The Warren Group
Forensic Engineers & Consultants
LARGE LOSS & COMPLEX CLAIMS

John Holecek, M.S.M.E, P.E., CFEI

Engineer: Mechanical & Machine Design

Failure Analysis

Industrial Accident Reconstruction

Machine Design

Machine Safeguarding

Machinery and Equipment Damage Appraisals

Products Liability

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EDUCATION

1984	**Bachelor of Science, Mechanical Engineering** University of South Carolina, Columbia, South Carolina
1989	**Master of Science, Mechanical Engineering** University of South Carolina, Columbia, South Carolina

EXPERIENCE

APRIL 2007 TO PRESENT

The Warren Group, Inc., Columbia, South Carolina. Senior Consulting Engineer performing specialized consulting related to property loss analysis and unintentional injuries involving mechanical engineering, machine design and safety.

Property Loss Analysis
Determine the cause of the loss, establish scope of damage, estimate cost to repair, evaluate replacement cost, establish actual cash value, estimate salvage value, estimate time required to complete repair.

Safety Design Analysis (both personal injury and property damage)
Industrial accident reconstruction, machine controls, machine safeguarding, warnings, OSHA compliance, standards and codes compliance, maintenance, fire and explosion analysis, products liability, product failures, failure analysis, consumer products.

2001 TO 2007

Thermal Engineering Corporation, Columbia, South Carolina.
President of Industrial Products Division, Vice President of Engineering
Responsible for all Operations of Industrial Products Division,
Manage Engineering Department providing engineering functions and manufacturing support for all divisions of the company.

1994–2001

Thermal Engineering Corporation, Columbia, South Carolina
Vice President of Engineering and Manufacturing. Assumed the responsibility of all manufacturing functions for the company while maintaining responsibility for all engineering functions. Provided overall direction to a workforce of up to 250 engineering and manufacturing employees. Guided engineering and manufacturing departments through an increase in sales from $12,000,000 to $22,000,000 per year

EXPERIENCE (Continued)

1990–1994 Thermal Engineering Corporation, Columbia, South Carolina
Vice President of Engineering. Managed Engineering Department of 10-12 engineers, designers and field service technicians. Designed consumer and commercial gas fired cooking appliances.
Includes design certification by CSA and NSF to any of several ANSI or UL standards. Guided the Engineering Department during the transition to a company with two divisions, Consumer and Commercial Products Division and the Industrial Products Division. Supervised all engineering functions for both divisions of the company

1984–1990 Thermal Engineering Corporation, Columbia, South Carolina
Project Engineer/Manager. Responsible for engineering and managing projects that involve the manufacture of industrial process equipment. Managed outside contractors in the installation of industrial process equipment.

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Butler Polymet Company, Lenoir, North Carolina
Design and fabrication of two electric infrared industrial ovens with integrated material handling systems. The ovens preheated fiberglass reinforced plastic sheets prior to forming in a hydraulic press.

Honda Cars of America, Marysville, Ohio
Fabrication and installation of three large industrial ovens used to cure coatings on Honda cars. Two of the ovens included thermal oxidizers to incinerate the solvents liberated during the paint curing process.

ASC Incorporated, Formerly American Sunroof Corporation, Bowling Green, Kentucky
Design, fabrication and installation of a paint system used to paint hard top roofs for Corvettes. The system included paint booths with air supply units, prep booths and curing ovens.

Diamondstar Motors, Normal, Illinois
Fabrication and installation of three large industrial ovens used to cure coatings on Mitsubishi cars. Two of the ovens included thermal oxidizers to incinerate the solvents liberated during the paint curing process.

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Westinghouse, Juarez, Mexico
Design and fabrication of a system to paint electrical transformers. The system included the following:

- Gas heated multi-stage parts washer
- Two down draft water wash paint spray booths with automated paint sludge removal systems
- Gas fired air supply units
- Dry off oven
- Paint bake oven
- Material handling system

Navistar, Springfield, Ohio
Design, fabrication and installation of several systems used in the manufacture of large trucks. The systems included the following:

- Eight large industrial ovens each over 150 feet long. The ovens were elevated; gas fired and multi-zoned. Total heating capacity of the ovens was over 50,000,000 BTUH.
- Three large booths used to prepare truck cabs for painting. The booths were ventilated and equipped with fire protection systems.
- Plant ventilation and air conditioning systems including air make up totaling 200,000 cfm

Delta Faucet Company, Chickasha, Oklahoma
Design, fabrication and installation of two natural gas fired industrial ovens. One oven was used to dry parts after processing through a chemical pretreatment system. The second oven was used to cure power coatings applied to faucet assemblies.

