

David P. Wills, P.E., CFEI, CVFI
Senior Managing Engineer

Professional Profile

Mr. David Wills is a Senior Managing Engineer in Exponent's Materials and Corrosion Engineering practice. Mr. Wills addresses issues related to failure and nonperformance analysis of engineered materials including metals, glass, polymers, and composites. He has metallurgical and materials engineering experience, which includes corrosion analysis. Mr. Wills performs fracture analysis of materials using scanning electron microscopy, metallography, fractography, and photography. Other areas of expertise include fabrication and machining methods, tube and heat exchanger fabrication, and prototype development. Mr. Wills has experience with welding and cutting methods and performs weld inspections. He analyzes surface coating applications and properties. He conducts fire investigations. He also has particular experience with aluminum process metallurgy; aluminum ingot casting technology and machinery, and aluminum extrusion machinery, tooling, dies, and materials. In the area of accident investigation, Mr. Wills addresses industrial and marine equipment failures, slip and fall issues, boating, and marine accidents. Mr. Wills is trained in underwater inspection and photography.

Academic Credentials and Professional Honors

M.B.A., Business Administration, Nova University, 1985
B.S., Metallurgical Engineering, University of Missouri at Rolla, 1977

Licenses and Certifications

Registered Professional Engineer, Florida, #41264
U.S. Coast Guard Captain's License, 50 Gross Tons, 1985
American Welding Society Certified Welding Inspector (CWI), 1994
National Association of Fire Investigators Certified Fire and Explosion Investigator (CFEI), 2002
National Association of Fire Investigators Certified Vehicle Fire Investigator (CVFI), 2009
Certified English XL Tribometrist (CXLT), 2002, 2008

Publications

Hoffman JM, Reitman M, Donthu S, Ledwith P, Wills D. Microscopic characterization of CPVC failure modes. Proceedings, ANTEC 2009, Society of Plastics Engineers, Chicago, IL, June 2009. Best Paper Award in Failure Analysis & Prevention.

Select Reports

Wills DP. ... Airport Acid Wash Damage Investigation – South Terminal Expansion Project Exponent, Failure Analysis Associates, Inc., Report, January 2009.

Wills DP. ...Sodium Hypochlorite Generator Failure, Exponent Failure Analysis Associates, Inc., Report, May 2008.

Wills DP. Investigation of a jacketed stainless steel pipe failure at Wellman, Inc. Exponent Failure Analysis Associates, Inc., Report, March 2007.

Wills DP. Investigation of a failed CPVC fire sprinkler pipe at the Cipraini Condo. Exponent Failure Analysis Associates, Inc., Report, January 2007.

Wills DP. *Aqua Novia* Piping Failure. Exponent Failure Analysis Associates, Inc., Report, May 2006.

Wills DP. *Sacajawea*-Fort Lauderdale shipyard incident of November 18, 2004. Exponent Failure Analysis Associates, Inc., Report, December 2005.

Wills DP. Investigation of pitting corrosion in new stainless steel distillery pipeline. Exponent Failure Analysis Associates, Inc., Report, October 2004.

Wills DP. Investigation of corrosion on the Research Vessel *Walton Smith*; condition assessment and remedial recommendations. Exponent Failure Analysis Associates, Inc., Report, December 2003.

Wills DP. Investigation of the failure of several PVC water mains. Exponent Failure Analysis Associates, Inc., Report, November 2002.

Wills DP. Design, operation and safety review of four Glatt GPCG-200 2-bar fluid bed processors at Andrx Pharmaceuticals Incorporated. Exponent Failure Analysis Associates, Inc., Report, October 2001, with L.A. Swanger.

Wills DP. Swing gear failure on a Kobelco track excavator. Exponent Failure Analysis Associates, Inc., Report, August 2001.

Wills DP. Investigation of the condition of aging transit buses. Exponent Failure Analysis Associates, Inc., Report, May 2000.

Wills DP. Engine room fire aboard the *Starbrite*. Exponent Failure Analysis Associates, Inc., Report, May 2000.

Wills DP. *Hat Trick* incident at Roscioli Yachting Center on November 15, 1998. Exponent Failure Analysis Associates, Inc., Report, July 1999.

Wills DP. Airboat Propeller Failure. Failure Analysis Associates, Inc., Report, June 1998.

Wills DP. Investigation of cracking in a spiractor water treatment cone. Failure Analysis Associates, Inc., Report, September 1997.

