

Lateral Force Report

KELTRACK® Trackside Freight

Portec Protector IV Trial
Eastern US Freight System

EXECUTIVE SUMMARY

Kelsan® Technologies Corp., an Eastern US Freight System (EUSFS) and Portec Rail Products conducted a lateral force and friction trial to evaluate the effectiveness of KELTRACK® Trackside Freight. The trial objectives included reducing L/V forces and to observe product carrydown.

In this trial, KELTRACK® Trackside Freight friction modifier was 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 lateral force and friction levels recorded for baseline and KELTRACK Trackside applied to both rails.

The lateral force and frictional characteristics of KELTRACK was tested at the Mountain Sub in Rowlesburg West Virginia. The chosen site is instrumented with lateral load sensors that are hooked into the AAR Test Center. Friction measurements were carried out with a Tribometer.

The test curve selected was located on the eastbound Track-2 at Milepost 250.6. The bars were installed on a 1.75% grade that increases to 2.2% by the end of the 1,600-foot curve.

Average L/V Force: The KELTRACK/Protector system produced an average 15% decrease in lateral versus vertical force on the lowrail. A steady decline was observed between Sept 25-Oct 24th with the application of KELTRACK. When the unit was turned off the L/V forces begin to rise.

Friction and Carrydown: The KELTRACK/Protector system decreased the top of rail friction level from an average 0.55 to an intermediate level of 0.35 for a distance of 1,600 feet from the wiping bars.

The test site chosen was not optimal for the demonstration of KELTRACKS ability to reduce lateral forces. The locomotives that operate this line apply large amounts of sand by automatic and manual sanding. This is partially due to the contamination of the top of the rail by grease from hydraulic and mechanical gauge face grease lubricators. Even under these conditions, KELTRACK reduced the lateral forces as compared to baseline conditions. Further testing will be conducted at another location on the EUSFS.

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