

Noise Report

KELTRACK® Trackside Transit

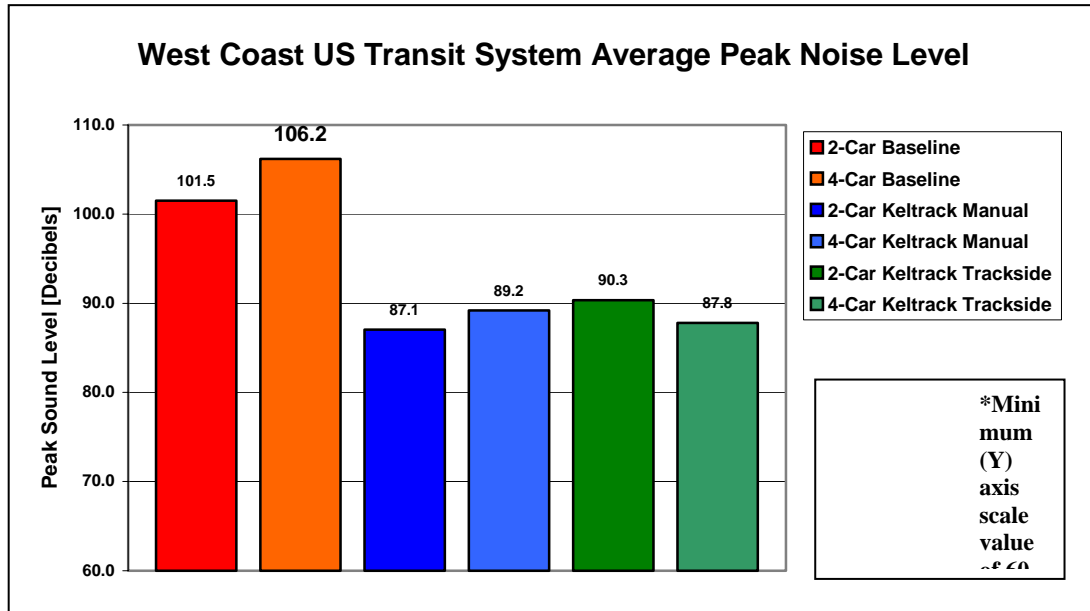
West Coast US Transit System

EXECUTIVE SUMMARY

Kelsan® Technologies Corporation was approached to evaluate the effectiveness of its Transit Rail Friction Management Solution at a West Coast US Transit System (WCUSTS). The objective was to decrease wheel/rail interface sound generation, thereby reducing the ambient sound levels in the nearby residential neighborhoods.

In this case, the Kelsan solution consisted of Kelsan KELTRACK® Trackside friction modifier, applied through a Portec Rail Products, Inc. Protector-IV™ TOR Trackside applicator. KELTRACK applied to the top-of-rail contact zone controls friction in the wheel/rail interface. The trial results in this document include the sound levels recorded for baseline, KELTRACK Manual and KELTRACK Trackside applied to both rails.

The noise reduction capabilities of KELTRACK were tested on regular revenue service trains running in embedded track on the curve leaving 13th Street Station in the inbound direction. KELTRACK Trackside readings, after it was applied to the top of both rails, were compared to baseline readings with dry rail and readings following the application of KELTRACK Manual.



Peak Noise: The KELTRACK trial resulted in an average 13.5-decibel decrease in rail/wheel sound generation for the trial vehicles relative to the control vehicles on the 250-foot length curve with an 82-foot radius.

High Frequency Noise: The KELTRACK trial resulted in an average 13.3 dB reduction at the frequencies between 2000Hz and 8000Hz. These frequency ranges are associated with wheel squeal and flange contact. Reductions in lower frequencies, especially the 500Hz-1600Hz range were also observed.

Conclusion

A solution of KELTRACK Trackside, applied through a Protector-IV TOR Trackside is recommended to reduce wheel/rail-generated noise, particularly in the higher frequency ranges.

Note: To obtain a copy of the full report or find out the identity of the West Coast US Transit System, please contact John Milobar, Vice President Sales & Marketing at 604-984-6100 or jmilobar@kelsan.com.