

ENGINEER: MECHANICAL

JOHN R. LIECHTY, P.E.

Engineering Design & Testing Corp.
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EDUCATION:

1991 Bachelor's Mechanical Engineering
Auburn University, Auburn, Alabama

PROFESSIONAL EXPERIENCE:

Nov., 1996 to present **Consulting Engineer with Engineering Design & Testing Corp.**
Specialized consulting in the areas of passenger and commercial vehicle accident reconstruction, vehicle-pedestrian accident reconstruction, vehicle acceleration and deceleration analysis, collision speed analysis, vehicle dynamics, brake system inspections, mechanical systems and component inspections, testing and failure analysis, mechanical design evaluations; testing and related analytical investigations.

Oct., 1993 to Oct., 1996 **Mechanical/ Construction/ Rigging Engineer with Construction Services, Division of Chicago Bridge & Iron Co.**
Design, planning and supervision of specialized rigging, lifting and erection techniques, heavy lift operations and specialized repair procedures for plate structures; technical consultant for construction of various types of metal plate structure. Experience includes the formation and implementation of erection procedures and specialized repair methods; knowledge in product lines including above ground storage tanks, elevated water storage tanks, low pressure and temperature tanks, elevated cone bottom tanks, pressure vessels, spheres, and specialty plate structures; technical and practical background in the development, planning and use of erection hardware, scaffolding, tools and equipment in the metal plate fabrication/construction industry; working knowledge of AISC, API, ASME and AWWA design criteria, codes and practices as well as OSHA, ASTM and ASCE specifications, codes and regulations.

Sept., 1991
to Sept., 1993

**Mechanical Engineer - Engineering Advancement Program with
Chicago Bridge & Iron Co.**

Practical knowledge of manufacturing processes used to fabricate metal plate structures for company's product lines including plate burning, beveling, pressing, braking, rolling, detail machining and template fabrication. Experience in the design, analysis and the development of fabrication, manufacturing and erection drawings for various elevated water storage tanks and ASME Section VIII vessels.

Sept., 1986
to Sept., 1990

**Cooperative Education Student - Mechanical Engineer Trainee for
Harbert Construction Co.**

Thermal analysis, piping flow analysis, HVAC load analysis, mechanical and civil estimation for budgets, engineering and contract execution; contract proposal engineering support, performance of contract supervision, field engineering and quality assurance tasks.

PROFESSIONAL ORGANIZATIONS:

- American Society of Mechanical Engineers
- National Society of Professional Engineers
- Alabama Society of Professional Engineers
- Society of Automotive Engineers
- National Association of Professional Accident Reconstruction Specialists

REGISTRATION:

Registered Professional Engineer in Alabama (#20993)
Registered Professional Engineer in Tennessee (#108147)
Registered Professional Engineer in Mississippi (#13584)
Registered Professional Engineer in Georgia (#024301)
Registered Professional Engineer in Florida (#68685)
Registered Professional Engineer in Missouri (#2008035063)
National Council of Examiners for Engineering and Surveying (#15624)

CONTINUING EDUCATION:

“Engineering Ethics Seminar”; presented by Jimmy H. Smith, Ph.D., P.E., Professor of Civil Engineering at Texas Tech University; Engineering Design and Testing Corp.; February 11, 2011; San Antonio, Texas

“Vehicle Dynamics of Passenger Vehicles”; Engineering Design and Testing Corp.; February 11, 2011

“Non-Linear Finite Element Analysis using ABAQUS”; ASME (online); March 20, 2010

“The Engineer’s Role in Loss Valuation”; Engineering Design and Testing Corp.; February 5, 2010; Columbia, South Carolina

“Product Liability–Terms and Techniques”; Engineering Design and Testing Corp.; February 6, 2010

“Vehicle Accident Reconstruction Methods”; Society of Automotive Engineers; December 10-11, 2009; Troy, Michigan

