MECHANICAL DESIGNER
Summary

Im offering over twenty-eight (28) years of extensive working knowledge of the principles, theories and concepts in the design-engineering field.

A self-motivated, assertive individual, who learns quickly, accepts new challenges, works well independently and also in team environments; lives up to high personal standards integrity/ethics; pro-actively demonstrates good interface/communication, task management.

Highlights

3D Model part design and assembly development including BOM generation.	Heavy and light structural frame design and aluminum mounting platform design.
Create weight distribution analysis as well as present findings and able to defend assumptions.	Strong under standing of hydraulic components and able to do troubleshooting with the ability to develop and improve hydraulic circuits from existing schematics.

Experience
Company Name May 2013 to July 2015 Mechanical Designer
City , State

- As a member of the Research and Technology team, I was able to be a part of several projects focused on saving the company money by reducing down time of equipment, use of tested and approved quality parts and material.
- Designs were developed with the use of Creo Parametric 2.0, Windchill and Autodesk Inventor 2015.
- Designed, tested and implemented a pneumatic circuit to insure proper conditions existed prior to engaging and dis-engaging the clutch on the Frac pump units.
- This circuit protects the clutch from premature failure and unnecessary ware.
- Investigated Fluid End failures and corrected drawing errors related to seat angel.
- This significantly increased the life of the Fluid Ends.
- Created approved source control drawings for the fluid end valves and seats witch eliminated the use of misaligned seat and premature washouts of the fluid ends.
- Designed a cross unit manifold used to connect up to twenty two (22) Frac Pumps to run off natural gas or field gas.
- This significantly reduced fuel cost across the fleet of Frac pumps.
- Troubleshot and redesigned the hydraulic circuit on the fleets sand conveyers.
- This redesign significantly reduced down time and reduced the amount of training needed for field hands.
- Troubleshot and redesigned the hydraulic circuit on a potential venders sand conveyor to correct an issue they were not able to correct.
- This redesign involved changing the spool in the PVG valve and installing a cross port relief valve and some re-plumbing of the hydraulic circuit.
- Troubleshot and corrected the spillage of sand from the sand conveyors.
- This reduced the amount of down time related to sand cleanup and removal.
- Designed a dust control system for the company's fleet of sand kings.

Company Name April 2011 to May 2013 Mechanical Designer
City , State

- As a member of the Coil Tubing Unit (CTU) team, I help to ensure our design and manufactured products meet the rigorous industry standards established by the American Petroleum Institute and the International Standards Organization by the use of 3D parametric model generation and manipulation using Autodesk Inventor Pro 2012 (Routed Systems - Tube and Pipe) and Autodesk Vault Professional 2102.

- Create weight distribution analysis as well as present findings and able to defend assumptions.
- CTU trailer layout redesigned to eliminate costly manufacturing rework, errors and confusion.
- Hydraulic Wet Kit assembly and frame design.
- Heavy and light structural frame design and aluminum mounting platform design.
- Capable of setting up 3D models for use with the integrated Autodesk stress analysis FEA with the understanding of setting the convergence, material, constraints and loads with the ability to interpret hot spots and make adjustments to the model.
- Have knowledge of, and can apply, the use of section modulus tables to determine how one shape compares to another in strength for a directional load Able to research possible problems with material selection or component interface and present options.
- Vendor/Purchasing Q &A sit-in's for second sourcing prospects.
- Direct and indirect interaction with customer regarding additional customer supplied hardware installations.
- Take initiative to procure data (research) and make contacts in order to bring viable solutions to the forefront.

Company Name January 2009 to February 2010 Planning Engineer
City , State

- Applied Aerodynamics Inc. is a FAA/EASA Repair Station and is focused on, but not limited to, Repair / Overhaul / Manufacturing of flight control surfaces and aircraft composites.
- I was responsible for the planning of incoming repair orders for aviation parts and for repair station planning and work instruction for aircraft components from minor skin repairs to complete rib, skin and spar replacement.
- As Planning Engineer I also created and developed internal procedures and assured compliance to the D1-51991 Digital Product Definition (DPD) for Boeing Suppliers.
- The successful on-sight Boeing DPD audit allowed Applied Aerodynamics to begin downloading, receiving, and/or using DPD data for manufacturing and repair of Boeing parts.
- I interact with contracts, customer service, engineering, purchasing and internal fabrication shops.
- I would review orders and procedures for process improvements.
- As Planning Engineer I was also heavily involved in the Parts Manufacturer Approval (PMA) development at Applied Aerodynamics.
- Parts Manufacturer Approval (PMA) is an approval granted by the United States Federal Aviation Administration (FAA) to a manufacturer of aircraft parts.

