RJ Lee Group identifies, evaluates, analyzes, and suggests control measures for environmental elements that originate in the workplace and may be a potential source of risk to workers or the environment. Taking an industrial forensics approach, we offer analytical and consultative services in materials research and selection, environmental health and safety and quality control throughout the product life cycle.

Case Study

**INDUSTRY: Environmental Health & Safety**

RJ Lee Group provides significant technical support to Fortune 500 companies for international liquefied natural gas production, including those involved in energy production. Technical challenges that are already significant become magnified when working across continents, cultures, and environments – e.g., the middle east is particularly harsh from a corrosion standpoint.

RJ Lee Group metallurgists were retained to provide system-wide materials evaluation and failure analysis support for the largest liquid natural gas plant in the Middle East. Over a decade, the project involved hundreds of individual analyses related to material selection, process improvement, and failure analysis for multiple metallurgical applications within the plant. These supported the installation, operation, maintenance, and engineering optimization of the facility, including piping and electrical systems.

Upon analysis, this failure mechanism was found to be caused by an unforeseen combination of vibration and environmental exposure. A redesign was implemented to address the vibration concerns and abate the problem.