

Donald G Parent, PE

Professional Summary

Mr. Parent has 30 years experience in the engineering, manufacturing and marketing of fully integrated and automated process machinery, electronic products and consumer products. He is a named inventor on more than 20 US and international patents and is a Registered Professional Engineer. As Principal Engineer at D2 Systems and at Steinke Beyer, Mr. Parent provides expert engineering services and testimony relating to intellectual property protection and patent related matters.

As President of D2 Inline Solutions, LLC, and then as Vice President of Sales and Innovation for Marca Coating Technologies, LLC, Mr. Parent developed and sold advanced inline metalizing and coating systems used for producing many of the electronic, consumer and medical products in common use today. As the primary inventor of these technologies, he worked with outside counsel in creating patent applications, researching prior art and reviewing patents and other relevant documents during the process of securing an issued patent.

As Engineering Director at First Light Technology, Mr. Parent led the development and construction of computer-controlled process machinery used worldwide for making CD, DVD and CD-R discs. He is experienced in developing products for compliance to US and international standards, including CE marking. He has extensive experience in the design of automated machinery for safe operation.

As an engineering practitioner with solid depth and breadth in engineering methods, Mr. Parent excels at conveying complex engineering principles to both technical and non-technical audiences alike. His experience as a presenter at technical conferences, as a teacher of engineers, and as a sales person to non-technical customers has taught him to adjust his message and approach to convey his desired message.

Mr. Parent holds a Master of Science degree in Mechanical Engineering from Stanford and a Bachelor of Science in Mechanical engineering from Northeastern. He is experienced in intellectual property and patent protection, and has broad and diversified engineering skills. These include product design mechanical design, heat transfer, fluid mechanics, stress and failure mechanics, thermodynamics, computational methods, controls, design of electrical systems, design for safety, machine interlocking, and failure analysis.

Expertise

- Patents and Intellectual Property
- Optical Disc Manufacturing Equipment
- Sensors
- Failure analysis
- Safety and Risk Analysis
- Coating Machinery
- Automated Assembly Machines
- Vacuum Metallizers
- Sputtering
- CD \ DVD \ CDR Technologies
- Optical Inspection
- Ionization Systems
- UV Curable Coating Systems
- Process Machinery
- Injection Molding Machinery
- Physical Vapor Deposition
- Product Design
- Robotics

Donald G. Parent, P.E. - Resume

Education

<u>Year</u>	<u>College/University</u>	<u>Degree</u>
1981	University of New Hampshire	Graduate classes in servo systems and signal processing.
1980	Stanford University	MS, Mechanical Engineering
1979	Northeastern University	BS, Mechanical Engineering (Summa Cum Laude)
1974	Central Maine Technical College	Machine Tool Technology

Employment History

From:	1998	D2 Systems
To:	Present	Windham, ME
Position:		<i>President and Principal Engineer</i> Engineering consulting relating to patents, intellectual property, product
From:	2000	Steinke Beyer
To:	Present	Lost Altos Hills, CA
Position:		<i>East Coast Manager</i> Engineering consulting relating to patents, intellectual property, failure analysis, safety and human factors engineering, and product remediation.
From:	2009	Marca Coating Technologies, LLC (formerly D2 Inline Solutions, LLC)
To:	2011	Scarborough, ME
Position:		<i>Vice President, Sales and Innovation</i> Sales, engineering development and intellectual protection of new vacuum coating machines and technologies.
From:	2001	D2 Inline Solutions, LLC
To:	2009	Scarborough, ME
Position:		<i>President</i> Development, intellectual property protection and reduction to practice of new production processes for coating plastic parts.
From:	1991	First Light Technology, Inc.
To:	1998	Saco, ME
Position:		<i>Director of Technology Development/ Director of Engineering</i> Design and development of patented DVD, CD and CD-R manufacturing processes and machinery.
From:	1985	Chapman Corp.
To:	1991	Windham, ME
Position:		<i>Vice President of Engineering</i> Design of patented static elimination equipment.
From:	1982	GTE Products Corporation
To:	1985	Standish, ME
Position:		<i>Senior Engineer</i> Design of patented heating products.

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From: 1979 **Bell Telephone Laboratory**
To: 1982 Whippany, NJ
Position: *Member of Technical Staff*
Design of digital tape backup systems.

From: 1978 **Ingersoll Rand Company**
To: 1979 Nashua, NH
Position: *Manufacturing Engineer*
Improved product assembly practices with assembly of injection molding machines.

From: 1976 **The Charles Stark Draper Laboratory**
To: 1978 Cambridge, MA
Position: *Junior Design Engineer*
Computed mass, volume and other properties on inertial guidance system components.

Consulting Projects (partial list):

Date: 2011 **Tex Tech Industries, Inc./ US Army**
Duties: Developing photovoltaic textile technologies for military and consumer use.
Provisional patent has been applied for.

Date: 2010 **Soleras, Ltd.**
Duties: Engineering consulting in the design and use of an industrial crane.

Date: 2007 **Idexx Laboratories, Inc.**
Duties: Analysis of matrix bar code systems for high speed marking of veterinary products.