3M Corporation, Detroit, Michigan
Design and fabrication of an experimental vapor phase curing machine. The machine created a saturated environment of 3M Florinert to rapidly heat parts using condensation heat transfer. The machine was installed in a General Motors laboratory in Detroit, Michigan.

Dana Corporation, Lugoff, South Carolina
Design and fabrication of a system to paint truck chassis assemblies. The system included the following:

- Gas heated multi-stage parts washer
- Down draft, dry filter paint spray booth
- Gas fired air supply unit
- Dry off oven
- Paint bake oven

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Paccar Company, Kenworth Truck Division, Renton, Washington
Design, fabrication and installation of several systems for the Renton, Washington truck assembly plant including the following:

- Small part powder coating system which included gas heated multi-stage parts washer, powder coating booth, dry off and bake ovens, and material handling systems.
- Five large air supply units that provided gas heated and humidified air to painting processes.
- One large combination paint spray booth and oven used to paint large off road specialty vehicles. This system included pneumatic man lifts which allowed painters to safely access the vehicles.

Anchor Continental, Columbia, South Carolina
Design and fabrication of two gas fired infrared paper driers used to dry coatings applied to paper tapes. The units were installed on tape manufacturing lines that processed tape at 1000 fpm.

Freightliner Corporation, Mount Holly, North Carolina
Design, fabrication and installation of two gas fired ovens used to cure paint on large truck assemblies. Systems included two coolers to cool the trucks after exiting the ovens.

Freightliner Corporation, Cleveland, North Carolina
Design, fabrication and installation of two truck painting systems. The systems included:

- Spray and prep booths
- Air supply units with gas burners and steam humidification
- Gas fired multi-zone paint baking ovens
- Conveyors with interlocked motorized enclosure doors

Volvo Truck Corporation, Dublin, Virginia
Design, fabrication and installation of two truck painting systems. The systems included:

- Down draft water wash spray booths with automated sludge removal systems
- Air supply units with gas burners
- Gas fired multi-zone paint baking ovens
- Material handling systems

Plastech Corporation, Formerly Standard Products Company, Winnsboro, South Carolina
Design, fabrication and installation of a large paint system for automotive plastic door trim. The system was designed to achieve ultra low levels of air pollutants while maintaining high production rates. The equipment was completely automated requiring operator intervention only to load and unload parts from the system. The system included the following:

- Gas heated multi-stage parts washer with deionized water
- Waste water treatment system
- Indirectly fired gas heated dry off oven
- Indirectly fired gas heated bake oven

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Plastech Corporation, Formerly Standard Products Company, Continued

- Six re-circulated, down draft water wash spray booths with robotic paint application and automated sludge removal capacity
- Air supply house with chilled water dehumidification of water wash booth exhaust air
- Thermal oxidizer with integral heat recovery
- Paint storage and automatic feed systems for the robotic paint application
- Automated material handling system consisting of eleven separate conveyors
- Integrated PLC and PC based control systems including data acquisition

Eaton Corporation, North Carolina, Tennessee, Iowa

Design, fabrication and installation of three systems to paint truck transmission assemblies. The systems included gas heated parts washers, paint spray booths, ovens and material handling systems.

Goldshield Fiberglass, Decatur, Indiana

Design, fabrication and installation of a system to prime paint truck body parts. The system included paint spray booths, air replacement units, ovens and material handling systems.

Haden Corporation, Detroit, Michigan

Design and fabrication of oven components used in the manufacture of large automotive industrial ovens. The components included specialized fan assemblies and indirect fired radiant duct assemblies. These components were part of a patented oven design. The components were installed by the Haden Corporation in many automotive assembly plants including those of Daimler / Chrysler, General Motors, Ford, Saturn, and Toyota. Almost 5 miles of the radiant duct assemblies were made and installed in the various plants.

