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Research Reports

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RESEARCH & DEVELOPMENT (R&D;) REPORTS

REPORT NUMBER	TITLE
DOT/FRA/ORD-07/29	Development and Application of Methodology for Reliability Assessment of Tank Car Structures: Phase I
DOT/FRA/ORD-07/25	Stub Sill Railroad Tank Car Research Project: Full-Scale Damage Tolerance Test
DOT/FRA/ORD-07/23	In-Service, Over-the-Road Testing of One Car for Tank Car Operating Environment Study (Phase IIA) Test Results
DOT/FRA/ORD-07/22	Tank Car Operating Environment Study: Phase I
DOT/FRA/ORD-07/21	Rail Crew Resource Management (CRM): The Business Case for CRM Training in the Railroad Industry
DOT/FRA/ORD-07/20	Detailed Modeling of the Train-to-Train Impact Test: Rail Passenger Equipment Impact Tests
DOT/FRA/ORD-07/19	Development of a Preliminary Set of Human Factors Functional Design Guidelines for Remote Control Locomotive Systems
DOT/FRA/ORD-07/18	Repair of Budd Pioneer Coach Car Crush Zones: Rail Passenger Equipment Impact Tests
DOT/FRA/ORD-07/17	In-Track Demonstration of Laser-Treated Rail to Reduce Friction and Wear
DOT/FRA/ORD-07/16	Conceptual Development Impact Overload Detection Devices for Tank Car Service
DOT/FRA/ORD-07/15	Human Error Investigation Software Tool (HEIST)
DOT/FRA/ORD-07/14	The Impact of Participatory Safety Rules Revision on Incident Rates, Liability Claims, and Safety Culture in the U.S. Railroad Industry
DOT/FRA/ORD-07/13	Preliminary Development of a Railroad Dispatcher Taskload Assessment Tool: Identification of Dispatcher Tasks and Data Collection Methods
DOT/FRA/ORD-07/12	Relative Risk of Workload Transitions in Positive Train Control
DOT/FRA/ORD-07/11	Work Schedules and Sleep Patterns of Railroad Dispatchers
DOT/FRA/ORD-07/10	Human-Centered Technologies Tool
DOT/FRA/ORD-07/09	Evaluation of the School Street Four-Quadrant Gate/In-Cab Signaling Grade Crossing System
DOT/FRA/ORD-07/08	Analysis of Accelerations Measured During Full-Scale Tank Car Impact Tests
DOT/FRA/ORD-07/07	Human Factors Considerations in the Evaluation of Processor-Based Signal and Train Control Systems
DOT/FRA/ORD-07/06	State-of-the-Art Technologies for Intrusion and Obstacle Detection for Railroad Operations
DOT/FRA/ORD-07/05	Tank Car Reliability Design and Analysis
DOT/FRA/ORD-07/04	Human Factors Guidelines for Intelligent Transportation Systems at the Highway-Rail Intersection - Technical Report
DOT/FRA/ORD-07/03.I	Rail Crew Resource Management (CRM): Pilot Rail CRM Training Development and Implementation
DOT/FRA/ORD-07/01	Yardmasters and Yard Safety in the U.S. Railroad Industry: An Exploratory Study
DOT/FRA/ORD-06/27	Public Education and Enforcement Research Study

