

# James A. Strong III, P.E.

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Iuka, MS 38852

## EDUCATION

Christian Brothers University, Memphis, TN 38104

Summa Cum Laude, May 2009

Bachelor of Science in Mechanical Engineering with a Minor in Mathematics

## WORK EXPERIENCE

Bishop Forensic Engineering, LLC

Forensic Engineer, April 2022 - Present

United States Department of Defense, Missile Defense Agency (MDA),  
Huntsville, AL

Hardware Engineer, NH-0801-03, AN / TPY-2 (Army Navy / Transportable  
Radar Surveillance) Radar Product Office, December 2012 –  
November 2021, Full-Time (40+ hours / week)

General Engineer, GS-0801-11, Career Development Program, November  
2010 - December 2012, Full-Time (40+ hours / week)

- AMRDEC (Aviation and Missile Research,  
Development and Engineering Center), WDI  
(Weapons Development and Integration) Propulsion  
Laboratory
- SBX (Sea Based X-Band Radar) Product Office
- Flight Test Mission Management

FedEx Customer Information Services, Memphis, TN

Associate Customer Service Engineer, August 2010 - October 2010, Full-Time  
(40+ hours / week)

Parker Hannifin Racor Division, Holly Springs, MS

Design Engineer II / IME (Improvement, Maintenance and Expansion) Engineer,  
March 2010 - August 2010, Full-Time (40+ hours / week)

Temporary Design / Maintenance Engineer, August 2009 - February 2010, 40  
hours per week

## RESPONSIBILITIES AND CONTRIBUTIONS

### Bishop Forensic Engineering, LLC

Evaluate loss and injury related electrical system failure modes and malfunctions  
including commercial and residential appliances, distribution equipment,  
communication and wiring systems, generators / motors, generator / motor  
control systems, vehicles and HVAC equipment

Electrical fire evaluations of commercial, industrial, maritime, and residential assets,  
and commercial, residential and recreational (RV) vehicles

Evaluations of lightning stroke damage and lightning protection systems (LPS)

Replacement cost estimation and depreciation, small and large computer hardware  
and software installations, large-scale project management and contract  
negotiations at the private and Federal Acquisition levels

## RESPONSIBILITIES AND CONTRIBUTIONS CONT'D

### Missile Defense Agency

- Manage Operations and Life Cycle Sustainment of Domestic AN / TPY-2 radars, including the AEU (Antenna Equipment Unit), EEU (Electronics Equipment Unit), PPU (Prime Power Unit) and CEU (Cooling Equipment Unit), to ensure schedule is maintained and costs are controlled
- Oversee production of Domestic and Foreign Military Sales (FMS) AN / TPY-2 radars by monitoring cost and schedule variance
- Plan, coordinate and implement Engineering Change Notices (CNs) into fielded radars for the purposes of upgrading hardware / software or improving operator and maintainer occupational efficiency and safety
- Brief the Sensors Directorate Engineering Review Board (SN ERB) regarding spares availability, technical manual updates, soldier / maintainer training and technical / logistical issues on new CNs prior to implementation
- Monitor radar repairs via MRBs (package of white papers, reports, engineering drawings and other documents submitted to the Material Review Board) and the PMCB (Parts and Materials Change Board)
- Identify and monitor failure trends within the radar fleet for the purposes of improving RAM (Reliability, Availability and Maintainability) and decreasing overall life cycle maintenance costs
- Analyze Earned Value metrics for the AN / TPY-2 IBR (Integrated Baseline Review) concentrating on unfavorable financial indicators
- Aid in formulation of TIs (Technical Instructions) and SOWs (Statements of Work) through the development of budget requirements; modification estimates including material and labor costs; and work performance schedules ensuring stakeholder requirements are met
- Perform test site field inspections of production radars prior to DD250 (government property transfer form) focusing on overall performance and aesthetics
- Utilize ALCS (Automated Logistics Control System) to manage open maintenance actions by ensuring availability of tools and materials, adequate distribution and inventory of parts and sufficient site labor to perform the work
- Review production and fielded FRB (Failure Review Board) events to ensure RCCA (Root Cause and Corrective Action) is obtained and implemented
- Review with MDA Quality MRB (Material Review Board) documentation and Factory ATPs (Acceptance Test Procedures)
- Participate in weekly production sub-IPT (Integrated Product Team) meetings with MDA Quality and contractors concentrating on cost and schedule management
- Prepare and execute TRRs (Test Readiness Reviews), SRRs (Ship Readiness Reviews) and PMRs (Program Management Reviews) as formal production milestones
- Perform PRRs (Production Readiness Reviews) to inspect manufacturing facilities and certify that they are capable of producing the desired hardware
- Manage NC (Non-Conformance) Closure Resolution resulting in waivers, deviations or reworks-to-print
- Audit radar hardware with MDA Quality comparing as-designed and as-built configurations and resolve radar hardware obsolescence issues
- Designed and constructed test fixtures and plumbing arrangements for the testing of solid and liquid fueled rocket motors
- Disassembled solid rocket motors for the purpose of replacing and testing different nozzles, propellants and / or grain structures