Central Manufacturing Corporation/Central Light Alloy, Paris, Kentucky

Design, manufacturing and installation of a large paint system for coating automotive wheels. The systems included the following:

- Gas heated multi-stage parts washer with deionized water
- Waste water treatment system
- Gas heated dry off oven
- Indirectly fired gas heated bake oven
- Powder coating booths with automated powder paint application
- Air conditioned environmental room enclosure around the powder paint application
- Liquid paint spray booths with automated paint application equipment
- Automated material handling system including specially designed machines to transfer wheels between machines.
- Integrated PLC and PC based electrical control systems including data acquisition

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Paccar Company, Kenworth Truck Division, Mexicali, Mexico
Design, fabrication and installation of a system to paint large truck cabs. The system included a down draft water wash spray booth, prep booths, gas fired air supply units, paint bake oven and automated sludge removal equipment.

Masonite Corporation, Laurel, Mississippi
Design and fabrication of a large system to cure coatings on door skin assemblies. The system included seven gas fired ovens of both high velocity hot air and infrared design. Several coolers were also supplied.

Bristol Compressors, Sparta, North Carolina and Bristol, Tennessee
Design, fabrication and installation of two large paint systems for electro-coating air conditioner compressor assemblies. The systems included the following:

- Gas heated multi-stage parts washers with deionized water
- Electro-coating system with power supplies, ultra-filtration, and automated paint supply provision
- Gas heated bake ovens
- Automated material handling system

American Axle & Manufacturing, Buffalo, New York
Design, fabrication and installation of a large paint system for automotive axle assemblies. The system included the following:

- Gas heated multi-stage parts washer
- Gas heated dry off oven
- Gas heated bake oven
- Down draft dry filter spray booth with robotic paint application
- Air supply house with gas heat and evaporative humidifier
- Paint storage and automatic feed systems for the robotic paint application
- Integrated PLC and PC based control systems including data acquisition

Masonite Corporation, Carrick-on -Shannon, Ireland
Design and fabrication of a large system to apply coatings to door skin assemblies. The system included:

- Four gas fired infrared ovens
- Three high velocity hot air ovens
- Three paint booths which incorporated paint recovery and high pressure spray application
- Four humidifiers
- Integrated PLC based control system

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Goodyear Tire and Rubber, Napanee, Ontario, Canada
Design, Fabrication and installation of a system to preheat large bales of rubber prior to their use in tire manufacturing. The system was a large gas heated enclosure built around a material storage rack system. The oven had many doors that were individually operated by the material transport system.

Fibramold SA, Division of Teranova SA, now owned by Masonite, Cabrero, Chile
Design and fabrication of a large system to apply coatings to door skin assemblies. The system included:

- A large wicket type humidifier. This unit processed approximately 16,000 pounds per hour of hardboard panels in an environment of 120F and 95+% relative humidity.
- Four gas fired infrared ovens
- Three high velocity hot air ovens heated with thermal oil
- Three paint booths which incorporated paint recovery and high pressure spray application
- Three humidifiers
- Material handling system to transport panels through the painting and humidification processes.
- Integrated PLC based control system

General Motors, Massena, New York
Design and fabrication of 16 large polystyrene foam aging ovens. The ovens were used to heat treat polystyrene patterns prior to their use in a lost foam casting process. Parts were processed on racks that were preloaded away from the ovens. Racks were presented to the entrance of the oven where the automatic material handling system received the rack for processing through the oven. The ovens were of two levels and included elevators to lift and lower the part racks. The ovens were electrically heated and included a PLC based control system.

Tranter, Inc., Edgefield, South Carolina
Design, fabrication and installation of a system to powder paint heat exchangers used on large electrical transformers. The system included the following:

- Hot water boiler heated multi-stage parts washer with deionized water
- Programmable hoist system used to convey parts through the parts washer
- Gas heated dry off oven
- Gas heated bake oven
- Powder coating booth with automated powder paint application
- Air conditioned environmental room enclosure around the powder paint application
- Automated material handling system
- Integrated PLC based electrical control system

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Bering Truck, Front Royal, Virginia
Design, fabrication and installation of truck chassis and cab painting systems. The systems included:

