Donnavan (Don) Halimunanda, P.E.
Senior Consultant

2030 Powers Ferry Rd., Suite 224
Atlanta, GA 30339

(770) 436-9399

ExpertWitness@rimkus.com

Background

Mr. Don Halimunanda holds B.S. and M.S. degrees in Mechanical Engineering and is a registered Professional Engineer in Alabama, Georgia, North Carolina, South Carolina, and Tennessee. He has over 20 years of experience in forensic engineering, general failure analysis, testing, and design improvements. Mr. Halimunanda has inspected and diagnosed the root causes of a wide range of issues, including material failures in mechanical design, equipment malfunctions due to defects, improper installations, misuse, and poor maintenance. Additionally, he has been involved in accident reconstruction and is a licensed and trained data collection technician.

Mr. Halimunanda has conducted various accident analyses related to component failures in vehicles and industrial and process equipment. In addition, he has investigated premature component failures during accidents that resulted in injuries and fatalities. Beyond accident investigations, he has also evaluated poor equipment performance that led to material production losses.

His 18 years of experience in the field of metallurgy have equipped him with the knowledge to determine whether components failed due to mechanical or environmental factors such as force overload, fatigue, low fracture toughness, corrosion, stress corrosion cracking, corrosion fatigue, hydrogen embrittlement, or hydrogen-induced cracking.

Beyond analyses requiring research and calculations, Mr. Halimunanda enhances project depth by conducting various custom mechanical tests to simulate accident conditions for claim verification or product performance improvement. These tests include both destructive and non-destructive methods. He has also performed a range of metallurgical analyses, such as fracture surface examinations using scanning electron microscopy (SEM) and microstructural analysis using an optical microscope. He is highly knowledgeable in metallurgical sample preparation techniques, including etching.

Mr. Halimunanda is a hands-on professional when conducting accident site inspections and collecting data. He has utilized a variety of inspection tools to gather detailed information. In addition to being highly trained in the use of the FARO 3D scanner, he is also a licensed drone operator.

Professional Engagements

- **Defense Contractor and Military**
  - Austal-USA – Mobile, AL (2018-2019), Worked as a contract engineer and conducted research on the properties of several steel and aluminum alloys for the design of a ship hull.

Forensic Engagements

- **Residential and Multi-Family Investigations**
  - Tampa, FL (2025), Evaluated the cause of a major water leak from an HVAC air handler unit.
  - Orlando, FL (2025), Investigated the cause of a ceiling collapse related to AC ductwork.
  - Atlanta, GA (2025), Identified the cause of a water filter housing failure that led to flooding.

- **Commercial Investigations**
  - Silacauga, AL (2022), Investigated the malfunction of a large double sliding door that resulted in injury.
  - Mobile, AL (2008), Investigated a pedestal crane failure used for transporting items to a cargo ship.
  - Daphne, AL (2006), Conducted an evaluation of a damaged copper wire as part of a fire investigation.

- **Vehicles**
  - Atlanta, GA (2025), Collected and analyzed collision data from a vehicle involved in a rear-end collision.
  - Wilmington, DE (2022), Investigated the failure of a parking brake on an articulated truck.
  - Atlanta, GA (2022), Conducted an investigation into the acceleration components of a golf cart that caused an accident.
  - Mobile, AL (2010), Conducted strain gauge testing and analyzed stresses in critical areas of an aircraft thrust reverser.
  - Mobile, AL (2003-2004), Evaluated the performances of resistance welds (spot welds) in both Original Equipment Manufacturer and aftermarket car body parts.

- **Product Evaluations**
  - New Albany, IN (2022-2024), Conducted testing and evaluated the performance of motorcycle brake hoses in accordance with Federal Motor Vehicle Safety Standards.
  - Parson, KS (2016), Evaluated broken bolts used in the construction of storage tanks, attributed to inadequate heat treatment.
  - Mobile, AL (2014), Investigated the separation of a tree stand chain that resulted in injury.
  - Pascagoula, MS (2012), Evaluated stress corrosion cracking in a chemical reactor.
  - Mobile, AL (2012), Predicted the remaining life of a cyclic pressure vessel using computer software.
  - Mobile, AL (2000-2001), Built a custom test frame to accommodate destructive testing of several car axles for evaluating their strength and materials properties.

- **Maritime**
  - Mobile, AL (2013), Evaluated the failure of bollard bolts due to heavy wind, which led to the ship breaking away.
  - Pascagoula, MS (2004), Evaluated the failure of a wire rope used in ship launching from a drydock, which resulted in ship damage.

Professional Experience

- **Rimkus** **2025 – Present**
  - Senior Consultant
    Provide failure analysis and forensic consulting services requiring mechanical engineering and transportation expertise to insurance, legal, industrial, and other clients. Evaluate injury, equipment, and property damage claims resulting from alleged issues involving products, vehicles, heavy equipment, machinery, HVAC, plumbing, fire suppression, and other mechanical systems.

- **Exponent** **2022 – 2024**
  - Senior Engineer
    Analyzed transportation and heavy equipment accidents, mechanical failures, and evaluated the design and safety of consumer and industrial products. Conducted custom tests to verify claims. Provided consultation to clients regarding inspections, observations, research findings, and testing results.

- **Hargrove Engineers and Constructors** **2018 – 2019**
  - Contract Ship Structural Engineer
    Conducted research for Austal-USA on structural shipbuilding metals, focusing on fracture toughness, fatigue, sensitization, and stress corrosion cracking to evaluate their service effectiveness.

- **Metallurgical Consulting** **2000 – 2018**
  - Mechanical Engineer
    Provided materials and mechanical engineering analysis to a wide range of clients, including industrial, legal, and insurance firms. Consulted with clients to improve product quality, mitigate failures, and protect equipment. Conducted custom mechanical tests on equipment, vehicle components, and mechanical parts to simulate scenarios and verify claims. Performed materials analysis using optical microscopes and a SEM.

Education and Certifications

- **Mechanical Engineering, B.S.:** University of South Alabama (1998)
- **Mechanical Engineering, M.S.:** University of South Alabama (2002)
- **Licensed Professional Engineer:** Alabama, Georgia, North Carolina, South Carolina, and Tennessee
- **Licensed FAA Remote Pilot (Drone):** #4935675
- **Licensed Emission Inspector:** Georgia #AA118194
- **Certified Bosch – Crash Data Retrieval (CDR) System:** Technician
- **Certified SAE – Accessing and Interpreting Heavy Vehicle Data Recorders (HVEDR):** Technician

Continuing Education

- **Georgia's Clean Air Force:** Emissions Inspector Certification Training Program (2024)

Publications and Presentations

- C.K. Clarke and D. Halimunanda, (2006). **"Failure Analysis of Induction Hardened Automotive Axles,"** Journal of Failure Analysis and Prevention, Volume 8, August, Pages 386-396.
- C.K. Clarke and D. Halimunanda, (2006). **"Imperfection in Tree Stand Failures,"** Journal of Failure Analysis and Prevention, Volume 6, April, Pages 24-30.