

## **Steve Constantinides**

*Magnetics & Materials LLC*

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### **PROFESSIONAL EXPERIENCE**

1/2017 – Present: Magnetics & Materials LLC Honeoye, NY

Principal – Founder and Principal of a contract and consulting business in support of the magnetics and materials industries.

9/2005 – 12/2016: Arnold Magnetic Technologies Corp. Rochester, NY

Director of Technology - Responsible for magnetics technology for Arnold worldwide, including the development of new products, processes, components, control systems, equipment and instrumentation; participate in magnetic research, design and development projects; Factory and equipment specification, acquisition and installation especially for production of rare earth magnets; prepare and conduct training classes in magnetics.

3/1992 – 9/2005 Arnold Magnetic Technologies Corp. Marengo, IL

Advanced Magnetics Program Manager, Manager Electronic Commerce, Supply Chain Manager, Manager Applications and Design - Responsible for construction of the Magnetics Technology Center, Applied Research and commercialization of new magnetic technology particularly as regards bonded magnets; Designed and developed the Arnold Website and the Magnetstuff.com e-commerce site; As Supply Chain Manager had responsibility for Powder Core Customer Service; Have been responsible for R&D, Applications Engineering, Technical Marketing and support of advertising functions (including layout and design for presentations in magazines, Thomas Register, newsletters, catalogs and marketing brochures).

5/1988 – 3/1992 Crucible Materials Corporation, Magnetics Div. Elizabethtown, KY

Manager of Technology and Quality Assurance - Responsible for raw material selection, purchase and inventory control; Material formulation; Process procedures; Specification and development of the process; Liaison with and provided direction for studies conducted by the Magnetics Research staff at the Crucible Research Center; Investigations of patents held by Crucible and competitors; Product Development; Frequent customer interface; Staff of 11 professionals at Elizabethtown facility; Liaison with outside research organizations at NC State University, NASA and others; Responsible for on-site Chemical Analytical Laboratory.

1/1986 – 5/1988 GTE VALENITE (now part of Sandvik AB) Madison Heights, MI

Senior Staff Engineer - Responsible for 40 vacuum and atmosphere furnaces at five locations in the United States, Canada and France; Supervised maintenance, operation, troubleshooting, and modernization; Also functioned as Staff Metallurgist in resolving manufacturing problems and advising Sales Personnel relative to use of Carbide materials.

1/1973 – 12/1985 Corning Inc. Corning, NY; Blacksburg, VA; Raleigh, NC

Process Engineer, Senior Staff Engineer, Process Management System Supervisor, Process Engineering Supervisor - Ceramic Engineer for the smooth-top range business; Assigned to solve multiple manufacturing problems associated with Glass Capacitors; Worked with staff mechanical engineers to successfully install and troubleshoot an innovative ceramic capacitor screen-printer; Directed phase-in and development of Corning's Process Management System at 40 domestic and 23 international plants. This system involved documentation (SOP's), training of the work force, Change Control, Design of Experiments, and an auditing system to test effectiveness of implementation. This system has been very similar to the government's GMP (Good Management Practices System) and more thorough than basic ISO and QS requirements.

## **MILITARY EXPERIENCE**

Enlisted in US Army Security Agency; Final Rank: 2nd Lieutenant; Security Clearance: Top Secret (Codeword)

## **EDUCATION**

Ceramic Science, Alfred University, 1967

## **PROFESSIONAL EDUCATION**

Accounting for Non-Accounting Professionals; Refractories; Kepner-Trego Problem Solving; Management Skills for Engineers; Electron Microscopy; Persuasive Communications; Rank Order Statistical Analysis; Classical Design of Experiments; Carbide Tools and Machining; Fundamentals of Electric Motor Design; Refractory Design and Heat Transfer; several more.

## **PUBLICATIONS & PRESENTATIONS**

- Kim and S. Constantinides: Corrosion Mechanism of Nd-Fe-B Magnets in Humid Environments, *Corrosion of Electronic and Magnetic Materials*, Phillip J. Peterson, Ed., ASTM, 1992, p.68-79
- S. Constantinides, Novel Permanent Magnets and Their Uses, *Advanced Hard and Soft Magnetic Materials*, Materials Research Society, 1999, p.255-263
- M.J. Kramer, R.W. McCallum, I.A. Anderson, and S. Constantinides, Prospects for Non-Rare Earth Permanent Magnets for Traction Motors and Generators, *JOM*, July 2012
- 15+ additional peer reviewed publications
- Instructor for course "Drying, burnout, and Firing of Ceramics" at the Center for Professional Advancement, 1990-93
- Instructor at MPIF Course, Production and Applications of Permanent Magnets, Philadelphia, PA, 1993-95
- 35+ professional presentations and workshops regarding magnetic materials and the magnet industry at professional society meetings: MRS, ASM/TMS, SMMA, APMI, APS, Gorham / Intertech, Magnetics Business & Technology, RERC, WMM'10, '12 and '16, VTP APEEM at ORNL, Keynote speaker at Technical University of Graz, Colloquium speaker at Case Western Reserve University 2013, MS&T-COM 2013, etc.

## **SYNERGISTIC ACTIVITIES**

- Member/Officer/Section Chairman/Meeting Chair in numerous professional organizations including: ASM, ACerS, APS, SPE, SAE, IEEE, APMI, MRS
- SMMA past Board Member and past Chairman of the Permanent Magnet Division (SMMA is now part of the MCMA, the Motion Control and Motor Association)
- EMERF Board Member (Electric Machine Education and Research Foundation)
- ASTM Fellow, Committee A-06 (Magnetics); Technical Advisor to IEC Task Group 68 (Magnetism)
- Member, International Advisory Board, World Magnetic Materials Conference
- Member, Steering Committee, MPIF and PowderMet Conferences
- Rochester Engineering Society, past member, Board of Directors