

# JAMES A. BRUSSO, PH.D., P.E.

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•P.O. Box 6100, St. Cloud, MN 56302 •

Business: 320-253-7968

Cell: 320-267-5120

## SUMMARY

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Metallurgical engineer with more than 20 years of experience in processing/properties of materials, materials characterization and behavior, materials specifications, mechanical testing, failure analysis, machining of materials, laboratory design and operation.

## EXPERIENCE

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METALLURGICAL ENGINEER

SEPTEMBER, 2000 TO PRESENT

*Engel Metallurgical Ltd.*

*St. Cloud, MN*

Provide metallurgical consulting services to a wide variety of clients in the manufacturing, legal, and insurance industries.

Perform failure analyses of products manufactured from various materials, including metals, cermets, and plastics.

Assist manufacturing clients with materials and process development, selection and problem solving, and prepare material and process specifications.

Develop and review product design, materials, and process specifications.

SPECIALIST/SECTION MANAGER - METALLURGICAL QUALITY ASSURANCE

1998 TO 2000

PROCESS IMPROVEMENT

*Canton, OH*

*The Timken Company*

Consulted with customers on machining issues.

Managed the disposition of nonconforming materials.

Reviewed customer specifications.

Responsible for the continuous improvement efforts in thermal treatment of steels.

Provided technical support for steel processing.

Advised on materials selection of mill tooling for seamless tubing production.

Team leader for product response for Department of Energy funded program on the controlled thermal-mechanical processing of steel tubing.

Final technical review of metallurgical processing and production standards to satisfy ISO 9000.

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 and external customers on material 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.

Interacted with customers to develop and specify materials and processing for new applications.

## EDUCATION

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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

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

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

Member of ASM International, American Foundry Society  
Member of NASP