

Darryl A. Rosario, P. E.

Associate

Education

MS in Mechanical Engineering, State University of New York at Stony Brook
Bachelor of Mechanical Engineering, Victoria Jubilee Technical Institute, India

Professional Associations

Registered Professional Mechanical Engineer, State of Virginia
American Society of Mechanical Engineers

Professional Experience

1999 to present	Structural Integrity Associates, San Jose, CA Associate
1993 to 1999	Structural Integrity Associates, San Jose, CA Senior Consultant
1992 to 1993	Engineering Evaluations Corporation Consultant
1984 to 1992	Failure Analysis Associates (FaAA) Senior Engineer
1983 to 1984	Facilities Engineering, State University of New York at Stony Brook, Engineering Aide (part time)
1983 to 1984	Department of Mechanical Engineering, State University of New York Teaching Assistant (Machine Design and Engineering Drawing)

Summary

Mr. Rosario has over twenty years of expertise in stress analysis and fracture mechanics analysis for a wide spectrum of power plant structures and components. He specializes in computer-based analytical techniques for evaluating turbine/generator rotors, high-energy piping systems, headers, valves, steam chests and various other critical power plant equipment. These evaluations have involved the use of elastic and inelastic finite element stress analyses and deterministic and probabilistic fracture mechanics methods to quantify the effects of in-service loading and relevant degradation mechanisms on the future operability/structural integrity of the

subject component/system. He has also contributed to several research and development projects for the Electric Power Research Institute (EPRI) which include the analysis of turbine/generator rotors (*LPRimLife*, SAFER, Turbo-X) and in creep-fatigue monitoring of fossil plant components (Creep-FatiguePro, Boiler OIO).

Selected Publications

1. "A Flaw Tolerance Approach For Evaluation of Steam Turbine Boresonic Data," Proceedings of the 7th EPRI Steam Turbine/Generator Workshop, August 20-23, 2001, Baltimore, Maryland.
2. "Evaluation of LP Rotor Rim-Attachment Cracking Using *LPRimLife*," Proceedings of the 7th EPRI Steam Turbine/Generator Workshop, August 20-23, 2001, Baltimore, Maryland.
3. "Rim Attachment Cracking Prompts Development of Life Assessment Tools," article published in Power Engineering Magazine, June 2000.
4. "Development of an LP Rotor Rim-Attachment Cracking Life Assessment Code (*LPRimLife*), Phase II – Evaluation of Westinghouse Axial-Entry Attachments" Proceedings of the 4th International EPRI Conference on Welding & Repair Technology for Power Plants, June 7-9, 2000, Naples, Florida.
5. "Development of an LP Rotor Rim-Attachment Cracking Life Assessment Code (*LPRimLife*)," Proceedings of the 6th EPRI Steam Turbine/Generator Workshop, August 17-20, 1999, St. Louis, Missouri.
6. "Stress Corrosion Cracking of Steam Turbine Rotors," 1998 NACE International, CORROSION- Vol.54, No. 7, pp. 531-545.
7. "Probabilistic Assessment of Failure by Stress Corrosion Cracking in Shrunk-on Disks of Low Pressure Turbines", EPRI Steam Turbine Stress Corrosion Cracking Conference, March 19-20, 1997, Baltimore, Maryland.
8. "Evaluation of Bore/Keyway and Dovetail Cracking in an LP Rotor," Proceedings of the 5th EPRI Steam Turbine/Generator Workshop, July 29-August 1, 1997, Lake Buena Vista, Florida.
9. "Low-Pressure Rotor Rim Attachment Cracking Survey of Utility Experience," EPRI TR-107088, RP9005-01, Final Report, March 1997.
10. "Creep-Fatigue Damage and Crack Growth Monitoring in Turbine Components using Creep-FatiguePro," Fourth EPRI Turbine/Generator Workshop, Milwaukee, Wisconsin, August 1-4, 1995.
11. "Remaining Life Assessment of a Secondary Superheater Outlet Header," ASME PVP Conference, Honolulu, Hawaii, July 23-27, 1995.
12. "Automated Creep-Fatigue Damage and Crack Growth Monitoring in Power Plants," ASME/IEEE Power Generation Conference, Kansas City, Kansas - October 17-22, 1993.
13. "Life Assessment Methodology for Turbogenerator Rotors, Volume 4," (SAFER computer code) Electric Power Research Institute Final Report CS/FL-5593-CCM, Vol. 4, Research Projects 2481-3, 2785-1, March 1988.

Current and Recent Clients for Professional Services

Darryl A. Rosario

1. TransCanada Pipeline Co. / Royal Insurance Co.: Design review of modification to ABB Stal VAX steam turbine
2. Diamond Energy / Irell and Manella: Catastrophic failure of a Siemens V84.2 engine at Doswell Combined Cycle Plant (root cause investigation). Currently FPL Energy / Duker Barrett Gravante & Markel
3. Indemnity Insurance Co. of North America / Cozen and O'Connor: Arizona Public Service Co. v. General Electric (failure of a second stage turbine bucket—engineering analysis)
4. Major Utility (Confidential) v. Westinghouse (CBS): Nuclear steam turbine stress corrosion cracking--named expert.*

* Active cases November 2002