Company Name October 2006 to December 2008 Senior Manufacturing Planner
City , State

- AeroParts Manufacturing and Repair is focused on sheet-metal detail parts, assemblies and drop-hammer stampings.
- The FAA/EASA Repair Station overhauls metal and fiberglass ducting for large commercial aircraft.
- As Sr. Planner I was responsible for the planning of all incoming production orders for new aviation parts and for repair station planning and work instruction for aircraft components.
- I interact with contracts, customer service, engineering, purchasing and internal fabrication shops.
- I would review orders and procedures for process improvements.
- I would ensure that all customer requirements are verified in existing orders and reviewed in new orders before releasing to subsequent operations.
- I reviewed all job folders, customer requirements and developed a plan to have the parts manufactured based on the contractual requirements.
- I would develop a "Master Shop Traveler" by: Inputting information per purchase order and/or drawing.
- Assign a "task number" (traveler number).
- Input manufacturing instructions, sequences, and inspection points as required.
- Input Specifications, verification and testing needs, etc.
- into job costing system.
- Create and print the shop traveler.
- As Senior Manufacturing Planner I would release shop traveler to production /stores for issuance of product, material(s), and/or tooling required to begin production flow.
- I would also Review completed travelers for "approved" change(s) made during production.

- Categorize required change(s) has either "one-time deviation only" or "required on future production".
- If change(s) are "required for future production" then enter change(s) into system and forward that information to the contract department for pricing adjustments on future sales.
- I was also responsible for conduct technical and estimating support by researching and reviewing work order requirements as requested by Production, Quality, and/or Management as well as providing lead-time estimates, manufacturing methods, historical planning information, etc.
- I was responsible for the planning of all incoming production orders for new aviation parts and for repair station planning and work instruction for aircraft components.
- I interact with contracts, customer service, engineering, purchasing and internal fabrication shops.
- I would review orders and procedures for process improvements.

Company Name June 2004 to July 2006 Senior Mechanical Designer
City , State

- I was responsible for designing electro-mechanical assemblies for Mobile Command and Communications Systems for military and commercial applications such as the Beyond Line-of-Sight High Mobility Digital Group Multiplexer Assemblage (BLOS HMDA).
- BLOS HMDA is housed in an S805 Shelter; it is mounted and transported on an ECV HMMWV.
- The design employs a rack mounting system for mounting electronics and equipment that is based on EIA standards.
- Included, but not limited to, my responsibilities are: troubleshooting existing solid models, generating new solid models, and supporting documentation for the following: Sheet Metal Fabrication, Assemblies and Subassemblies Welding, Punching, Forming and Machining Electro-Mechanical Assemblies and Subassemblies Cable and Harness Assemblies All design and documentation were prepared using SolidWorks Rev 2004 and Rev 2005, in compliance MIL-STD-100E; ANSI Y14.5M-1982; ASME Y14.5-1994 requirements and industry standards.

Company Name June 2002 to November 2003 Senior Mechanical Designer
City , State

- The U.S.
- Department of Energy's Waste Isolation Pilot Plant (WIPP) is the world's first underground repository licensed to safely and permanently dispose of excess transuranic radioactive waste from research and production of nuclear weapons.
- Project facilities include disposal rooms mined 2,150 feet underground in a 2,000-foot thick salt formation.
- In my position, as the Senior Mechanical Designer, I supported design and documentation of the following projects associated with Remote Handling of Transuranic Radioactive Waste: Underground Radios Continues Air Monitoring (CAM) Remote Alarm, Filter Clip 2½ Ton Jib Crane for the Cask Preparation Station Radiation Source Holders Elevated Work Platform for Cask Preparation Station Shrouded Probe assemblies Hydraulic Wrench System for 10-160B Casks.
- 10-160B Road Cask Lid Vent Tool Underground Ventilation System and Underground Bulkhead Assemblies.

Company Name August 1996 to June 2001 Senior Mechanical Designer
City , State

- Supported design and documentation of electro-mechanical packaging of data acquisition electronics, instrumentation, missile, and satellite guidance systems utilizing global positioning system (GPS).
- Units are connected to multiple sensors and actuators throughout an expendable launch vehicle such as ATLAS IIAR, DELTA II, and DELTA III.
- Supported new product design, by provided all supporting design and documentation of tooling, wiring fixtures and assembly fixtures for programs I was assigned.
- Design layouts, assembly drawings, parts list, and engineering details were generated in AutoCAD-R14 in compliance with MIL-STD-100E; ANSIY14.5M-1982; ASMEY14.5-1994 requirements.

- Presented design proposals to management and our customers.