- Prep booths
- Down draft water wash spray booth with automated sludge removal system
- Air supply units with gas burners and evaporative humidification
- Gas fired multi-zone paint baking ovens
- Conveyors with interlocked motorized enclosure doors

American Transportation, Division of Navistar, Tulsa, Oklahoma
Design, fabrication and installation of several large paint systems for bus components and body assemblies. Equipment supplied included:

- Bus body paint system over 600 feet in length. The body paint system included:
  - Body prep booth
  - Gas heated dry off oven
  - Three gas heated bake ovens
  - Down draft dry filter spray booth with robotic or automatic paint application.
  - Two spray booths were re-circulated to reduce exhaust rates and conserve energy
  - Two air supply units with gas heat
  - Two recirculation air units with direct expansion cooling provisions.
  - Paint storage and automatic feed systems (plural component) for the robotic and manual paint application
  - Integrated PLC based control system
- Bus hood and cowl paint system. The hood and cowl paint system included:
  - Prep booth
  - Down draft dry filter spray booth with robotic paint application.
  - Spray booth was recirculated to reduce exhaust rates and conserve energy
  - Recirculation air units with direct expansion cooling provisions.
    - Paint storage and automatic feed systems (plural component) for the robotic paint application.
    - Integrated PLC based control system
- Bus seat powder paint system
    - Gas heated multi-stage parts washer
    - Gas heated dry off oven
    - Gas heated bake oven
    - Powder coating booth with automated powder paint application
    - Air conditioned environmental room enclosure around the powder paint application
    - Material handling system

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

Boise Cascade, Elma, Washington
Design and fabrication of several systems used in the manufacture of a new type of lap siding. The siding is a composite material made of recycled polyethylene plastic and wood chips. Equipment supplied included:

- Wood / plastic composite melting machine over 135 feet in length. The machine operated at 400F and included:
    - Three zones heated with circulated thermal oil. Total heating capacity in excess of 20,000,000 BTUH.
    - Ten high pressure circulation fans totaling over 1300 horsepower
    - Custom designed water mist fire suppression system with multi-zone spark detection
    - Interleaved conveyors using a stainless steel flat wire belt type carrier belt with a perforated Teflon / fiberglass overlaid release belt.
    - Integrated PLC based control system
- Caul plate heating system consisting of:
    - Four large ovens that heated caul plates used in the manufacturing process
    - The pre-heated plates received the melted composite material from the melting machine and delivered them to a large press where they were simultaneously pressed and cooled
    - Custom designed water mist fire suppression system with multi-zone spark detection
    - High temperature material handling equipment
    - Integrated PLC based control system
- Edge painting system used to paint the edges of the siding material. This system included:
    - Two flame treating machines that promote the adhesion of water based paints to plastic substrates.
    - Two spray grafting machines that promote the adhesion of paint to the substrate by applying a chemical grafting solution
    - Four gas fired high velocity hot air ovens
    - Four custom designed edge coating machines
    - Material handling system
    - CO2 based fire suppression system
    - Integrated PLC based control system
- Panel painting system used to paint large sheets of the composite material
    - Gas fired infrared preheat oven
    - Two gas fired high velocity hot air ovens
    - Two custom designed pneumatic coating machines which incorporated paint recovery
    - Seven modular coolers
    - Integrated PLC based control system

SUMMARY OF MACHINE AND SYSTEM DESIGN EXPERIENCE

BMW Manufacturing, Spartanburg, South Carolina
Design and manufacturing of a hot water heated oven used to warm wiring harnesses prior to installation in cars. The system included a PLC controlled material handling system that supplied harnesses in the order needed for production.

Paccar Company, Kenworth Truck Division, Mexicali, Mexico
Design, fabrication and installation of truck chassis painting system. The system included:

- Prep booth
- Down draft water wash spray booth with automated sludge removal system
- Air supply units with chilled water cooling, gas burners and evaporative humidification

Duratex SA, Botucatu, Brazil
Design and fabrication of a large industrial oven and material handling system used to heat temper MDF panels at 320F. The system included the following features:

- Ten zone steam heating system using 200 psi steam. Total heating capacity in excess of 10,000,000 BTUH
- Recirculating air systems totaling 1250 horsepower
- Large seal welded stainless steel enclosure with built in thermal expansion provisions. The enclosure was 130 feet long, 37 feet wide and 28 feet tall.
- Wicket type conveyor with indexing drive rated at 1,000,000 inch pounds of torque. The conveyor was designed to handle 250,000 pounds of product and wickets
- Custom designed water mist fire suppression system with multi-zone spark detection

Vought Aircraft Industries, Dallas, Texas
Design, fabrication and installation of a system to paint Blackhawk helicopters. The system included a combination dry filter paint booth and oven, air supply system with chilled water cooling and humidification, and PLC based control system.