Date: 2006 **Spaceworks, Inc.**
Duties: Development of sputtered coatings on composite parts for satellite use

Date: 2006 **Confidential Client**
Duties: Development of thick metal film process for coating composite fuel cell Structures.

Date: 2005 **Precise Technology, Inc.** (now Rexam)
Duties: Technical/engineering problem solving for vacuum metallizers and other production equipment

Date: 2003 **Savcor, Oy** (Finland)
Duties: Development and construction of patented production process and system for mobile telephones shielding.

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Date:	2001	WNA Comet, Inc.
Duties:		Development and intellectual property protection of high-throughput production metallizer for metalized plastic cutlery.
Date:	2002	Precise Technology, Inc.
Duties:		Engineering efforts for various projects.
Date:	2002	Web Converting, Inc.
Duties:		Production equipment rework, installation and problem solving.
Date:	1998	Precise Technology, Inc.
Duties:		Technical/engineering problem solving for vacuum metallizers and other production equipment.

US Patents & Publications

<u>Patents/ Publications</u>	<u>Date</u>	<u>Description</u>
20100181193	1/15/2010	In-Line Metallizer Assemblies and Part-Coating Conveyor Systems Incorporating the Same
6,983,925	1/10/2006	Rotary Barrel Gate Valve
6,889,564	5/10/2005	Peak flow meter
6,676,810	1/13/2004	Method of coating insulative substrates
6,511,616	1/28/2003	System and method for curing a resin disposed between a top and bottom substrate with thermal management
6,500,297	12/31/2002	Method of forming bonded storage disks with low power light assembly
6,430,803	8/13/2002	Method for maintaining concentricity of a combination of a top and bottom substrate during the assembly of a bonded storage disk
6,355,129	3/12/2002	System and method for thermally manipulating a combination of a top and bottom substrate before a curing operation
6,352,612	3/5/2002	System for forming bonded storage disks with low power light assembly.
6,254,809	7/3/2001	System and method for curing a resin disposed between a top and bottom substrate with thermal management
6,103,039	8/15/2000	System and method for thermally manipulating a combination of a top and bottom substrate before a curing operation
6,098,272	8/8/2000	System for maintaining concentricity of a combination of a top and bottom substrate during the assembly of a bonded storage disk
5,709,785	1/20/1998	Metallizing machine
5,491,602	2/13/1996	Air distributing and ionizing systems
5,430,923	7/11/1995	Method for removing a cap from a container with a cap engaging unit

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<u>Patents/ Publications</u>	<u>Date</u>	<u>Description</u>
5,271,296	12/21/1993	Automated container cap remover and method
5,008,594	4/6/1991	Self-balancing circuit for convection air ionizers
4,780,286	10/25/1988	Insecticide dispenser containing eutectic disconnecter

Publications and Presentations

1. *Inline Metallization: The Next Game-Changing Technology in Cosmetic Packaging*, HBA NYC, 2010
2. *Sputtered Metal Coatings and UV Coatings, Working Together*, RadTech Report, November/December 2008
3. *PVD and UV Coatings, Working Together*, Presenter, RadTech2008, May 2008
4. *Gazebo Project Report*, Mikkeli International Industrial Coating Seminar (MIICS), Mikkeli, Finland, March 2003
5. *Innovations in Sputtering Technology Workshop*, Panelist and Presenter, Replitech Europe 1998, Netherlands.
6. *DVD-9, Perfecting the Process*, Panelist and Presenter, Replitech USA, San Francisco, California. 1998.
7. *Practical Solutions for Gold Sputtering of Recordable Compact Discs*, Society of Vacuum Coaters Conference, 1995.
8. *Presentation on design for CE compliance*, Presented to American Society of Quality Control, Maine Chapter.
9. *A Comparison of Various Ionizer Balancing Methods*, Electrostatic Society of America Conference, Stanford University, Palo Alto, CA.
10. *Benchtop Ionization Workshop*, Panelist and Presenter, EOS/ESD Symposium.
11. *Balancing of Benchtop Ionizers*, Magazine Article, Evaluation Engineering Magazine.
12. *DC Motor Selection with Personal Computer Software*, Power Conversion & Intelligent Motion Magazine, August, 1986
13. *DC Motor Selection with Personal Computer Software*, Proceedings, Motor-Con Conference, 1985.
14. *Monitoring Heat Transfer Coefficients using Liquid Crystals*, Master's Project, Stanford University, 1980.

Professional Affiliations, Achievements & Awards

- Registered Professional Mechanical Engineer, Maine #4832
- Member, National Society of Professional Engineers
- Member, American Society of Safety Engineers
- Member, Institute of Electrical and Electronic Engineers
- Member, American Society of Mechanical Engineers
- Member, Society of Vacuum Coaters
- Past member, Northeastern University Engineering Department Industrial Advisory Board
- Past President, Windham Educational Foundation Board of Directors
- Past instructor, PE Exam review class, University of Southern Maine
- Participant, State of Maine Commission on Science and Technology Literacy