

Mechanical Engineering

Expanded Resume

Experience

Siemens Automotive
Newport News, VA.
June 1993 - Present

Mechanical Design Leader

Design:

- Designed fuel system components for Automotive Industry – stampings, forgings, tube fabrication, plastic injection molding, grinding and screw machine parts for high volume production.
- Worked with suppliers and manufacturing to eliminate design issues and reduce component costs early in design stage.
- Interfaced with O.E.M. customers for part definition and design standards.
- Inventor on U.S. patent for fuel injector design.
- Developed tool designs of jigs and fixtures for sample build line.
- Provided 97 tolerance study analyses, drawing packages done to ANSI and ASME Y14.5M (GD&T) standards, and designs from concept through detail.
- Logged over 6000 hours of design with Catia software, 2D & 3D solid modeling.

Administrative:

- Supervised daily activity and workflow within the design and documentation group that varied in size from 12-18 people (employees, co-op students, and contractors).
- Conducted performance appraisals, scheduled training, and handled staffing requirements.
- Expanded CAD/CAE technology within the design group; department concurrently ran five CAD packages: Catia, U.G., Pro/E, C3P (SDRC) and AutoCAD; evaluated hardware and software requirements.
- Reviewed and approved all engineering change orders and new product drawings.
- Maintained departmental standards and procedures (adhered to VDA & QS9000) and coordinated procedures between plants in Italy, Germany and USA.

ME 434 (experience matched with course objectives)

- Designed the Deka IV fuel injector, increasing my skills in:
 - Providing technical and economical data for reports and proposals
 - Project management through the utilization of a five-phase process
- Attended Siemens Automotive training sessions in the following areas:
 - Plant Safety & Safety Policy
 - Evacuation Procedure Hazardous Materials
 - Confidentiality & Patent Disclosures
 - Sexual Harassment
 - QS 9000 Awareness
- Supervised mechanical design department and improved my skills in project management and interviewing techniques by:
 - Attending quarterly engineering reviews (QBR)
 - Scheduling projects and workload for the department
 - Attending a weeklong management-training course
 - Hiring and interviewing co-op students through Old Dominion University's Career Management Center
 - Conducting phone interviews for contract support
 - Interviewing direct hits for design group

ME 435 (experience matched with course objectives)

- Designed Deka IV fuel Injector from concept to production, utilizing engineering skills in machine design, materials, and process knowledge to provide:
 - Production drawings and B.O.M.s
 - Rapid prototyping through the use of stereolithography
 - Manufacturing analysis and process flows
- Worked in a true engineering environment, concurrently with:
 - Analysis and simulation, CAD/CAB integration
 - Manufacturing and component engineering
 - Suppliers
 - Customers
- Developed teamwork and communication skills by giving status reports in weekly design reviews.
- Worked to a program schedule that identified milestones provided in a Gantt chart.

Snap-on Diagnostics (Balca, Inc.)
San Jose, CA.
Jan. 1987 - June 1993

Product Engineer

- Developed designs of automotive test equipment - wheel balancers, front-end alignment systems, and engine diagnostic tools - for low to medium volume production. Product design entailed: sheet metal fabrications, castings, injection molding, thermo-forming, stamping; broaching, powdered metal and machined parts.
- Supported five product lines; led cost reduction programs and assisted in manufacturing tool design.
- Managed a small mechanical design department of 3-5 people.
- Qualified vendors and worked with them on both national and international levels regarding quality issues and price structuring.
- Initiated new product development (DIS Probe); utilized Anvil 2000 as CAD tool.

ME 434 (experience matched with course objectives)

- Created technical proposal for MT2700 DIS Probe.
- Acquired project management knowledge through new product development:
 - DIS Probe
 - Scanner Power Pack
 - Cost reduction program on Alignment System
 - Supervising design activities
- Acquired product and occupational safety knowledge through interface with manufacturing and OSHA requirements.

ME 435 (experience matched with course objectives)

- Designed MT2700 DIS Probe from concept to production and developed:
 - Production drawings and B.O.M.92s
 - Prototypes for business assessment and design validation
- Completed multiple design projects by supporting product lines, enhancing design and engineering skills in:
 - Product development
 - Materials and processes
- Worked in an engineering environment providing interface with all aspects of product development:

- Sales and Marketing
- Finance
- Manufacturing
- Quality
- Logistics

- Provided engineering reports and status reports to upper-management.
- Maintained a project folder for each program worked on to document history of progression.

Contact Design Work
Locations Nationwide
May 1982 – Dec. 1986

Senior Mechanical Designer

- Rockwell Collins Gov. Avionics Division - Cedar Rapids, Iowa. Designed small mechanisms, servomotors and gears, for navigational equipment.
- IBM - Boulder, CO. Developed electro-mechanical packaging of a high-speed printer. Plastics and sheetmetal design done with Cadam software.
- Volvo Bus - Chesapeake, VA. Developed layout and design of bus interior seating, lighting, body and framework; did structural analysis on framework.
- General Electric - Portsmouth, VA. Designed plastic components, cabinets and aluminum extrusions for high volume television production. Supervised five contract designers.
- Westinghouse- Pittsburgh, PA. Developed tool designs of holding fixtures for robotic welding.

ME 434 (experience matched with course objectives)

- Short term job contracts strengthened skills in:
 - Job searching
 - Resume writing
 - Interviewing
- Job variety across multi-industries provided:
 - Heightened awareness of occupational and product safety issues
 - Exposure to different project management techniques

ME 435 (experience matched with course objectives)

- Participated in design reviews
- Worked in engineering environment
- Submitted drawings and status reports

Anderson Engineering
Pittsburgh, PA.
June 1981 - May 1982

Mechanical Engineer

- Developed underwater plate cutting and material transfer equipment.
- Designed gantry crane with trolley and hoist, and parts carrier oar.
- Computed stress analysis on framework and lifting beam.
- Produced engineering calculations for sizing motors and drive train.

ME 434 (experience matched with course objectives)

- Provided technical data for proposals on new equipment
- Assisted in program scheduling

ME 435 (experience matched with course objectives)

- Worked in engineering and manufacturing environment
- Utilized engineering background to produce new product development
- Submitted drawings and status reports.
- Worked to a program schedule that had been Gantt charted.

Contract Design Work
Pittsburgh, PA.
April 1979 - June 1981

Mechanical Designer

- Koppers Co: designed and detailed mill machinery – conveyors, hoppers, and blast furnace.
- Mesta Machine Co: designed rolling mill equipment, forging press, large castings and thick plate weldments.
- Taylor-Wilson Mfg. Co: designed and detailed pipe testing mill equipment – gag press, hydrostatic pipe tester, and conveyors.

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ME 435 (experience matched with course objectives)

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- Worked in engineering environment
- Submitted drawings

Hanlon-Gregory Industries
Pittsburgh, PA.
Apr 1978 - Apr 1979

Plant Foreman

- Supervised plant operations and workflow for galvanizing plant of 50 plus union shop employees.
- Designed material handling devices to increase output.