Museum of Science and Industry, Chicago, Illinois
Design and fabrication of a custom built, motorized, round char broiler. The unit was installed in an open kitchen where patrons can view the cooking process. The unit included four gas burners and a variable speed motorized turntable that slowly moved the cooking food across the top of the burners. The unit was designed to the applicable portions of the ANSI Z83.11b and ANSI/NSF 4 standards.

Thermal Engineering Corporation, Columbia, South Carolina
Detail engineering and listing of several products for commercial cooking operations. The products included griddles and broilers designed and listed to the ANSI Z83.11b and ANSI/NSF 4 standards.

Thermal Engineering Corporation, Columbia, South Carolina
Detail engineering and listing of several products for residential cooking operations. The products included BBQ grills designed and listed to the ANSI Z21.58 or ANSI Z21.89 standards.

PROFESSIONAL ORGANIZATIONS

National Association of Fire Investigators (#120116)
International Association of Arson Investigators (#12474)
National Fire Protection Association (#2544036)
National Safety Council (Company Membership)

REGISTRATIONS

Professional Engineer in South Carolina (#13246)
Professional Engineer in North Carolina (#033482)
Professional Engineer in Florida (#67111)
Professional Engineer in Alabama (#29030-E)
Professional Engineer in Virginia (#0402 044801)
Professional Engineer in Georgia (#033723)
Professional Engineer in Ohio (#74075)
The National Council of Examiners for Engineering and Surveying (NCEES) (#31492)
Certified Fire and Explosion Investigator (#12474-6262)

CONTINUING EDUCATION

October 4, 2009
"Arc Mapping Basics," online course presented by CFITrainer.com, Online Course in conjunction with The International Association of Arson Investigators, Inc.

December 29, 2008
"Diagnosing and Mitigating IAQ Problems," online course presented by RedVector.com, Online Course

November 2-5, 2008
National Association of Subrogation Professionals 2008 Annual Conference, Hollywood, Florida

- The Inner Workings of the Subrogation Department: An In-Depth Symposium, Part I
- Damages 101: From Loss Adjustment to Subrogation Recovery – How to Understand Damages and Recover Top Dollar
- Surge Suppressors and Power Strips – it's Shocking What You May Not Know
- Product Liability (Subro College®)
- The Revolution in Building Materials: Plastics – Innovation or Ignition?

November 4-7, 2007
National Association of Subrogation Professionals 2007 Annual Conference,
New Orleans, Louisiana

- 3-2-1 Ignition!! Pyrolysis…Is It a Viable Recovery Theory? Part 1
- 3-2-1 Ignition!! Pyrolysis…Is It a Viable Recovery Theory? Part 2

August 9-10, 2007
National Seminar on Fire Analysis Litigation presented by The National Association of Fire Investigators, Sarasota, Florida

CONTINUING EDUCATION, Continued

August 6-8, 2007
National Fire, Arson, & Explosion Investigation Training Program presented by The National Association of Fire Investigators, Sarasota, Florida

June 28, 2007
"Introduction to Fire Dynamics and Modeling," On-line curriculum presented by Daniel Madrzykowski for CFITrainer.net in conjunction with The International Association of Arson Investigators, Inc. (4 Hours Tested Training Program)

April 20, 2007
"Fires, Explosions and Electricity: Intensive Instruction in Irmo," Inner Circle of Investigators, 2007 Annual Conference, Irmo, South Carolina

July 03, 2006
"Design Considerations for Hydronic Pump System Design," online course presented by PDHonline.org, Inc., Herndon, Virginia

June 25, 2006
"Psychometric Chart Fundamentals and its application to HVAC Troubleshooting," online course presented by PDHonline.org, Inc., Herndon, Virginia