“Basic Fatigue Design Analysis”; Engineering Design and Testing Corp.; February 7, 2009; Birmingham, Alabama

“Use of Metallurgical Analysis to Pinpoint a Brake Problem and the Cause of a Bus Fire”; Engineering Design & Testing Corp.; February 6, 2009; Birmingham, Alabama

McHenry Reconstruction Seminar and Training; McHenry Software; October 6-8, 2008; Cary, North Carolina

“Uncertainty Analysis in Accident Reconstruction”; Engineering Design & Testing Corp.; February 8, 2008; Memphis, Tennessee

Crash Data Retrieval User’s Conference; ARC Network and Collision Safety Institute et al; January 28-30, 2008; Houston, Texas

Third Annual Alabama Engineering Ethics Day; Alabama Society of Professional Engineers; October 19, 2007; Birmingham, Alabama

National Truck Heavy Equipment Claims Council; October 4-7, 2007; San Antonio, Texas

“Caterpillar E.T. for On-Highway Truck Engines”; Thompson Tractor Company; August 29, 2007; Birmingham, Alabama

“Human Factors for Traffic Accident Reconstruction and the Use of Drive³ Software”; Accident Dynamics Research Center; June 11-15, 2007; Amherst, Massachusetts

Bendix Brakes Refresher Course; Engineering Design & Testing Corp.; February 9, 2007; Columbia, South Carolina

Crash Data Retrieval User’s Conference; ARC Network and Collision Safety Institute; January 29-31, 2007; Houston, Texas

“Tire & Wheel Safety Issues”; Society of Automotive Engineers; August 11, 2006; Troy, Michigan

“The Tire as a Vehicle Component”; Society of Automotive Engineers; August 10, 2006; Troy, Michigan

Crash Data Retrieval User’s Conference; ARC Network and Collision Safety Institute; February 13-14, 2006; Dallas, Texas

“Nighttime Visibility Studies”; Engineering Design & Testing Corp.; February 10, 2006; Kansas City, Missouri

“Hydraulic Hose Failure Analysis”; Engineering Design & Testing Corp.; February 10, 2006; Kansas City, Missouri

“An Introduction to Infrared Thermography”; Engineering Design & Testing Corp.; February 5, 2005; Asheville, North Carolina

CDR System Operator's Certification Course; Institute of Police and Technology Management; November 17-19, 2004; Jacksonville, Florida

Confined Space Compliance; National Safety Council; February 5, 2004

“Analysis of Plastic Fractures”; Engineering Design & Testing Corp.; February 6, 2004; Columbia, South Carolina

“Passenger Van Rollovers”; Engineering Design & Testing Corp.; February 7, 2004; Columbia, South Carolina

“Fundamentals of Metal Fatigue Analysis”; Society of Automotive Engineers; October 20–22, 2003; Troy, Michigan

“Examining Diesel Engines”; Engineering Design & Testing Corp.; February 8, 2003; San Antonio, Texas

“Commercial Motor Vehicle Accident Reconstruction”; Engineering Design & Testing Corp.; February 7, 2003; San Antonio, Texas

“Theoretical and Applied Vehicle Dynamics”; Engineering Dynamics Corporation; October 1-3, 2002; Indianapolis, Indiana

“Fundamentals of Accident Reconstruction”; Engineering Design & Testing Corp.; February 9, 2002; Savannah, Georgia

“Videography Techniques and Application”; Engineering Design & Testing Corp.; February 8, 2002; Savannah, Georgia

Accident Reconstruction TOPTEC: Special Topics; Society of Automotive Engineers; May 22-23, 2001; Tempe, Arizona

2001 HVE Forum; Engineering Dynamics Corporation; May 7-11, 2001; Santa Fe, New Mexico

“Black Boxes and Red Tape, An Update on the Current Status of Event Data Recorders”; Engineering Design & Testing Corp.; February 9, 2001; Columbia, South Carolina