## RESPONSIBILITIES AND CONTRIBUTIONS CONT'D

Performed maintenance and repair work on rocket motor handling equipment, such as all-terrain 4WD forklifts and rough-terrain 2WD forklifts, and on range engineering construction equipment such as the SEE (Small Emplacement Excavator)

Installed and calibrated force and pressure transducers, thermocouples and combination force and torque load cells to ensure accurate and reliable data collection

Transferred liquid nitrogen to cryogenic pressure vessels for use as a refrigerant during tests and to refill high pressure, gaseous nitrogen tanks using a high power, phase-change, piston pump

Coordinated and planned shipyard maintenance and dry dock operations for the SBX (Sea-Based X-Band Radar) vessel including thruster overhaul, painting, environmental assessments and port security operations

Managed installment of in-port software upgrades for the SBX radar

Fostered the re-initiation of an SBX WSTR (Web-based Software Trouble Report) database

Designed and constructed the SBX Construction Documents SQL (Search Query Language) database as part of the SNX-M Configuration Management Plan

Coordinated and facilitated the integration of mission elements culminating in a complete test package for flight test execution

### FedEx Customer Information Services

Reported FedEx Representatives' Schedules requiring database creation and data mining to demonstrate productivity

Substantiated business case studies for FedEx customer outreach by gathering and analyzing data from exit surveys, focus groups and third-party collection services

### Parker Hannifin

Designed new products to meet customer specifications and improved existing products to meet new durability, size, manufacturing and / or packaging criteria

Produced RFQ (Request For Quote), CID (Customer Interface Drawing) and Detail / Production drawings for sales use and factory manufacturing operations

Produced detailed floor plan drawings for work station / cell layout

Set-up product packaging including boxing, labeling and palletizing to minimize shipping costs while meeting customer requirements

Maintained private brand / aftermarket labels and associated drawings to meet ever-changing customer requirements

Designed quick and inexpensive field repairs in cooperation with Quality Assurance to help resolve customer warranty claims

Aided in the production of Air Lab Procedure and Equipment Set-up manuals

Continually gathered and coalesced market data for Aftermarket Element Business Unit to aid in regaining market share

Aided in setting up Air Lab air filter full-life / dust-holding and pressure drop tests

Gathered Bills of Material and identified routers for manufactured merchandise

Participated in filter canister end-cap Design and Process Failure Modes and Effects Analyses (DFMEA and PFMEA)

Initiated the Production Parts Approval Process (PPAP) for product releases through customer interaction by analyzing and modifying product details

## LICENSES

Professional Engineering (PE)  
Mississippi – License Number 29758  
Tennessee - License Number 119812

## PROFESSIONAL ORGNIZATIONS

International Association of Arson Investigators (IAAI) – Arkansas Chapter  
American Society of Engineering Management (ASEM)

## ACHIEVEMENTS

RDECOM / AMRDEC (Research, Development and Engineering Command /  
Aviation and Missile Research Development and Engineering Center)  
Ammunitions and Explosive Certificate - Class I A&E Operations Level  
DAWIA (Defense Acquisition Workforce Improvement Act) Engineering Level II  
Certification  
Lean / Six Sigma Yellow Belt Certified  
Certificate of Presidential Recognition, CBU, May, 2009  
FE (Fundamentals of Engineering) Certificate  
Engineer Intern as recognized by the Tennessee Board of Architectural and  
Engineering Examiners

## MANUFACTURING EXPERIENCE AND SPECIALIZED EQUIPMENT

Palas Aerosol and Particle Measurement System, used for CCV testing and  
development  
The Toyota Way and 5 Whys methods of manufacturing and management within an  
ISO 9001, ISO 14001 and ISO / TS 16949 certified environment  
Geometric Dimensioning and Tolerancing (GD&T)  
Arc, oxy-fuel, MIG and TIG welding processes  
Plasma cutting  
CNC / Manual lathes and mills  
Injection molding / Die manufacturing  
Rapid prototyping with molten plastic 3-D printer  
Silk-screening  
Sheet metal design and laser cutting  
Mazak Super Turbo – X48 NC CO<sub>2</sub> laser processing machine

## SOFTWARE

AutoCAD 2009  
Automated Logistics Control System  
FabCAD  
Intralink  
Kinetic Impact Debris Distribution modeling software  
Labelview 7.0  
Lotus Notes  
Microsoft Office  
ProEngineer and ProMechanica  
PSpice circuit analysis software  
SolidWorks  
TOPS Pro packaging software