

ROBERT J. GLODOWSKI

Title: Director, Technical Services

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EDUCATION

1967 BS Metallurgical Engineering, South Dakota School of Mines and Technology
1968-1975 Graduate Courses in Metallurgy, University of Cincinnati & Ohio State University

PROFESSIONAL EXPERIENCE

1997 -	Strategic Minerals Corporation	Director, Technical Services
1993 - 1997	GST Steel Company	Director, Rod Product Technology
1989 - 1993	Armco, Inc., Midwestern Steel Div.	Principal Metallurgist
1986 - 1989	Armco, Inc., Midwestern Steel Div.	Works Metallurgist, Kansas City Works
1984 - 1986	Armco, Inc., Research & Technology	Manager, Prod. Research, Midwestern Steel
1979 - 1984	Armco, Inc., Research & Technology	Senior Staff Metallurgist, Carbon & Alloy Prod.
1967 - 1979	Armco, Inc., Research & Technology	Metallurgist to Sr. Research Metallurgist

PATENTS AND AWARDS

2002 Mordica Memorial Award of the Wire Association International, presented annually to one individual in recognition of contributions to the knowledge base of the wire and cable industry.

1994 U.S. Patent #5462613 Method and Apparatus for Producing Steel Rods with A Desired Tensile Strength and Model for Simulating Same

1981 U.S. Patent #4589934 Grinding Rod and Method for Production Thereof

RECENT TECHNICAL PAPERS

2003 "Nitrogen Strain Aging in Microalloyed Steels", ISSTech, Indianapolis, IN

2002 "Experience in Producing V Microalloyed High Strength Steels by Thin Slab Casting Technology", International Symposium on Thin Slab Casting and Rolling (TSCR'2002), Guangzhou, China

2002 "A Perspective on Microalloying Strategies for the Thin Slab Casting Process", ASM Materials Solutions 2002 - Columbus, Ohio

2001 "Vanadium Microalloying in Steel Sheet, Strip and Plate Products", CSM, Beijing, China

2000 "Production of High Strength Hot Rolled Rebar using Nitrovan Vanadium", Vanitec, Beijing, China

- 2000 "Effect of V & N on Processing and Properties of HSLA Strip Steels Produced by Thin Slab Casting" I&SS Mechanical Working and Steel Processing Conference, Toronto, Canada
- 2000 "Vanadium Microalloyed HSLA Strip Steels", 4th Int. Conference on High Strength Low Alloy Steels, Xi'an, China
- 2000 "Vanadium in Medium and High Carbon Steels", Int. Symposium 2000 on Vanadium Application Technology, Guilin, China
- 1998 "The Role of Nitrogen in Microalloyed Forging Steel", II International Conference on Forging, Porto Allegre, Brazil
- 1998 "Physical Metallurgy Applications and Enhanced Machinability of V-Ti-N Forging Steels", SAE Annual Convention, Detroit MI
- 1995 "Tensile Strength Control in High Carbon Steel Rods", WAI European Technical Conference, Bruges, Belgium
- 1994 "Melt-To-Tensile High Carbon Rods for Direct Drawn Wire Applications", WAI 64th Annual Convention, Detroit, MI
- 1983 "Through-Thickness Tension Testing of Steel", Editor, ASTM STP 794 and Chairman, Symposium on Through-Thickness Tension Testing of Steel, Sponsored by ASTM Com. A-1

ADDITIONAL CONTRIBUTIONS TO THE INDUSTRY

Designed and implemented the MELT-TO-TENSILE process for providing rods for direct wire drawing applications. This process includes the establishment of a new definition of rod grades based on expected mechanical properties rather than chemistry specifications. Necessary procedures for modeling the relationship between mechanical properties and chemistry were developed. Techniques for scheduling and production of these new grades of carbon rods were developed and implemented. This MELT-TO-TENSILE process has significantly changed the way carbon steel rods are specified, graded and sold throughout the industry, making this the most significant change in carbon steel rod products since the advent of the STELMOR process for manufacturing steel rods.

Worked with many wire drawing operations, optimizing drawing practices so that high carbon rods produced from electric furnace melting, continuous billet casting, and SELMOR cooling could be direct drawn to wire without breakage. Critical relationships between reduction per pass and die angles were established for successful direct drawing of these types of high carbon rods.

Developed a procedure for estimating the loss of prestressing forces in prestressed concrete structures due to interaction of concrete creep and stress relaxation of steel wire tendons. Resulting computer program was used for design of secondary containment vessels of nuclear power generation systems.

Served on ASTM Committee A-01 rod and wire subcommittees, and served as U.S. representative on the ISO TC 17 / SC 17 Committee on Rod and Wire. Involved in writing a number of specifications for rod and wire products. Currently active in A-01 subcommittees on rods, bars, sheets and structural steels.

Served for ten years on the ASME Boiler and Pressure Vessel Committee, which establishes rules and regulations for construction of pressure vessels enforced by state laws throughout the USA. Represented the USA on similar ISO organizations dealing with international standards on pressure vessels.

Member of WAI Board of Directors for 6 years, and the Ferrous Management Committee for 15 years. Additional society memberships include ASM International, ASME International, Iron & Steel Society, ASTM, and SAE. Served for 8 years on the University of Missouri-Rolla Corporate Board of Advisors.