“Response Time of Air Brake Systems”; Engineering Design & Testing Corp.; February 9, 2001; Columbia, South Carolina

“Vehicle Spinout Trajectories”; Engineering Design & Testing Corp.; February 5, 2000; Charlotte, North Carolina

“Accident Event Data Recorders”; Engineering Design & Testing Corp.; February 4, 2000; Charlotte, North Carolina

“Accident Reconstruction Using Conservation of Momentum & Energy”; Society of Automotive Engineers; April 26-28, 1999; St. Charles, Illinois

“Drag Factors, Friction Factors, Deceleration Rates...”; Engineering Design & Testing Corp.; February 5, 1999; Columbia, South Carolina

“Braking Performance of Heavy Commercial Vehicles”; Society of Automotive Engineers; November 2-3, 1998; Detroit, Michigan

Level I Training; Commercial Vehicle Safety Alliance; March 18, 1998; Atlanta, Georgia

“Changes in Federal Motor Carrier Safety Regulation Laws for Rear Underride Guards on Commercial Vehicles”; Engineering Design & Testing Corp.; January 30, 1998; Columbia, South Carolina

“Operation and Maintenance of Heavy Duty Vehicle Air Components and Brake Systems”; Allied Signal Truck Brake Systems Co.; February 17-20, 1997; Atlanta, Georgia

“Traffic Accident Reconstruction I”; Northwestern University Traffic Institute; January 6-17, 1997; Evanston, Illinois

Crosby Training Program

Sessions – “Risk Management,” “Inspection of Fitting,” “Foundation for Performance,” “Industry Concepts and Key Concerns of Fittings in Overhead Lifting”; The Crosby Group, Inc.; July 11, 1996; Houston, Texas

Welding & Quality Assurance Supervisor’s Training Program; Chicago Bridge & Iron Co.; February 13-24, 1995; Houston, Texas

Mobile Crane Safety Training Program (8 hr. course); Chicago Bridge & Iron Co.; March 25, 1994; Houston, Texas

Accident Prevention and Supervisor’s Development Program; Chicago Bridge & Iron Co. - National Safety Council; February 28 - March 4, 1994; Houston, Texas

PRESENTATIONS:

“Human Factors and Driver Response”; Technical Presentation; 2010 Annual Engineers Meeting – Engineering Design & Testing Corp.; Columbia, South Carolina; February 5, 2010

“Onsite Safety - Accident Reconstruction/Vehicle Analysis”; Safety Presentation; 2008 Annual Engineers Meeting - Engineering Design & Testing Corp.; Memphis, Tennessee; February 8, 2008

"Electronic Data Retrieval from Passenger Vehicles"; Technical Presentation; 2005 Annual Engineers Meeting - Engineering Design & Testing Corp.; Ashville, North Carolina; February 5, 2005

“The Objective Vehicle Examination”; Technical Presentation; 2002 Annual Engineers Meeting - Engineering Design & Testing Corp.; Savannah, Georgia; February 8, 2002

“Accident Reconstruction”; Liberty Mutual Insurance Co. - Southern Region Field Investigation Department Quarterly Meeting; Brentwood, Tennessee; May 6, 1999

“Hydroplaning of Passenger Cars on Wet Pavement”; Technical Presentation; 1999 Annual Engineers Meeting - Engineering Design & Testing Corp.; Charleston, South Carolina; February 6, 1999

“Accident Reconstruction”; United Parcel Service - South Central Region Health & Safety Managers Meeting; Nashville, Tennessee; February 3, 1999

“Tractor-Trailer Brake Effectiveness Based on Post Accident Examination”; Engineering Design & Testing Corp.; Columbia, South Carolina; February 8, 1997

“Mobile Crane Safety - Shipping and Assembly”; Technical Presentation; Chicago Bridge & Iron Co.’s “Mobile Crane Safety Supervisor Program”; Houston, Texas; December 6, 1995