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Stephen W. Stafford, PhD, PE (Texas) has 48 years of experience in materials failure analysis for a wide range of industries to include primary metals production, oil and gas, electric utility, aerospace and biomedical devices. As a University of Texas at El Paso (UTEP) tenured and foundation endowed professor, he has taught the Failure Analysis and Advanced Failure Analysis courses for over 38 years.

He is a former process metallurgist in melt shop operations with ARMCO Steel. This experience was extremely beneficial to formulating manufacturing processes and product service performance. He has also worked closely with a number of oil and gas companies as a consulting engineer. These projects have focused on a wide array of gas compression equipment, gas transportation systems, reciprocating engines and land-based turbines. In this capacity, he has grown in the areas of nondestructive evaluation, structural integrity assessment, fracture mechanics, environmental deterioration mechanisms, weld fabrication and reverse engineering of structural components. With partner, Dr. Juan M. Herrera, and three talented staff engineers, Drs. Brenda Machado, Shalayna Smith and Chris Bradley, they have a well-equipped, modern laboratory dedicated to material performance analysis, materials characterization and root-cause analysis.

Keyword Experience: Failure Analysis, Metallurgical Engineer, Metallurgy, Root Cause Analysis Investigations, Expert Witness Testimony, Engineering, Metal Failure Analysis, Oil and Gas Field and Equipment Failures, Gas Turbines, Steam Turbines, Compressors, Combined Cycle Power Plants, Diesel Engines, Natural Gas Engines, Turbo Expanders, Pipeline Compressors, Pipeline Failures, Microbial Corrosion (MIC), Stress Corrosion Cracking (SCC), Environmentally Assisted Cracking, Stress, Pumps, Design or Manufacturing Defects, Materials Testing, Remaining Life Assessment, Materials Selection/Design, Aerospace Materials, Corrosion Analysis, Fracture Analysis, Fatigue Fracture, Welding Metallurgy, Manufacturing Processes, Steel, Aluminum Alloys, Composites, Characterization, API standards, ASTM Standards.

Partial List of Clients:

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| El Paso Electric | Delphi | Valeo |
| PG&E | Energy Services | Western Refining |
| EPNG | Freeport-McMoRan | Willbros |
| TGP | Federal Mogul | Williams Pipeline |
| Kinder-Morgan | Shamrock | Mahle |
| EMS Pipeline | WHA International | Aarmor Metals |
| Ethicon (Johnson & Johnson) | Patterson UTI | Conair |
| HKN Engineering | Rainbird | Columbia Pipeline |
| Noble Energy | Lifecycle Specialties | CorrPro |
| Raytheon | Cummins | |
| Schlumberger | And numerous law firms dealing with manufacturing liability | |