

PUBLICATIONS

Journal

1993

1. "Comparison of Tension and Flexure to Determine Fatigue Life Prediction Parameters at Elevated Temperatures," S. R. Choi, J. A. Salem, and J. L. Palko, in Life Prediction Methodologies and Data for Ceramic Materials, ASTM STP 1201, C. R. Brinkman and S. F. Duffy, Eds., American Society for Testing and Materials, Philadelphia, PA, 1993.

NASA Technical Reports

2003

1. "Thermal and Thermostructural Analysis of FASTRAC Engine Thrust Chamber-Nozzle with C/SiC Nozzle Extension", Sullivan, R. M., Palko, J. L., Davis, D., and Prickett, T., NASA TP-2003-212464, December, 2003.

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2. "Structural Reliability Analysis of Laminated CMC Components," S. F. Duffy, J. L. Palko, and J. P. Gyekenyesi, in Transactions of the ASME, Journal of Engineering for Gas Turbines and Power, Vol. 115, No. 1, 103-108, (January 1993). (Also NASA TM 103685).

1992

3. "Analysis of Whisker-Toughened CMC Structural Components Using an Interactive Reliability Model," S. F. Duffy and J. L. Palko, presented at the 33rd Structures, Structural Dynamics, and Materials Conference sponsored by AIAA, Dallas, Texas, April 13-15, 1992. (Also NASA CR-190773).
4. "An Interactive Reliability Model for Whisker-Toughened Ceramics," J. L. Palko, Master's Thesis, Cleveland State University, June 1992. (Also published as NASA CR 191048).

1989

5. "Analysis of Whisker-Toughened Ceramic Components - A Design Engineer's Viewpoint," S. F. Duffy, J. M. Manderscheid, and J. L. Palko, Ceramic Bulletin, Vol. 68, No. 12, 2078-2083, (December 1989) (Also NASA TM-102333).

Conference Proceedings and Presentations

2004

1. "Modeling of Carbon-SiC Composites for Space Applications", Mital, S., Murthy, P. L., Sullivan, R., M., Palko, J. L., Presented at 28th Annual Conference on Composites, Materials, and Structures, Cocoa Beach, FL, January 26-30, 2004

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2. "Design and Fabrication of High Temperature Seal Preload Devices", Paquette, E.L., and Palko, J. L., Presented at NASA Glenn Seals/Secondary Air Flow Workshop, November 5-6, 2003.

2001

3. "FEA Modeling and Probabilistic Characterization of MEMS Pressure Sensors" Presented at the MEMS: Mechanics and Measurements SEM Annual Conference and Exposition, June 4-6, 2001, Portland Marriott Downtown Portland, Oregon.

2000

4. "Time-Dependent Reliability of Ceramic Components Under Transient Loads", Jadaan, O., Powers, L., Nemeth, N., Palko, J., and Baker, E.; For presentation at The 45th ASME International Gas Turbine & Aeroengine Technical Congress, Exposition and Users Symposium, May 8-11, 2000.
5. "Creep of a Silicon Nitride Under Multiaxial Stress Conditions", Powers, L., Choi, S., Holland, F., Palko, J., for presentation at The 24th American Ceramic Society Cocoa Beach Meeting and Exposition, January 23-28, 2000.

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6. "CARES/Life Software for Characterizing and Predicting the Lifetime of Ceramic Parts"; Nemeth, Noel, N., Janosik, Lesley, A., Palko, Joseph, L.; Presented at NAFEMS World Congress, April 25-28, 1999, Newport, Rhode Island.

1995

7. "Finite Element Study of C-Ring Fracture Specimens for the Determination of Design Data," A.E. Segall, O.M. Jadaan, and J.L. Palko, For presentation at the 11th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Boston, MA, September 1995.
8. "Trends in the Design and Analysis of Components Fabricated from CFCC's", S.F. Duffy, J.L. Palko, J.B. Sandifer, C.L. DeBellis, M.J. Edwards, and D.L. Hindman, Presented at the International Gas Turbine and Aeroengine Congress and Exposition, Houston, TX, June 1995.

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9. "Reliability Analysis of Single Crystal NiAl Turbine Blades," J. L. Palko, J. A. Salem, S. F. Duffy, and R. D. Noebe, For presentation at the 7th Annual HITEMP Review, Westlake, OH, October 1994.

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10. "Parameter Estimation Techniques Based on Optimizing Goodness-of-Fit Statistics for Structural Reliability," A. Starlinger, S. F. Duffy, and J. L. Palko,

- Presented at the 10th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Albuquerque, NM, September 1993.
11. "Design of a Laminated CMC Heat Exchanger Using the C/CARES Algorithm," J. L. Palko and S. F. Duffy, Presented at the 6th Annual HITEMP Review, Westlake, OH, October 1993.

Books/Monographs/Special Issues

1. "Composite Ceramics Analysis and Reliability Evaluation of Structures (C/CARES) User's and Programmer's Manual," J. L. Palko, A. Starlinger, S. F. Duffy, and D. J. Thomas.

PATENTS:

1. Poppet Valve with Embossed Neck Structure, U.S. Patent # 5771852, June 1998.
2. Engine Valve and method for making the same, U.S. Patent # 5823158, October 1998.