

About

Professional Mechanical Engineer with 11 years of experience specializing in the design of heavy machinery and mechanical systems. Reliable, creative, organized and able to solve problems to make sure projects get finished on time and on budget. Adept at planning projects, managing production, drafting and design.

Education & Licensing

Professional Engineer (P.Eng.)

Engineers and Geoscientists of BC

BASc, Mechanical Engineering

University of British Columbia, 2007

Skills

DESIGN

Problem Solving
Analytical Thinking
Top-Down Design
Prototyping & Testing
Engineering Fundamentals
Troubleshooting

TECHNICAL

Statics & Dynamics
Heat Transfer
Fluid Mechanics
Manufacturing Processes
FMEA
Statistical Analysis

SOFTWARE

Solidworks / PDM
AutoCAD / Inventor
FEA Simulation
Programming (C/C++)
Scripting (Python)
MS Suite (incl. MS Project)

OTHER

Proactive
Adaptable
Detail-Oriented
Project Management
Labour & Cost Estimating
Spanish

Professional Experience

2021 – Present

Mechanical Engineer III

Tulsa Winch Group (TWG)

TWG is a leading manufacturer of winches, hoists, hydraulic pump drives, electronic monitoring systems, and more.

- Developed and tested brand new electric winch product line and controls system
- Plans, designs and implements electromechanical, and hydraulic systems and products
- Designs products and systems such as winches, hoists, gear boxes, hydraulic systems and parts
- Reviews product design for compliance with engineering principles, company standards, industry standards, and customer requirements
- Computes magnitude, direct and point of application of tension, compression and bending forces and develops geometric shapes of machine parts to accommodate operating loads
- Compiles and or analyzes test data to determine effect of design on machine in relation to such factors as temperature, pressure, volumes, speed, tension and horsepower

2009 – 2021

Senior Mechanical Engineer

Lochhead Haggerty Engineering & Manufacturing, Ltd.

Lochhead Haggerty is an innovator of environmentally-friendly recycling technology. Lochhead has been a leader in the design and manufacture of high-temperature heat process equipment for over 60 years.

- Designed multi-million dollar projects that were later installed in the United States, Dominican Republic and Argentina; completed 25+ additional projects at various international sites
- Designs rotary kilns, mercury retorts and harsh-environment mining processing equipment
- Performs engineering calculations of heat transfer, stresses, speeds, hp, weights and loading
- Creates parts, assemblies and drawings with 2D and 3D CAD software
- Reviews and signs off on drawings for accuracy, material selection and clarity
- Performs experimental tests and quality control inspections in production facility
- Attends international site visits for equipment commissioning
- Oversees vendor and business contracts, prepares time, cost, material, and labor estimate

- 2006 **Mechanical Designer (Co-op)** **Eastman Kodak – Graphic Communications Division**
Kodak's Graphics division (formerly Creo) a world leader in supplying platesetters for the printing industry.
- Designed and modeled rotator module for Newspaper Platesetter
 - Created and drafted design requirements and specifications for the rotator
 - Drafted design and production drawings using SolidWorks
- 2006 **Production Engineer (Co-op)** **ASCO Aerospace Canada**
ASCO is a high-precision CNC machine shop that specializes in manufacture of aerospace components.
- Assisted in production start-up of 5-axis high-speed aluminum machining mill
 - Streamlined process for production of Boeing 737s wing ribs
 - Ensured production ran on time and in a lean manner
- 2005 **Research Assistant (Co-op)** **Novelis Canada – Lubrication Division**
Novelis, formerly Alcan, is the world's largest producer of rolled Aluminum.
- Worked closely with research engineers at global technology center to help develop coolants for aluminum rolling for Canada's largest aluminum producer
- 2003 **CNC Machine Operator** **Mahler Industries CNC Shop**
Mahler Industries is a CNC machine shop specializing in precision aluminum and stainless-steel machining.
- Operated and maintained CNC lathes, mills and drills
 - Made machine adjustments and interpreted tolerances