Wills DP. Investigation of fractures in G.E. mixing valves. Failure Analysis Associates, Inc., Report, March 1997.

Wills DP. Corrosion of starboard oil/water separator on the *Florida Responder*. Failure Analysis Associates, Inc., Report, October 1995.

Wills DP. Hull corrosion damage on the *MV Gulf Coast Responder*. Failure Analysis Associates, Inc., Report, January 1994.

Wills DP. Multi-layer chemical vapor deposition for extrusion die mandrels. Report 84-TB-04, Atlantic Richfield Metals Co. Research and Development, March 1984.

Prior Experience

Plant Manager, Continuous Extruded Products, Inc. (Kaiser Aluminum), 1985–1988
Senior Research Metallurgist-Extrusions, ARCO R&D, 1982–1984
Development Engineer, Anaconda Aluminum Extruded Products, 1980–1982
Ingot Process Engineer, Anaconda Aluminum, Sebree Reduction Facility, 1978–1980

Professional Affiliations

- American Society for Materials (member and past chapter chairperson)
- American Welding Society (member and past chapter chairperson)
- NACE International (member)
- Marine Industries Association of South Florida (member)
- The American Boat and Yacht Council (member)

Deposition and Trial Testimony

Northern Insurance Company of New York and Gilbert Theoret v Alex Halberstein. Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida
Case No. 08-80986 CA-21, June, 10, 2010. Second depo, Marine operations-standard of care.

Northern Insurance Company of New York and Gilbert Theoret v Alex Halberstein. Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida
Case No. 08-80986 CA-21, April, 28, 2010. Marine fuel line failure, boat fire.

Lexington Insurance Co., et al. v Wellington Remodeling, Inc./Gyongyosl v Amerigas Propane, et al. Circuit Court of the 15th Judicial Circuit in and for Palm Beach County, Florida
Case No. CA 0202528 AI, Oct. 21, 2009.

Florida Diversified Films, Inc. v 1175 NW 159th LLC and Simon Roofing and Sheet Metal Corp.
Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida
Case No. 06-22941 CA-24, Sept. 14, 2009.

Jan Baillargeon, a personal representative for The Estate Of Frank R. D'Alessandro v Mainship Corporation, US District Court of Florida Middle District, Fort Myers, FL. Case No. 2:08-cv-00721-T-FTM-29DNF. June 11, 2009.

Jameson Cooper v Meridian Yachts, Ltd. US District Court Southern District of Florida, In Admiralty. Case No. 06-61630-CIV-Dimitrouleas/Seltzer. May 15, 2008.

Moore v El Mar Tropic Ranch Resort, Inc., 17th Judicial Circuit Court in and for Broward County, FL. Case Number 06-0054 (13), Feb. 25, 2008.

St. Paul Fire & Marine Ins. V Lago Canyon, Inc, V Sunseeker International et al. US District Court Southern District of Florida, Ft. Lauderdale Civil Action File: CIV-COHN 06-60889, January 30, 2008.

Catalina Rental Apartments v Pacific Insurance Company, US District Court, Southern District of Florida, Miami Division Civil Action File 05A-10988-6, March 15, 2007, Daubert Motion Defense – Testimony allowed, May 31, 2007.

Trevino v FSS, Superior Court of Gwinnett County, State of Georgia, Civil Action File 05A-10988-6, December 5, 2006.

Diosdado Lugo v Ken Hall dba Sport-Craft Boats, Bayside Boating Center, Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida, Case No. 03-28659 CA-30, April 3, 2006.

Fonseca v Best Equipment, Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida, Case No. 04-24975 CA (20), March 1, 2006.

One Beacon America Ins. Vs New River Boat Club, et al., US District Ct., Southern District of Florida, in Admiralty, Fort Lauderdale Div., February 27, 2006.

State Farm & Allstate v Jomar International, Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida, Case No. 01-23485 CA 31, June 4, 2004.

State Farm v All Florida Distribution and Sundance Spa, Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida, Case No. 00-19290 CA 30, March, 9, 2004.

Sriro v Aquadulce, Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida, Case No. 00-23569 CA (01), February 6, 2003.

Olivera v Fitzgerald, Circuit Court for the 11th Judicial Circuit, Dade County, Florida, Case Number: 01-9440-CA01, November 7, 2002.

Walker v Sheraton Grand, United States District Court, Southern District of Florida, Miami Division, Case Number: 01-3564-CIV-Gold, Magistrate Judge Andrea M. Simonton, October 3, 2002; August 28, 2003, Daubert hearing prior to testimony.

