

Final Report – Public Page

Date of Report: 7/15/08

Contract Number: *DTRT57-08-C-10015*

Prepared for: *US Department of Transportation*

Project Title: *Development, Design, and Testing of Optimized “Soft Crack Arrestors”*

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Summary: During the course of this project, critical data was developed on ductile fibers at a variety of loading rates as well as service temperatures from arctic to temperate locations. In order to develop this data at the extremely high loading rates that are comparable to what a crack arrestor will experience during a ductile fracture arrest event, a unique test machine was developed so that data from standard loading rate, intermediate loading rates, and the extremely high loading rates could be developed at a variety of temperatures. From the screening of numerous candidate materials and then elaborate testing on two of those candidate fibers, one of them was found to be the best and directly applicable to the “Soft Arrestor Design”. Additional optimization on the fiber processing could lead to a more efficient design yet.