

Rail Research and Testing at TTC/TTCI

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Abstract

Transportation Technology Center, Inc (TTCI), a subsidiary of the Association of American Railroads (AAR), is a world-class transportation research and testing organization, providing emerging technology solutions for the railway industry, including research and testing for heavy axle load (HAL) freight operations, as well as high-speed rail (HSR) and passenger train operations. TTCI manages the Federal Railroad Administration's (FRA) Transportation Technology Center (TTC). This 52-square mile, secure and remote site operates with a vast array of specialized laboratories and test tracks. TTC, operated by TTCI, enables testing for all categories of freight and passenger rolling stock, vehicle and track components, and safety devices. This presentation will provide an overview of the rail research and testing activities conducted by TTCI, including the strategic research initiatives funded by the AAR, and the research and testing programs funded by the FRA. This presentation will also describe the testing facilities and their capabilities that can be used for rail research and testing, and will include photographs and video clips to illustrate some of the rail testing activities conducted at TTC.

Biography

Dr. Dingqing Li is Executive Director - Government Programs and Engineering Services, Transportation Technology Center, Inc (TTCI), a subsidiary of the Association of American Railroads (AAR). He is responsible for TTCI's research programs for the Federal Railroad Administration, and manages TTCI's Group of Track and Bridge Engineers, Metallurgists, NDE (non destructive evaluation) Engineers, and Big Data Analysts. Dr. Li joined TTCI/AAR in 1995 after receiving his Ph.D. from the University of Massachusetts at Amherst. He worked as Assistant Professor in Railway Engineering at the Central South University in China prior to his career in the United States. He has close to 30 years of research, testing, modeling, consulting and academic experience in railway engineering and has published more than 200 technical papers and reports, including the book "Railway Geotechnics". Dr. Li is a registered Professional Engineer, and is a member of AREMA and ASCE. Dr. Li also serves as board member or paper reviewer for several professional journals, including Transportation Geotechnics, Journal of Rail and Rapid Transit, Construction and Building Materials, Journal of the Transportation Research Board, Journals for ASCE, as well as major conferences of AREMA, TRB, IHHA and WCRR. Dr. Li has received several professional awards including the Eagle award, the highest level award for extraordinary and exemplary performance from TTCI/AAR, and Best Paper Awards from Railway Engineering conference in UK and IHHA.



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