

MANAGER - APPLICATIONS METALLURGICAL LABORATORY 1997 TO 1998
The Timken Company Canton, OH

Managed associates and laboratory operations providing metallurgical expertise to steel and bearing businesses.

Performed and reviewed metallurgical investigations related to steel processing and component performance including failure analysis and mechanical testing.

Established digital microscopy capabilities for electronic investigations reporting.

Consulted with internal/external customers on material processing/performance issues.

Consulted on machining issues.

PRINCIPAL DEVELOPMENT ENGINEER 1990 TO 1996
The Timken Company Canton, OH

Established a machinability laboratory and test methodology.

Patented a family of steels as alternatives to Pb-containing medium carbon steels and cast iron.

Provided technical support to customers to develop and specify materials and processing for new applications.

EDUCATION

PH.D. METALLURGICAL ENGINEERING 1992
Michigan Technological University Houghton, MI

MASTER OF SCIENCE, METALLURGICAL ENGINEERING 1986
Michigan Technological University Houghton, MI

BACHELOR OF SCIENCE, METALLURGICAL ENGINEERING 1983
Michigan Technological University Houghton, MI

PROFESSIONAL

Registered Professional Engineer (P.E.) in the State of Minnesota

Past Member, External Advisory Board, Materials Science & Engineering, Michigan Technological University

Member ASM International, Heat Treating Society, International Metallographic Society, American Foundry Society, American Welding Society