

JOSEPH FIGNAR

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SENIOR RESEARCH & DEVELOPMENT PROFESSIONAL

Work Experience

Engineering Consultant

EXPONENT-Denver, CO

January 2022 to December 2023

- # Acted as a trusted client advisor and subject matter expert, responsible for offering expertise in the automotive, mechanical, and materials sectors of the engineering domain.
- # Led dedicated research efforts for each vehicle and mechanical project, leading to generating \$300K in revenue within the first year of employment.
- # Expanded the existing clientele by assisting them in data gathering and analysis and translating it into comprehensive technical reports to provide necessary insights to clients.
- # Cultivated and sustained strategic, long-term client relationships with law firms, corporate customers, and attorneys to acquire new business and attain overarching business development goals.
- # Independently oversaw the entire project lifecycle from planning to scoping, budgeting, team management, testing, and maintaining project timelines; provided witness services and failure analysis for key projects.
- # Actively participated in large-scale industry conferences and delivered impactful presentations to leadership, executives, and varied audiences on automotive ADAS technologies and flaw detection.
- # Prepared peer-reviewed journal entries and performed comprehensive bookkeeping duties.
- # Maintained coordination with multiple law firms to align schedules, as well as ensure seamless operational flow and adherence to strict project timelines.
- # Leveraged a distinctive perspective gained from diverse industry experiences to seamlessly integrate and navigate through various business environments.
- # Directed end-to-end technical preparation and execution to test automotive components for a leading motorcycle OEM as the Lead Test Engineer.
- # Leveraged exceptional problem-solving skills to identify and report underlying issues; prepared and submitted detailed reports to the senior management on reported problems to facilitate informed decision-making.

Senior Heat Treat Process Engineer

HONDA TRANSMISSION MANUFACTURING/GEAR DEPARTMENT-Russells Point, OH

January 2015 to December 2022

- # Engineered key production components that established new standards for North American operations.

- # Drove significant improvements in production and cost-efficiency including implementing a \$5.5M worth of heat treat production line to increase production output capacity by 60%.
- # Attained cost savings by deploying a new production line to improve in-house capabilities and eliminate parts' outsourcing needs.
- # Implemented a strategy that reduced destructive quality checks by 17%, resulting in annual cost savings of \$250K annually; enhanced carburizing process capability using the Micro-Vickers hardness testing method.
- # Spearheaded the adoption of an advanced heat-treating method for the first time in the U.S. market and actively contributed to the design of key upgrades in the Heat-Treating Department.
- # Provided expertise in the design and development of an SQL-based UI to streamline the process for associates to input, track, analyze, and retain production quality data, leading to reduced production downtime by 30%.
- # Led 4 teams of four operators each to manage 26 pieces of assigned production equipment and ensure attainment of capacity and production targets.
- # Entrusted to oversee multifaceted metallurgical laboratory operations encompassing machine availability, data entry, testing timeframes for 40+ tests, and parts quantity to ensure streamlined workflow.
- # Demonstrated hands-on engineering skills by proactively engaging in equipment repairs, rebuilding, and replacements and assisting maintenance crews to ensure equipment functionality.
- # Leveraged a continuous improvement-focused mindset to optimize key processes and drive excellence in coordination with 70+ vendors.
- # Provided hands-on training to the team on maintaining 10 endothermic gas carburizing furnaces by case-hardening multiple transmission gears for passenger vehicles, ensuring high-quality production output.
- # Entrusted to manage ~\$1.8M budget and oversee effective resource management, allocation, and utilization.
- # Maintained oversight of process/project engineers' performance across cycle time, vendor research, costing, pricing, and plant capacity evaluation for fabrication of new equipment valued at \$500K-\$2M.

Distinguished Undergraduate Research Associate (Materials & Manufacturing Division)

PENN STATE UNIVERSITY (APPLIED RESEARCH LABORATORY)-University Park, PA
January 2013 to December 2015

- # Hand-selected to oversee R&D activities for a critical proprietary research project to design and produce nickel-based superalloys, refractory alloys, and functionally graded titanium alloys.
- # Maintained open lines of communication with cross-functional project teams and ensured seamless information flow/process consistency in alignment with overarching project objectives.
- # Provided expertise in extensive research and accurate modification of an existing refractory alloy for aircraft engines and medical X-ray targets, resulting in a presentation to the Departments of Energy and Defense.

Ensured publication of the research, encompassing academia, scientific research, and research design.

Facilitated design, development, and fabrication of carbon-composite fiber and Boron-Carbide ceramic matrices, targeting applications in the medical and defense sectors while acting as the Secondary Investigator.

Core areas of responsibility included reviewing experiment results and equipment data to collect necessary information, conducting hypotheses, and preparing detailed presentations for the advisor and clients.

Presented a full-class lecture on 'Materials Science for Civil Engineers', an elective course, for the first time in department history and assisted in generating exam questions for the course.

Structural Joist/Deck Detailer

CMC JOIST & DECK

Metallurgical Intern

ARCELORMITTAL STEEL-LONG CARBON

Education

Master of Engineering in Engineering Management

THE PENNSYLVANIA STATE UNIVERSITY

2020

Bachelor of Science in Materials Science & Engineering

THE PENNSYLVANIA STATE UNIVERSITY

2015

Skills

- Highly detail-oriented and dynamic professional with diverse experience in the automotive, materials science, and renewable energy sectors. Broad research and development background with hands-on project management experience and proven expertise in executing groundbreaking projects in heat treatment processes, as well as advanced manufacturing. Adept at translating complex engineering principles into tangible solutions, with a proven track record in both laboratory and field settings. Noted for a strong research-oriented approach with a proven track record of contributing to critical defense and energy sectors by participating in extensive research, data gathering, and reporting, and presenting findings to the Departments of Energy and Defense. Possess excellent problem-solving skills with a solid history of outperforming colleagues and peers by identifying underlying issues. Proficient in technical writing and presenting to diverse audiences including leadership and large-scale conferences; known for a strong passion for scientific discovery and technological advancement. Committed to continuous improvement and innovation as demonstrated by the

implementation of SQL-based UIs and competencies in programming languages such as Python and MATLAB.
Knowledge of ISO standards, IBC, CQI-9, ANSI, ASTM, & NFPA 86/86-C Fire Codes | Microsoft Office Suite | SAP | Minitab | Abaqus FEA | AutoCAD | SolidWorks | Python | C++ | MATLAB

- Six Sigma
- Research and development
- Design of experiment