

James D. Shepherd

Binder Mechanical Consulting

7043 Silverhorn Dr.
Evergreen, CO 80439

Phone: 303-478-3501
FAX: 303-674-6472

jim@bindermc.com
<http://bindermc.com>

CURRICULUM VITAE

Jim Shepherd has nearly 50 years of experience in the design definition, fabrication, application and testing of automotive and industrial products. A major activity of my working career involved trouble-shooting and failure analysis of industrial machinery. I retired from The Gates Rubber Company as Chief Engineer. During my career, I taught various continuing education accredited courses to both engineers and non-technical personnel. I have been an expert witness in several cases.

Qualifications and Experience

- Strong investigative skills honed by years of equipment trouble-shooting
- Extensive working experience with automotive, industrial, and agricultural OEMs
- Skilled and experienced in public speaking and technical presentations
- Outstanding ability to present complex engineering and technical concepts to a non-technical audience without compromising engineering principles
- Significant deposition and trial testimony experience
- Excellent mechanical and metal fabrication skills
- Extensive welding experience (have professional gas/stick/MIG/TIG welding equipment)
- Good working knowledge of AutoCad
- Comprehensive computer skills

Career Highlights:

- BSME - University of Denver 1965
- 34 years at The Gates Rubber Company - emphasis on engineering management, project management, fatigue testing, and mechanical power transmission application technology (including development of application technological tools and design software) and fluid power (hose and hydraulic) products
- Served as United States Chief Delegate to ISO (TC41-SC1 V-belt Drives) and Gates representative to Rubber Manufacturers' Association
- Author of over 50 trade articles
- Authored and presented several engineering association technical papers (ASAE, SAE, National Conference on Power Transmission)
- Authored three textbook chapters
- Taught continuing education classes at the University of Wisconsin (Belt Power Transmission)
- Taught various continuing education classes for National Technology Transfer

Professional-Related Societies and Activities

39-year member Society of Automotive Engineers (SAE)

Patent 4,472,295: Static Conductivity Tester

Professional Experience:

2013- present National Technology Transfer

Project Based Instructor. Instructor of various continuing education courses. The courses include: Mechanical Drives, Shaft Alignment, Ball Screw, and Vibration Analysis. The majority of the students are maintenance personnel. In 2013 I was one of the lead instructors for a major contract with Boeing.

2002- present Independent Contractor with TASA

Independent Contactor. Listed with The TASA Group (Technical Advisory Service for Attorneys) as an forensics expert witness in the area of mechanical failures. Have worked on several cases and have significant experience with deposition and trail testimony.

2004- 2012 RV Safety Systems

Owner. Formed a company to develop and sell safety-related products to the Recreational Vehicle industry. As a part of the business, I developed two versions of a unique electronic fire detection system. While the company was closed in 2012, I continue to consult on the application of these systems for recreational and commercial vehicles.

2002-present Consulting (currently Binder Mechanical Consulting)

Consultant. Formed a company to do consulting in matters related to my work experience and knowledge. I have served as an forensics expert witness in cases involving product litigation and patent infringement.

2000-2002 National Technology Transfer

Project-Based Employee Seminar Leader. Instructor of a continuing education course titled: Mechanical Drives. The course was aimed at maintenance personnel. This assignment involved approximately 20 classes per year in various cities in the United States.

1997-1999 The Gates Rubber Company (Early Retirement after 34 years service)

Chief Engineer, Power Transmission Product Application. This was a focus assignment for several major projects with emphasis on critical customer projects. As a result of this work, I authored an SAE technical paper on the development and testing of a major new product line.

1980-1997 The Gates Rubber Company

Manager, Product Application. This assignment evolved several times and included industrial, agricultural, and automotive (OEM) markets consulting on all Gates products. These products included power transmission belts, hydraulic hose and couplings, and industrial hose and couplings. Operating budget exceeded three million dollars. Responsibility included supervision and direction for a computer group focused on developing product application design software. I was involved in several major product development teams and served as team leader on two teams that developed new products with market sales of several millions of dollars per year. These were enormous projects, one of which made extensive use of Microsoft Project. For the majority of this assignment, I represented Gates at the Rubber Manufacturers' Association (RMA) technical standards meetings and also represented The United States (as chief delegate) at ISO technical meetings.

1976-1980 The Gates Rubber Company

Manager, Belt Test Laboratory. This assignment involved all phases of the operation of the world's largest belt and molded rubber products testing laboratory with an operating annual budget exceeding two million dollars. During this period I was responsible for the definition and implementation of several major capital projects including computerization of the data gathering process. I represented The Gates Rubber Company on the Society of Automotive Engineers (SAE) belt-related committees. I developed a strong background in fatigue statistics and authored an SAE technical paper which related laboratory statistics to practical use for our customers as they developed and tested their equipment.

1965-1976 The Gates Rubber Company

Application Engineer and Group Leader. During this period I worked with all of the Gates products including belts, industrial hose, hydraulic hose and couplings, and molded rubber products. This gave me broad exposure to almost every type of industry and to an extensive array of OEM equipment. The work involved both general market and OEM customers. This assignment also involved extensive training of Gates and customer personnel. In addition, I concentrated on the writing of technical manuals, bulletins, and trade articles.

Publications:

1. ASAE Technical Paper 75-1524 Spring Loaded Idler Designs For V-Belt Drives
2. SAE Technical Paper 800446: V-Belt Reliability -- a Statistical Study of Large Sample Size Fatigue Tests.
3. SAE Technical Paper 961031: The Development of a High-Performance Snowmobile Variable Speed Belt.
4. National Conference on Power Transmission, 1974: Fundamentals of Belt Power Transmission.
5. National Conference on Power Transmission, 1976: Fundamentals of Belt Testing.
6. Textbook chapter: Belt Selection and Application for Engineers (ISBN: 0-8247-7353-5); Industry Standardization of Power Transmission Belts
7. Textbook Chapter: Mechanical Components (ISBN: 0070486174): Belts and Belting
8. Textbook chapter: Mechanical Power Transmission components (ISBN: 0-8247-9036-7); Belt Drives
9. Over 50 technical articles published in various trade publications

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