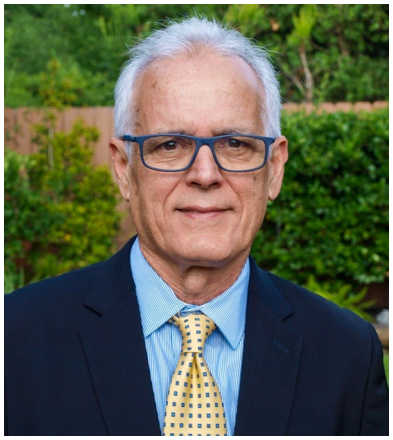


HALLIWELL

FERNANDO LORENZO, Ph.D., PE

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INDUSTRIAL LOSS SERVICES
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SPECIALTIES

- Mechanical and Metallurgical Failure Analysis of Machinery and Materials
- Power Generation Equipment
- Oil Wells - Upstream/Downstream Processes
- Welding, Metal Forming, and Processing
- Process Engineering
- Gas Compression Plants
- Fires and Explosions
- Gas Releases/Gas Migration in Soils
- Expert Witness Testimony

BIOGRAPHY

Dr. Lorenzo is a licensed Mechanical Engineer and holds a Ph.D. in Materials Science and Engineering. He specializes in failure analysis of materials, equipment, and machinery. He is an expert in analyzing metal fatigue, mechanical properties of metals, welding, and metal forming. He performs stress analysis, and computational fluid dynamics analysis. His expertise is providing engineering consulting for cases involving mechanical and metallurgical failures of machinery, components, oil wells, gas compression plants, piping systems, gas and steam turbines, boilers, fires and explosions, and cases involving gas releases and gas migration in soils.

Dr. Lorenzo provides engineering services to the insurance, legal, and industrial sectors, including consulting, projects, forensics, and expert analysis and testimony. He manages engineering projects of all sizes and complexities, including highly technical and/or unusual in the field of Mechanical and Metallurgical engineering, and one-of-a-kind events, on a global scale.

QUALIFICATIONS

Ph.D., Materials Science and Engineering, University of Pennsylvania

M.S.E., Mechanical Engineering, University of Michigan

Mechanical Engineer, Simon Bolivar University, Venezuela

LANGUAGES

Fluent in English and Spanish, proficient in Italian and Portuguese

INDUSTRY CERTIFICATIONS, LICENSES AND MEMBERSHIPS

- PE #84890 (TX)
- Member American Society of Mechanical Engineers (A.S.M.E.)

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- Member American Society for Metals (A.S.M.)
- GWO Climb Certification

PROFESSIONAL EXPERIENCE

- Halliwell, Director, Subject Matter Expert, Industrial Loss Services
- Charles Taylor Engineering Technical Services, SVP, Engineering
- Engineering Systems Inc., Senior Consultant, Senior Managing Consultant, Principal
- Metallurgical Services, CH&A Corporation, Director
- Crawford-THG, Loss Adjuster/Head of Engineering Support Unit
- Thomas Howell Group, Technical & Specialist Services, Regional Director
- Cunningham IAP Americas, Loss Adjuster/Head of Failure Analysis Investigations & Engineering Support Unit
- Analytica y Asociados, S.A, Mechanical/Metallurgical Engineer/Head of Failure Analysis Section
- Asesoria Tech, C.A., Part-time NDT (Non-Destructive Testing) Instructor
- Simon Bolivar University, Caracas, Venezuela, Associate Professor of Mechanical Engineering Department
- INTEVEP (Center for Research and Development, affiliated to Petroleos de Venezuela PDVSA), Los Teques, Venezuela, Research Engineer, Chief of Mechanical Testing Laboratories
- Simon Bolivar University, Caracas, Venezuela, Assistant Professor and Supervisor of the Welding Laboratories
- Simon Bolivar University, Caracas, Venezuela, Instructor & Supervisor of the Mechanical Testing Laboratory

REPRESENTATIVE ASSIGNMENTS

Failure of Yankee Roll in Paper Plant | Montevideo, Uruguay and Campana, Argentina
Cause and origin of equipment damage to plants.

Hydrocracking Unit, Damage to Catalyst | Vicksburg, Mississippi
Cause and origin of high temperature event causing damage to insured.

Damage to Crusher in Mining Facility | Rochester, Nevada
Cause and origin of Rotary Crusher that failed during commissioning.

Coke Conveyor Structural Failure | Port Arthur Texas
Cause and origin of fire causing conveyor structure collapse.

Fire in Aromatic Hydrocarbons Plant | Xiamen, China
Investigation into the cause and origin of fire causing property loss and plant shutdown.

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Investigation of Fire at Water Disposal Facility | Midland, Texas
Cause and origin of event causing fire resulting in life loss.

Investigation of Failure of Large Gas Turbine | New Haripur, Bangladesh
Investigation of cause and origin of catastrophic failure of large Gas turbine for Arbitration procedures. Arbitration held in Seoul, South Korea.

Investigation of damage to Wind Turbines | Multiple locations, USA and Canada
Cause and origin of damage to Wind Turbine components during installation and blade replacement procedures.

Investigation of damage to Gas Turbine | Vinton, Louisiana
Cause and origin of compressor blade failure causing property loss and business interruption.

Investigation of damage to Aero Derivative Gas Turbine | Italy and France
Cause and origin of Aero derivative turbine blade failure and roller bearing failures causing property loss and business interruption.

Investigation of fire and explosion allegedly caused by gas migration | Holly Springs, Mississippi
Cause and origin of fire causing property loss.

Investigation of buckling of hydraulic cylinder of mobile crane | Dallas, Texas
Cause and origin of buckling of hydraulic cylinder resulting in operator injury.

Hydrate induced damage of liquid separator in gas plant | South of Midland, Texas
Investigation into the cause of the failure of large gas/liquid separator at gas processing plant.

Saltwater Disposal Facility Fire | Midland, Texas
Cause and origin of fire causing life and property loss.

Investigation of Damage to Clay Forming Press | Lima, Peru
Investigation of cause of cracking formation and growth in press.

Manufacturing Facility Fire | Reynosa, Mexico
Property damage evaluation, caused by fire.