

Denis A. Brosnan

Director & Professor
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Bishop Endowed Chair, Ceramic and
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Education

Ph.D in Ceramic and Materials Engineering from Iowa State University.
M.S. in Ceramic and Materials Engineering from Clemson University.
B.S. in Ceramic and Materials Engineering from Clemson University.

Dr. Brosnan is Director of the [The National Brick Research Center](#), an organization of Clemson University's College of Engineering and Science, and Professor of Materials Science and Engineering at Clemson University. In his role as Director of the Center, Dr. Brosnan directs research in production of brick products and on use of brick in the 27,000 square foot Bishop Ceramic Laboratory which opened in 1996. Research in this facility is supported by brick and tile producers and consumers. See www.brickandtile.org. Dr. Brosnan teaches introductory ceramic processing courses in Materials Science and Engineering.

Dr. Brosnan is a Registered Professional Engineer in Ceramic Engineering in South Carolina (#13888). His professional responsibilities include the position of Program Director of the International Brick Plant Operator's Forum held annually in October in Clemson. The forum draws an audience of traditional ceramic manufacturers. Dr. Brosnan is Course Director for several short courses offered through the Brick Association of the Carolinas. Dr. Brosnan is also the editor of Brick Yard Road quarterly magazine.

Research

Dr. Brosnan's research fields include processing and environmental concerns related to ceramic products. Research is in the specific areas of brick production, service of brick products, wall systems, and environmental areas. Other research is related to ceramic tile, whiteware ceramics, and refractory ceramics. Dr Brosnan is currently taking a more active role in restoration assisting from a materials science perspective. This includes verifying authenticity of repair materials, tracing materials to their source, and assisting in problems with historic masonry buildings.

Recent Publications and Awards

Denis A. Brosnan and Gilbert C. Robinson, Introduction to Drying of Ceramics, The American Ceramic Society, ISBN 1-57498-046-7 (April, 2003).

Sanders, J.P. and Brosnan, D.A., "Modeling the Thermal Decomposition of Chrysotile," Proceedings of the 5th SKT 2003 (Thermal Analysis-FTIR Spectroscopy/Thermal Analysis-Mass Spectrometry), Bad Orb/Frankfurt Germany, (2003).

Brosnan, D.A., "Low Density Ceramics Produced From Paper Recycling Residuals", U.S. Patent 6,569,797, (2003).

Sanders, J.P. and Brosnan, D.A., "Evaluation of Scrubber Reagent Efficiency For Dry Lime Absorbers and Dry Lime Scrubbers", Ziegelindustrie Annual, Bertelsmann Springer Bauverlag GmbH (ISBN 3-7625-3899-9), 47-57 (2003).

Brosnan, D.A., Frederic, J.C., and Sanders, J.P., "Method For Processing Clay Ceramic Materials", U. S. Patent 6,548,438, (2003).

"Process For Recycling Spent Pot Liner", U.S. Patent 6,471,931. Issue date 29 October 2002.

Seaverson, E., Brosnan, D., Frederic, J., and Sanders, J., "Predicting Freeze Thaw Durability Using an Index Based on Residual Expansion", ASTM Symposium on Masonry Opportunities for the 21st Century, (2002).

Introduction to Drying of Ceramics, Denis A. Brosnan and Gilbert C. Robinson (in press -to be published by the American Ceramic Society).

"Process For Recycling Spent Pot Liner", U.S. Patent 6,471,931. Issue date 29 October 2002.

"Evaluation of Scrubber Reagent Efficiency for Dry Lime Absorbers and Dry Lime Scrubbers, ZI-Annual 2002 (Ziegelindustrie International), In Preparation.

"Predicting Freeze Thaw Durability Using an Index Based on Residual Expansion", Eric Seaverson, Denis Brosnan, Jim Frederic, and John Sanders, ASTM Symposium on Masonry opportunities for the 21st Century, Salt Lake city (June 2002). Reviewed and accepted for publication.

"The Air Pollution Potential for Brick Making Materials and Additives", Denis A. Brosnan and John P. Sanders, ZI-Annual 2001 (Ziegelindustrie International), In Press.

"Expansion Phenomena During Freezing of Saturated Bricks and Implications on Frost Resistance", Ziegelindustrie International, 54 (4), pp. 12-19 (2001).

U.S. Patent 6,136,063 (issued 10/24/2000), "Process For Separating Hazardous Metals From Waste Materials during Vitrification".