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DOT/FRA/ORD-06/26	Human Factors Guidance for Intelligent Transportation Systems at the Highway-Rail Intersection
DOT/FRA/ORD-06/25	Work Schedules and Sleep Patterns of Railroad Maintenance of Way Workers
DOT/FRA/ORD-06/24	A Pilot Examination of a Joint Railroad Management-Labor Approach to Root Cause Analysis of Accidents, Incidents, and Close Calls in a Diesel and Car Repair Shop Environment
DOT/FRA/ORD-06/23	Railroad Dispatching Operations: Putting Research into Practice - Workshop Summary
DOT/FRA/ORD-06/21	Validation and Calibration of a Fatigue Assessment Tool for Railroad Work Schedules - Summary Report
DOT/FRA/ORD-06/20	Development of Conventional Cab Car End Structure Designs for Full Scale Testing - Rail Passenger Equipment Impact Tests
DOT/FRA/ORD-06/19	Work Schedules and Sleep Patterns of Railroad Signalmen
DOT/FRA/ORD-06/18	Design and Evaluation of Advanced Systems for Locomotive Crew Emergency Egress
DOT/FRA/ORD-06/17	Application of Ultrasonic Phased Arrays for Rail Flaw Inspection
DOT/FRA/ORD-06/16	Impact Performance of Draft Gears in 263,000 Pound Gross Rail Load and 286,000 Pound Gross Rail Load Tank Car Service
DOT/FRA/ORD-06/15	Fatigue Behavior of AAR Class A Railroad Wheel Steel at Ambient and Elevated Temperatures
DOT/FRA/ORD-06/14	Use of Dynamic Rail Deflection as a Means of Determining Changes in Top of Rail Friction
DOT/FRA/ORD-06/13	Development of Gage Widening Projection Parameter for the Deployable Gage Restraint Measurement System
DOT/FRA/ORD-06/12	Damage Assessment of Railroad Tank Cars Involved in Accidents: Phase I - Literature Search and Evaluation.
DOT/FRA/ORD-06/11	Survivability of Railroad Tank Car Top Fittings in Rollover Scenario Derailments
DOT/FRA/ORD-06/10	Rail Crew Resource Management (CRM): Survey of Teams in the Railroad Operating Environment and Identification of Available CRM Training Methods
DOT/FRA/ORD-06/09	A Comparative Risk Assessment of Remote Control Locomotive Operations versus Conventional Yard Switching Operations
DOT/FRA/ORD-06/08	Remote Control Locomotive Operations: Results of Focus Groups with Remote Control Operators in the United States and Canada
DOT/FRA/ORD-06/07.I	Investigation of Cracks in Acela Coach Car Brake Discs: Test and Analysis Volume I - Final Report
DOT/FRA/ORD-06/07.II	Investigation of Cracks in Acela Coach Car Brake Discs: Test and Analysis Volume II - Appendices
DOT/FRA/ORD-06/05	Human Factors Root Cause Analysis of Accidents/Incidents Involving Remote Control Locomotive Operations
DOT/FRA/ORD-06/04.III	Variable Amplitude Fatigue Crack Growth Characteristics of Railroad Tank Car Steel: Volume III
DOT/FRA/ORD-06/04.II	Fatigue Crack Growth Behavior of Railroad Tank Car Steel TC-128B Subjected to Various Environments: Volume II - Appendices
DOT/FRA/ORD-06/04.I	Fatigue Crack Growth Behavior of Railroad Tank Car Steel TC-128B Subjected to Various Environments: Volume I
DOT/FRA/ORD-06/03	Highway-Rail Grade Crossing Safety Research: Railroad Infrastructure Trespassing Detection Systems Research in Pittsford, New York.
DOT/FRA/ORD-06/02	San Joaquin, California, High-Speed Rail Grade Crossing Data Acquisition Characteristics, Methodology, and Risk Assessment
DOT/FRA/ORD-05/06	Evaluation of Options for Improving Amtrak's Passenger Accountability System
DOT/FRA/ORD-05/05	Real-Time Measurement of Track Modulus from a Moving Car
DOT/FRA/ORD-05/04	Ground Penetrating Radar for Railroad Track Substructure Evaluation
DOT/FRA/ORD-05/03	Comparative Safety of the Transport of High-Level Radioactive Materials on Dedicated, Key and Regular Trains - Technical Study
DOT/FRA/ORD-05/01	Fiberglass Wrapped Tie Performance Evaluation Report
DOT/FRA/ORD-04/18	Human Factors Phase III: Effects of Train Control Technology on Operator Performance
DOT/FRA/ORD-04/17	Human Factors Phase IV: Risk Analysis Tool for New Train Control Technology

