

**ENGINEER: MECHANICAL**

**JAMES I. MIDDLETON, JR., M.E., P.E.**  
Engineering Design & Testing Corp.  
Post Office Box 8027  
Columbia, South Carolina 29202  
[jmiddleton@edtengineers.com](mailto:jmiddleton@edtengineers.com)

EDUCATION:

1991 Bachelor of Aerospace Engineering  
Auburn University, Auburn, Alabama

2001 Master of Engineering, Mechanical Engineering  
University of South Carolina, Columbia, South Carolina

EXPERIENCE:

June 1995 to Present **Consulting Engineer with Engineering Design & Testing Corp.**  
**Vehicle Analysis Group Coordinator (November 2004 to Present)**  
**District Engineering Manager (July 2005 to October 2010)**

Specialized consulting in the reconstruction of vehicle accidents involving both light and heavy vehicles, mechanical evaluation of hydraulic and pneumatic braking systems, analysis of vehicle and occupant dynamics, and analysis of reportedly stolen vehicles. Specialized consulting in the area of failure of mechanical components and mechanical systems. Analyses include analytical investigations, acceleration and deceleration of vehicles, failure of vehicle components, analysis of collision speed, and motion analysis of vehicles and occupants, as well as the determination of the origin and cause of vehicle and machinery fires. Analyses also include failure analysis of mechanical components and mechanical systems.

January 1992 to May 1995 **Project/Manufacturing Engineer with American Koyo Bearing Manufacturing Corporation, Orangeburg, South Carolina**

Project Engineer

Experience in the layout of production lines and placement of machines at a new production facility. Assisted in the sizing and placement of all support equipment including compressed air, coolant, power, and scrap handling. Responsibilities also included supervision of facility wide projects for improved parts handling, process expansion or modification and plant expansion. Also rendered technical drawings in support of these projects. Experience in the design of machinery utilized in the handling of in process bearing components.

**Project/Manufacturing Engineer with American Koyo Bearing  
Manufacturing Corporation (continued)**

Manufacturing Engineer

Experience in maintaining and improving bearing manufacturing processes. Responsibilities included testing new grinding wheels and stones for grinding processes, testing new tooling for forging processes, testing new machinery to evaluate its effectiveness, establishing processes and procedures for the manufacture of bearing components, and developing new manufacturing techniques for bearing components including new equipment design and equipment modification.

June 1990 to  
September 1990

**Ethyl (Albemarle) Chemical Corporation, Research and Development**  
Summer Intern, Orangeburg, South Carolina

Experience in process design for the manufacture of products used in the manufacture of gasoline additives and pharmaceuticals.

May 1988 to  
June 1990

**Firestone Tire and Rubber Company**, Albany, Georgia

Experience in the adjustment of damaged tires, mounting and balancing of tires, vehicle maintenance and repair.

PROFESSIONAL ORGANIZATIONS:

- ASM International (ASM)
- American Institute of Aeronautics and Astronautics (AIAA)
- Society of Automotive Engineers (SAE)
- National Association of Professional Accident Reconstruction Specialists, Inc. (NAPARS)

REGISTRATION:

Registered Professional Engineer in Alabama (#22569)  
Registered Professional Engineer in South Carolina (#18911)  
Registered Professional Engineer in Florida (#53097)  
Registered Professional Engineer in North Carolina (#24138)  
Registered Professional Engineer in Georgia (#24768)  
Registered Professional Engineer in Virginia (#38478)  
Registered Professional Engineer in West Virginia (#18494)  
Registered Professional Engineer in Texas (#104480)

CONTINUING EDUCATION:

Basic SMAW

Midlands Technical College (Continuing Education Department), December 14, 2011, Columbia, South Carolina

Fractography

ASM International (ASM International Education Department), September 2, 2011, Materials Park, Ohio

Applied Vehicle Dynamics

SAE International, Society of Automotive Engineers, Inc., May 2011, Duncan, South Carolina

Basic Fatigue Analysis Design

Engineering Design & Testing Corp. Technical Session  
February 2009, Birmingham, Alabama

Microstructure and Performance of Heat Treated Steel

ASM/AIST Course, November 2007, Birmingham, Alabama

CDR Data Analyst

Collision Safety Institute, January 2007, Largo, Florida

Principles of Failure Analysis

ASM International, July 2005, Online

Vehicle Fire Investigation Seminar

SCIAAI, August 2004, Columbia, South Carolina

NFPA 921, the Daubert Challenge and Expert Testimony: The New Rules

SCIAAI, May 2004, Columbia, South Carolina

Metallurgy for the Non-Metallurgist

ASM International, December 2003, Online

NFPA 921, the Daubert Challenge and Expert Testimony: The New Rules

SCIAAI, February 2003, Columbia, South Carolina

Tire & Wheel Safety Issues

SAE International, October 2001, Greenville, South Carolina

Investigation of Vehicle Fires Seminar

Lee S. Cole & Associates, Inc., November 2000, Charleston, South Carolina

**CURRICULUM VITAE:  
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Vehicle Fire Investigation Seminar  
SCIAAI, June 1999, Columbia, South Carolina

Brakes and Design Safety  
SAE Seminars, April 1999, Lexington, Kentucky

Commercial Vehicle - Accident Investigation and Prevention Workshop  
J.J. Keller & Associates, Inc., August 1998, Charlotte, North Carolina

Vehicle Fire Investigation Seminar  
SCIAAI, May 1998, Columbia, South Carolina

Arson/Fire Origin Investigation and Arson Case Management  
August 25-27, 1997, Columbia, South Carolina

Bendix HVS Training Program in the Operation and Maintenance of Heavy Duty Vehicle Air  
Components and Brake Systems, February 1997, Atlanta, Georgia

Accident Reconstruction I  
The Traffic Institute, Northwestern University, October 1995, Evanston, Illinois