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Summary

Structural and mechanical design of new mechanical systems, vehicles, tooling, and mechanisms utilizing 3D CAD solid modeling; from concept through product release

Objectives

Seeking a creative position in research, development and design of mechanical systems and mechanisms, tooling, and equipment, with a progressive company which enables me to apply my extensive experience in mechanical design, analysis, and 3D CAD.

Areas of interest

Research, development and design of mechanical systems, structures, equipment and tools. Concept development and design of state-of-the-art vehicle elements and mechanical components. Solution of mechanical design problems. 3D solid modeling and visualization.

Applicable Software

Pro-E/WildFire (1997-recent), SolidWorks (1998-recent), AutoCAD, MS-Office/WP-Office, UNIX, Win NT through 7, Corel, Web Design

Employment history

Wiley Consulting, LLC 1992-1995/2001-Present 6810 S. Tucson Way Englewood, CO Senior Design Engineer. 3D solid modeling and design in heavy equipment, machinery, structural, mechanical equipment layout. Pro-E/SolidWorks/AutoCAD design for underground remote hydro-jet mining equipment, including water-jet hydro-monitors, nozzles and Venturi-eductors. Duties include: R&D, working fluids circulation analysis, hydrodynamic calculations of high pressure water/slurry channels and hydraulic fixtures, design of new and optimization of existing equipment, supervising of jet-tool prototype manufacturing, its assembly/adjustment, laboratory and field testing, further enhancement, modification and standardization. 3D design, modeling and drawing for Argo Tunnel and monorail train Idaho Springs - Black Hawk, CO Project.

Lockheed Martin Astronautics 2001 (6 Mo. Contract) 12257 Hwy 121, Littleton, CO Senior Design Engineer. Mechanical design for Atlas 5 Upper Stage Structures, ground support, transportation and assembly equipment. Pro-E design for payload fairing and base modules interface, including Clean Room isolation equipment and structures. Duties and responsibilities included study and analyzing of the vehicle structures, assembly and maintenance procedures and requirements, inter-communicational development of engineering solutions, its presentation for related engineers and managers groups, including vendors and Cape’s assembly team leads. Design concept is based on successful combination of high reliability, simplicity, lightweight, multiple reuse, versatility, cost effectiveness and ability develop and apply non-standard solutions. Working “atmosphere” included interdisciplinary environment and accurate following by deadlines while handling of multiple tasks under minimum or no supervising.

MAXTOR Corp. 1998 – 2001 2190 Miller Drive, Longmont, CO 80501
Senior Tool Design Engineer. Pro-E mechanical design for clean room (class 100) equipment, including micro-mechanisms, robotic assembly lines and transporting systems. Job included: study and analyzing of a concept, development of engineering approaches, its discussion with different engineers/managers levels, complete Pro-E design, technical documentation release, purchase / manufacturing requisition, prototype assembly, testing and remodeling /debugging. Responsible for specific engineering projects of moderate to major scope relating to carrying out research, design, planning, assessment, fabrication, inspection, assembly/installation, technical documentation, trouble shooting, repair and on-going support. Engineering group leading in development of state-of-the-art equipment and generating of new design concepts and ideas.

Air Methods Corporation 1996 – 1997 301 S. Peoria, Englewood CO 80112
Engineering lead for mechanical design on the Operation Dustoff Program - an air medical evacuation model of the UH-60Q Blackhawk helicopter for the U.S. Army. Using AutoCAD R14, created 3D solid models, renderings, and released drawings of flight structures and operating mechanisms of the litter platform loading system for carrying of injured patients. Models were translated into IGES format, programmed for CNC machining, then successfully tested and installed on the aircraft.

Education

Master of Science degree of engineering science.
Moscow Geo-Prospecting Institute, Russia.
Bachelor of Science degree in mining engineering.
Moscow Geo-Prospecting Institute, Russia

Related Engineering

R&D, design conceptualizing, identifying problems areas, summarizing and solution searching, optimization, standardization, modeling, prototyping, testing & debugging.

Deep knowledge and experience (15-20 years) in: fluid dynamics, micro-mechanisms, heavy equipment, clean room robotic pick-and-place operations, medical equipment and opto-mechanical systems. Solid experience in engineering analysis, development, mechanical design, packaging, prototyping, testing, debugging, inventing and patenting.

Basic knowledge in: aerodynamics, electro-mechanical systems, materials, radar and lidar airborne remote sensing, stress analysis, GD&T, GIS, ISO-9000, physics, mathematics, metrics, acoustics, optics, ergonomics, safety and human factors. Experience in manual drafting, scientific photography, movie/video and sound recording.

Bilingual - English/Russian. Fluent in Serbian/Croatian, other Slavonic languages.
US Citizen.