June 25, 2006
"Fundamentals of Material Science," online course presented by PDHonline.org, Inc., Herndon, Virginia

June 16, 2006
"Fire Protection Fundamentals," online course presented by Decatur Professional Development, LLC, Houston, Texas

June 13, 2006
"Seismic Restraints for Mechanical Equipment," online course presented by Decatur Professional Development, LLC, Houston, Texas

March 18, 2005
"2000 International Building Code – Structural Design," online course presented by PDHonline.org, Inc., Herndon, Virginia

March 9, 2005
"ISO 9000 and 10000 Quality Documents - 1994 to 2000 Development and Application," online course presented by Decatur Professional Development, LLC, Houston, Texas

February 23, 2005
"Valve Fundamentals," online course presented by Decatur Professional Development, LLC, Houston, Texas

CONTINUING EDUCATION, Continued

February 22, 2005
"Finding the Root Cause," online course presented by Decatur Professional Development, LLC, Houston, Texas

February 9, 2005
"Centrifugal and Positive Displacement Pump Fundamentals," online course presented by Decatur Professional Development, LLC, Houston, Texas

February 3, 2005
"Steam System Basics," online course presented by Decatur Professional Development, LLC, Houston, Texas

January 22, 2005
"Heat Transfer Fundamentals," online course presented by Decatur Professional Development, LLC, Houston, Texas

January 18, 2005
"Industrial Fan Fundamentals," online course presented by Decatur Professional Development, LLC, Houston, Texas

June 12-14, 2001
"Business Skills for General Managers", Daniel Management Center, University of South Carolina School of Business

June 2000
"Leadership Skills for Engineers", Daniel Management Center, University of South Carolina School of Business

June 3, 1999
"Lean Manufacturing and Kaizen: Improving Your Effectiveness and Productivity", Industrial Extension Service, North Carolina State University

COURSES, SEMINARS AND LECTURES PRESENTED

April 6, 2010
"Losses Involving Corrugated Stainless Steel Tube" (CSST) presented at the Greenville Claims Association Meeting, Greenville, South Carolina

February 23, 2010
"Fuel Gas Fires & Explosions" presented at the Fires, Explosions & Electricity 101 Seminar, The Warren Group, Irmo, South Carolina

COURSES, SEMINARS AND LECTURES PRESENTED, Continued

November 4, 2008
"Fires and Explosions in Industrial Ovens and Furnaces – Subrogation Potential," presented at the 2008 Conference of the National Association of Subrogation Professionals, Hollywood, Florida

November 6, 2007
"Spread Claims: Recovering from Parties Who did Not Start the Fire," presented at the 2007 Conference of the National Association of Subrogation Professionals, New Orleans, Louisiana

September 12, 2007
"Design Issues of Workers' Comp Injuries: How to Identify and Pursue Third Party Workers' Comp Subrogation Claims," presented at the Georgia Chapter of the National Association of Subrogation Professionals, Atlanta, Georgia

September 15-16, 1992
Presentation on "Convection Stabilized Radiant Heat Transfer Ovens", SME Paint Systems Design conference, Cleveland, Ohio

February 19, 1992
Mechanical Engineering Panel Member, "Engineering the Future 1992" conference, University of South Carolina, Columbia, South Carolina

"Losses Involving Corrugated Stainless Steel Tube (CSST)" presented at the Large Loss and Complex Claims Investigations Seminar, The Warren Group, Irmo, South Carolina

- **August 27, 2009**
- **October 22, 2009**
- **March 18, 2010**
- **May 20, 2010**

Two-hour seminar, approved by the North Carolina Department of Insurance, Continuing Education Agency Services Division, entitled "Design Issues as a Cause of Workers' Comp Injuries"

September 16, 2009 Key Risk, Greensboro, North Carolina
September 29, 2009 Key Risk, Columbia, South Carolina
October 7, 2009 Zurich, Charlotte, North Carolina

PUBLICATIONS

"Determination of Transient Temperature Distributions in Auto Bodies Subjected to Radiative and Convective Heat Transfer," M.S. Thesis, University of South Carolina, 1989

"Convection Stabilized Radiant Heat Transfer Ovens," SME Paper No. FC92-255, 1992