Company Name August 1994 to March 1996 Senior Mechanical Designer
City , State

- Specialized in mechanical engineering/aerospace design and electro-mechanical packaging of black boxes.
- Generated AutoCAD-R12 design layouts, assembly drawings, and engineering details from verbal instructions and engineering sketches to DOD-STD-100C, MIL-STD-100E/, and corporate standards.
- Established datum's, dimensions, geometric tolerances to ANSI Y14.5M-1982 requirements, and application of standard notes, material call-outs and generation of parts list.
- Performed change order tracking, statistical data and checking functions.
- Maintained web-based mechanical parts Library.
- Developed solutions and provided technical assistance to internal engineering; troubleshooting/configuration management change order problems.

Company Name October 1992 to August 1994 Senior Mechanical Designer
City , State

- Extensive design technology and manufacturing of Vertical and Horizontal Shaft High Velocity Impact Crushers and associated components, castings, precision machinery, and other heavy mining, structural steel, and industrial equipment.
- Analyze and investigate pertinent design factors such as ease of manufacturing, availability of materials and equipment, interchangeability, replaceability, strength weight efficiency, and contractual specification requirements.
- Design and produce layouts of complex assemblies, detail parts of devices, mechanisms and structures of high velocity impact rock crushing manufacturing equipment.
- Develop new product, process and service concepts.
- Provide technical advice and project leadership to management.
- Strong customer, internal, and subcontractor interface and coordination.
- Communicate with line manufacturing engineering regarding tool needs and change orders.
- Resolve technical problems on designs to assure cost-effective manufacturing production and workable tooling.
- Apply tolerance specifications, and make decisions as to whether tolerances could be met.
- Recommend tooling changes for a cost-effective production.
- Supervised generation of drawings to MIL-SPEC and ANSI standards.
- Audited layouts and drawings for clarity, completeness, standards, procedures, specifications and for accuracy of calculations and dimensions.

Company Name June 1986 to October 1992 Senior Mechanical Designer
City , State

Specialized in mechanical engineering/aerospace design and electro-mechanical packaging of black boxes. Generated AutoCAD-R12 design layouts, assembly drawings, and engineering details from verbal instructions and engineering sketches to DOD-STD-100C, MIL-STD-100E/, and corporate standards. Established datum's, dimensions, geometric tolerances to ANSI Y14.5M-1982 requirements, and application of standard notes, material call-outs and generation of parts list. Performed change order tracking, statistical data and checking functions. Maintained web-based mechanical parts Library. Developed solutions and provided technical assistance to internal engineering; troubleshooting/configuration management change order problems.

Education

Hydraulics Training 2012 Certification

Completed 60 hours Industrial Hydraulics Training (Level I, Level II and Hydraulic Trouble Shooting).

Federal Aviation Administration 2004 License : Private Pilot's License

Earned Federal Aviation Administration FAA Private Pilot's License

New Mexico State University 2003 Pro/Engineer Certification : Pro/Engineer City , State

Completed certification program for Pro/Engineer

South Plains College 1986 Associates Degree : Drafting Technology City , State

Applied Science & Drafting Technology
Affiliations

Aircraft Owners and Pilots Association (AOPA) Member.

Accomplishments

- Capable of setting up 3D models for use with the integrated Autodesk stress analysis FEA with the understanding of setting the convergence, material, constraints and loads with the ability to interpret hot spots and make adjustments to the model.
- Have knowledge of, and can apply, the use of section modulus tables to determine how one shape compares to another in strength for a directional load Able to research possible problems with material selection or component interface and present options.
- Direct and indirect interaction with customer regarding additional customer supplied hardware installations.
- 3D Model part design and assembly development including BOM generation.
- Take initiative to procure data (research) and make contacts in order to bring viable solutions to the forefront Recent 60 hours Industrial Hydraulics Training (Level I, Level II and Hydraulic Trouble Shooting).
- Posses an understanding of hydraulic components and able to do troubleshooting with the ability to develop and improve hydraulic circuits from existing schematics.
- High-density packaging, 3-D Solid Modeling, , large and small mechanisms, sheet metal, wire harness, and installation control drawings.
- Working knowledge of: DOD-STD-100E, DOD-D-1000, ANSI Y14.5M-1982, ASME Y14.5-1994 standards/specifications.

Additional Information

- HONORS AND ACHIEVEMENTS

- President's List (4.0 GPA) two semesters, Dean's List, Academic Scholarship, Honorary Draftsperson of the Year 1986, member National Honor Society while attending South Plains College. Maintained a 4.0 GPA at National College.
- Received Spot Award, Honored with You Make a Difference, and two Letters of Commendation during employment at Honeywell Defense Avionics Div

Skills

Extremely computer literate and proficient in the use of Microsoft Suites, Word, Excel, Autodesk Inventor Pro 2012 (Routed Systems - Tube and Pipe) and Autodesk Vault Professional 2102, certification in Pro/Engineer, Creo, ComputerVision 3-D Personal Designer, CADDS4X-SUNhardware, AutoCAD-R2002, SolidWorks, FastCAD, ProCAD.