Williams v Allied, Circuit Court of the 17th Judicial Circuit in Broward Co., Florida, Case Number: 99-011250 CACE 14, July 25, 2002.

Taylor v Marr, Federal District Court for Southern District, State of Florida, Case No: 01-0087CIV Highsmith, March 18, 2002.

Royal Insurance Company of America v J.C.'s Marine Service, Inc., United States District Court Southern District of Florida, Miami Division, In Admiralty, Case No: 00-7162, May 1 2001.

Yang Yang Pilgrim and Jack Ward v Metal Masters/Level-Lok, Inc., Circuit Court, 11th Judicial Circuit, Dade County, Florida, Case No. 00-28667 CA 13, March 21, 2001.

Smith v Healthcare. Civil District Court for the Parish of Orleans, State of Louisiana, Case 90-19246, Div B., January 10 & 12, 2000.

Owen v Baron USA, Inc., 15th Circuit Court, Palm Beach Fl, Case CL99 2823 AH, January 23 & February 11, 2000.

Amoto v Carnival Cruise Lines, Circuit Court of the Eleventh Judicial Court, Dade Co. FL., Case 95-09099-CA-21, Dec. 12, 1998.

State of Florida vs. Scott Derrin, 15th Judicial Circuit Court of Palm Beach County, Case 97-2496 CF A02, October 22, 1998.

Janice O'Gwin vs. Carnival Cruise Lines, Circuit Court of the Eleventh Judicial Court, Dade Co. FL., Case 96-04706 CA-30, September 10 1998.

Shamari, Inc. vs. Aetna Insurance, Standard Fire Ins., John Alden Ins., et al.
U.S. District Court, Southern District of Florida, June 3 1997.

Bailey v CCL, 5th Circuit Court, Lakeland, Florida, March 5, 96.

Eric Melin et. al. vs. Donzi Marine, OMC, 12th Circuit Court, Sarasota Co. Florida, Case 92, 3753 CA, August 11, 1995.

Schafale v. Strates, Strates Holdings, Broward Youth Fair, 17th Circuit Court, Broward Co. Florida, Case 88-32625-Shahood, August 22, 1994.

Roscioli Yachting Center v. Atlantic Cordage, et al. 17th Circuit Court, Broward Co. Florida, Case 93-8999 (09), August 18, 1994.

Van Malsen v. Hawthorne Ocala, Inc., et al., Case #: 93-627-CA Division J, 8th Circuit Court, Aluchua County, FL., May 17, 1994.

Consolidated vs. Orion, Case #: 92-21129 (04), 17th Circuit Court, Broward County, Florida, May 11, 1994.

Harwood vs. Florida Hi-lift, Case #: C190-2322, 9th Circuit, Orange County, Florida July 18 1991.

Trials and Arbitrations

Trevino v FSS, Superior Court of Gwinnett County, State of Georgia, Civil Action File 05A-10988-6, January 10, 2007.

Bakalar v RCCL, Circuit Court of the 11th Judicial Circuit in and for Miami-Dade County, Florida, Case No. 03-24703 CA-04, May 18, 2006,

Celebrity Cruises, Inc. v Barbados Port Authority, High Court of Justice, Civil Division, Bridgetown, Barbados, Case No. 214 of 1996, July 19 & 21, 2005.

Dino di Milano Fire, Arbitration Forums Inc., Applicant: Northern Ins. Co. of New York Respondent: Wausau Insurance Companies, February 26 2004.

Walker v Sheraton Grand, United States District Court, Southern District of Florida, Miami Division, Case Number: 01-3564-CIV-Gold, Magistrate Judge Andrea M. Simonton, August 28, 2003, Daubert hearing prior to testimony.

Amoto v Carnival Cruise Lines, Circuit Court of the Eleventh Judicial Court, Dade Co. FL., Case 95-09099-CA-21, Jan. 14, 1999.

Eric Melin et. al. vs. Donzi Marine, OMC, 12th Circuit Court, Sarasota Co. Florida, Case 92, 3753 CA, September 26, 1995.

Consolidated vs. Orion, Case #: 92-21129 (04), 17th Circuit Court, Broward County, Florida,
April 11, 1995.

Harwood vs. Florida Hi-lift, Case #: C190-2322, 9th Circuit, Orange County, Florida,
April 16, 1991.