DOT/FRA/ORD-04/16	On-line High-speed Rail Defect Detection
DOT/FRA/ORD-04/15-II	North Carolina DOT Traffic Separation Studies: Volume II - Findings by Community
DOT/FRA/ORD-04/15-I	North Carolina DOT Traffic Separation Studies: Volume I - Assessment
DOT/FRA/ORD-04/13.i	Supporting Railroad Roadway Worker Communications with a Wireless Handheld Computer: Volume I - Usability for the Roadway Worker
DOT/FRA/ORD-04/13.ii	Supporting Railroad Roadway Worker Communications with a Wireless Handheld Computer: Volume II - Impact on Dispatcher Performance
DOT/FRA/ORD-04/12	Preview Information in Cab Displays for High-Speed Locomotives
DOT/FRA/ORD-04/11	Impact of Data Link Technology on Railroad Dispatching Operations
DOT/FRA/ORD-04/10	Effects of Supervisory Train Control Technology on Operator Attention
DOT/FRA/ORD-04/03	Proceedings of the Human Factors Workshop: Improving Railroad Safety Through Understanding Close Calls
DOT/FRA/ORD-04/01	Optimizing Staffing Levels and Schedules for Railroad Dispatching Centers
DOT/FRA/ORD-03/29	Gage Restraint Measurement System Comparison Tests: Railbound and Hi-Rail Vehicles
DOT/FRA/ORD-03/25	Tread Metal Buildup on Railroad Freight Car Wheels – Dynamometer Simulation
DOT/FRA/ORD-03/24	Estimation of Residual Stresses in Railroad Commuter Cars Wheels Following Manufacture
DOT/FRA/ORD-03/22	Revised Railroad Tank Car Damage Assessment Guidelines for Pressure Tank Cars
DOT/FRA/ORD-03/21	Railroad Tank Relief Valve Requirements for Liquid PIH Lading
DOT/FRA/ORD-03/19	Fatigue Behavior of Railcar Wheel Steel at Ambient and Elevated Temperature
DOT/FRA/ORD-03/18	Passenger Train Grade Crossing Impact Tests: Test Procedures, Instrumentation and Data
DOT/FRA/ORD-03/17.i	Passenger Rail Train-to-Train Impact Test Volume I Overview and Selected Results
DOT/FRA/ORD-03/17.ii	Passenger Rail Train-to-Train Impact Test Volume II Summary of Occupant Protection Program
DOT/FRA/ORD-03/17.iii	Passenger Rail Train to Train Impact Test Volume III Test Procedures, Instrumentation, and Data
DOT/FRA/ORD-03/16	Catalog of "Common Use" Rail Corridors
DOT/FRA/ORD-03/15	Human Reliability Analysis in Support of Risk Assessment for Positive Train Control
DOT/FRA/ORD-03/13	Vertical Track Modulus in Plastic Composite Tie Test Zones at FAST
DOT/FRA/ORD-03/12	Railroad Dispatcher Communications Training Materials
DOT/FRA/ORD-03/09	Selection of Railroad Dispatcher Candidates
DOT/FRA/ORD-03/08	Documentation of Deformation from Passenger Rail Two-Car Impact Test
DOT/FRA/ORD-03/07	Evaluation of Concepts for Locomotive: Crew Egress
DOT/FRA/ORD-03/06	Commuter Rail Seat Testing and Analysisof Facing Seats
DOT/FRA/ORD-03/05	Crashworthiness Design Modifications for Locomotive and Cab Car Anticlimbing Systems
DOT/FRA/ORD-03/04	Evaluation of Alternative Detection Technologies for Trains and Highway Vehicles at Highway Rail Intersections
DOT/FRA/ORD-02/06	Human-Centered Incident Investigation Methods for Railroad Industry
DOT/FRA/ORD-02/04	Damage Assessment of Railroad Tank Cars Involved in Accidents: Phase II - Modeling and Validation
DOT/FRA/ORD-02/03	Locomotive Crashworthiness Research: Locomotive Crew Egress Evaluation
DOT/FRA/ORD-02/01	Rail Commuter Vehicle Curving Performance
DOT/FRA/ORD-01/23	Locomotive Crashworthiness Research: Modeling, Simulation, and Validation
DOT/FRA/ORD-01/22-I	Passenger Rail Two-Car Impact Test, Volume I: Overview and Selected Results
DOT/FRA/ORD-01/22-II	Passenger Rail Two-Car Impact Test, Volume II: Summary of Occupant Protection Program
DOT/FRA/ORD-01/22-III	Passenger Rail Two-Car Impact Test, Volume III: Test Procedures, Instrumentation, and Data

