

Noise Report

KELTRACK® Trackside Transit

Seoul Metro

EXECUTIVE SUMMARY

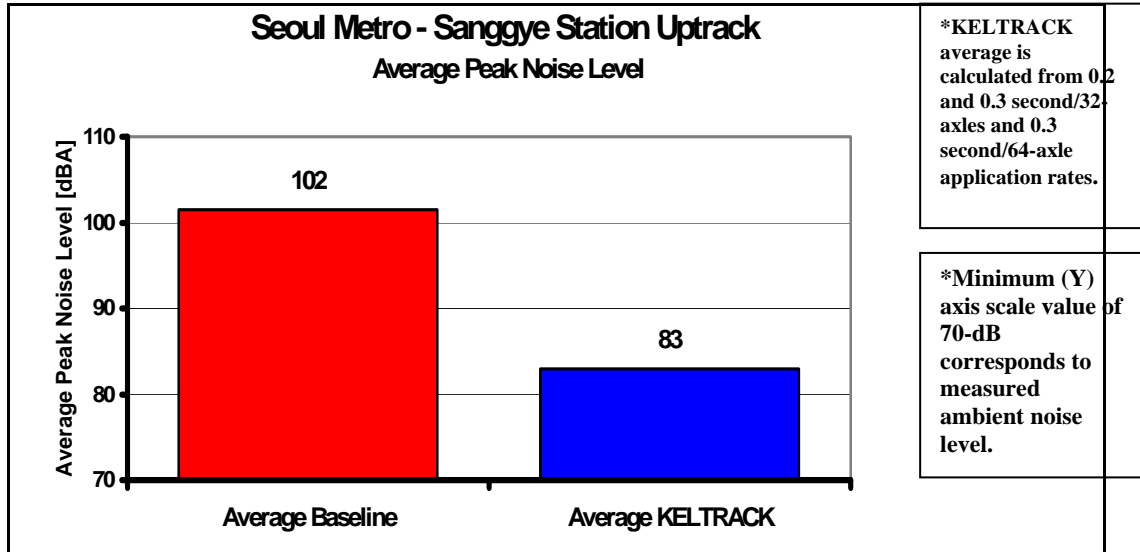
Kelsan® Technologies Corporation was approached to evaluate the effectiveness of its Transit Rail Friction Management Solution at Seoul Metro. The objective was to decrease wheel/rail interface sound generation, thereby reducing the ambient sound levels in the nearby residential neighborhoods.

The solution consists of applying KELTRACK™ Trackside friction modifier, through a Portec Rail Products, Inc. PROTECTOR-IV® TOR Trackside applicator. Application of KELTRACK to the top-of-rail contact zone controls friction at an intermediate level in the wheel/rail interface. The controlled positive friction characteristics of the thin KELTRACK film greatly reduce wheel squeal noise. The trial results in this document include the sound and friction levels for baseline and KELTRACK.

Summary Result: Sound Level Testing

The sound reduction capabilities of the Kelsan Solution was tested on revenue service ten-car trains on Line 4 in the curve leaving Sanggye Station in the uptown direction. Kelsan KELTRACK Trackside sound and friction readings with the application to the top-of-rail were compared to baseline readings with dry rail conditions. The revenue service vehicles were measured for a minimum of ten runs over the test site for both baseline and product conditions during the trial. Friction levels on both the high and low rail were measured prior to and following the application of KELTRACK Trackside to the rail/wheel contact

area.



AVERAGE PEAK NOISE: The KELTRACK Trackside trial resulted in an average 19-decibel decrease in rail/wheel sound generation for the trial vehicles relative to the control vehicles on the test curve under revenue service conditions.

Conclusion

A solution of Kelsan KELTRACK Trackside is recommended to provide a consistent intermediate top of rail friction that reduces wheel/rail-generated sound and thereby decreases Seoul Metro’s concern of high ambient sound levels, particularly in the higher frequency ranges.

Note: To obtain a copy of the full report, please contact John Milobar, Vice President Sales & Marketing at 604-984-6100 or jmilobar@kelsan.com.