organized by  
The China Hong Kong Railway Institution  
The Hong Kong Institute of Acoustics  
(Supported by HKIEIA, HKIE-EVD & HKIE-MMNC)

**Date & Time:** Monday 30<sup>th</sup> Sep 2013, 6:30 pm to 8:00 pm  
(Reception with drinks and snacks starts at 6pm)  
**Venue:** Theatre, 2/F, Fo Tan Railway House  
**Speaker:** Wilson Ho, Wilson Acoustics Limited  
**Convener:** Walter Chan, China Hong Kong Railway Institution

Railway noise control by rail damper is becoming more popular. Tens of kilometers of rail tracks have been installed with rail damper in Europe and Australia for the last decade. A new type of rail damper (Shearing Tuned Mass Rail Damper) has been invented and tested in Hong Kong. The damper is able to reduce both vertical and lateral rail vibrations by single oscillation mass, such characteristic makes the damper provide exceptional high damping to rail vibration, and suppresses corrugation growth & noise radiation. The performance is better than other dampers as below:

- ◇ Track side noise reduction by ~4dB (A).
- ◇ Saloon noise reduction by ~3dB (A).
- ◇ Rail vibration reduction from 8 to 10dB (A).
- ◇ Suppression in corrugation growth rate by 45%.  
(The only damper in the world shows suppression of rail corrugation growth).

The seminar will focus on design concept, testing results, implications and future developments.

## About the speaker

Wilson Ho invented the Shearing Tuned Mass Rail Damper in Year 2007 and tested in 2 operating railway lines from Year 2010 to 2013. He has 20 years' experience on noise and vibration control consultancy, specialized in railway noise source control, including multiplex tests in West Rail Line, rail absorber tests in Ma On Shan Line, trackform vibration tests for Pandrol Vanguard, ATP Egg, Delkor Egg, Low Profile Egg, Alt 1, Gatzner Ballast Mats at Lok Ma Chau Spur Line, FST at Lantau Airport Railway, West Rail Line & Ma On Shan Line, Ballast Mats at Kaohsiung MRT, etc. Moreover, he is also conducting vibration tests for various trackforms, resilient wheels and damping wheels. He is the integrated system consultant for noise and vibration control in Malaysia KVMRT.

## Registration

Please register at [http://www.wal.hk/hkioa/Rail\\_Damper.html](http://www.wal.hk/hkioa/Rail_Damper.html) on or before **23<sup>rd</sup> Sep 2013**. The seminar is free of charge for all members, related professionals, interested persons, and first-come first-served based. Hence, please register early to reserve your seat. For any enquiries, please contact CHKRI Mr Anthony Tong at [secretary@chkri.hk](mailto:secretary@chkri.hk) or HKIOA Mr. Wilson Ho at [who@wal.hk](mailto:who@wal.hk).

Anthony Tong  
Secretary, CHKRI

Wilson Ho  
Chairman, Activities Sub-committee of HKIOA

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