DOT/FRA/ORD-01/21.i	Evaluation of Semi-Empirical Analyses for Railroad Tank Car Puncture Velocity, Part I: Correlations with Experimental Data
DOT/FRA/ORD-01/21.ii	Evaluation of Semi-Empirical Analyses for Railroad Tank Car Puncture Velocity, Part II: Correlations with Engineering Analyses
DOT/FRA/ORD-01/20	An Examination of Railroad Yard Worker Safety
DOT/FRA/ORD-01/18	Progress in Rail Research Integrity Research
DOT/FRA/ORD-01/16	Fire Safety of Passenger Trains Phase II: Application of Fire Hazard Analysis Techniques
DOT/FRA/ORD-01/15	Steel Alloys with Lower Bainite Microstructures for Use in Railroad Cars and Track
DOT/FRA/ORD-01/14	Effects Of Coupler Height Mismatch On The Structural Integrity Of Railroad Tank Car Stub Sills
DOT/FRA/ORD-01/13	Intruder and Obstacle Detection Systems (IODS) for Railroads - 1998 Requirements Workshop
DOT/FRA/ORD-01/12	Aerodynamic Effects of High-Speed Passenger Trains on Other Trains: Safety of High-Speed Ground Transportation Systems
DOT/FRA/ORD-01/08	A Preliminary Examination of Railroad Dispatcher Workload, Stress, and Fatigue
DOT/FRA/ORD-01/07	Safety of Railroad Passenger Vehicle Dynamics: OMNISIM Simulation and Test Correlations for Passenger Rail Cars
DOT/FRA/ORD-01/05	Safety of Railroad Passenger Vehicle Dynamics: Final Summary Report
DOT/FRA/ORD-01/04	Railroad Tank Car Nondestructive Methods Evaluation
DOT/FRA/ORD-01/02	Understanding How Train Dispatchers Manage and Control Trains - Results of a Cognitive Analysis
DOT/FRA/ORD-00/07	Recognition of Rail Car Retroreflective Patterns for Improving Nighttime Conspicuity
DOT/FRA/ORD-00/06.ii	Acoustic Detection of Railcar Roller Bearing Defects: Phase II, Field Test Report
DOT/FRA/ORD-00/06.iii	Acoustic Detection of Rail Car Roller Bearing Defects: Phase III, System Evaluation Test
DOT/FRA/ORD-00/04	Switching Operations Fatality (SOFA) Analysis: Findings and Recommendations of the SOFA Working Group
DOT/FRA/ORD-00/03-I	Passenger Rail Vehicle Safety Assessment Methodology, Volume I: Summary of Safe Performance Limits
DOT/FRA/ORD-00/03-II	Passenger Rail Vehicle Safety Assessment Methodology, Volume II: Detailed Analyses and Simulation Results
DOT/FRA/ORD-00/02.i	Single Passenger Rail Car Impact Test Volume I: Overview and Selected Results
DOT/FRA/ORD-00/02.ii	Single Passenger Rail Car Impact Test Volume II: Summary of Occupant Protection Program
DOT/FRA/ORD-00/02.iii	Single Passenger Rail Car Impact Test Volume III: Test Procedures, Instrumentation and Data

RAILROAD DEVELOPMENT (RDV) REPORTS

REPORT NUMBER	TITLE
DOT/FRA/RDV-06/01	EMF Monitoring on Amtrak's Northeast Corridor:

	Post Electrification Measurements and Analysis
DOT-FRA-RDV-04/02-1	Technical Monograph: Transportation Planning for the Richmond-Charlotte Railroad Corridor, Volume I: Executive Summary and Main Report
DOT-FRA-RDV-04/02-2	Technical Monograph: Transportation Planning for the Richmond-Charlotte Railroad Corridor, Volume II: Appendixes
DOT/FRA/RDV-02/02	Five-Year Strategic Plan for Railroad Research, Development, and Demonstrations
DOT/FRA/RDV-00/05	Assessment of Risks for High-Speed Rail Grade Crossings on the Empire Corridor Next Generation High-Speed Rail Program
ENSCO Report DOT-FR-05-07	Investigation of Cracks in Acela Coach Car Brake Discs: Test and Analysis Volumes I & II - Final Report (November 2005)

MAGNETIC LEVITATION (MAGLEV) REPORTS

REPORT NUMBER	TITLE
VNTSC-FRA-02-13	Noise Characteristics of the Transrapid TR08 Maglev System
VNTSC-FRA-02-11	Electromagnetic Field Characteristics of the Transrapid TR08 Maglev System
Freight Railroading / Research & Development Last Updated: Oct. 29, 2007	

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