

## Senior Mechanical Engineer – Job Description

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### About Delta-Q Technologies Corp.:

Are you looking for challenging career opportunities? Do you truly want to make a difference in the world through technology innovation? Delta-Q could be the place for you.

Delta-Q Technologies, founded in 1999, supplies vehicle manufacturers with power conversion solutions enabling the shift away from internal combustion engines to environmentally friendly electric drive systems. Considered the technology benchmark in industrial AC-DC battery chargers and integrated DC-DC power converters, Delta-Q products are installed on hundreds of thousands of vehicles such as golf cars, aerial work platforms, industrial floor cleaning machines, Neighborhood Electric Vehicles, and plug-in hybrid and utility vehicles.

To support our continued business growth and to resource several new product development programs, Delta-Q is recruiting for a variety of Engineering, Product Management, Product Support, and Sales positions. Our vision is "Delta-Q in electric vehicles everywhere!" and our focus is to hire the best and brightest to make that happen. Find out how rewarding it is to help advance the state of vehicle electrification while working in a dynamic culture that embraces honesty, integrity, perseverance and innovation.

### Position Summary

The Senior Mechanical Engineer is the foremost expert in the Mechanical Engineering field within Delta-Q and will ensure that Delta-Q has detailed knowledge and application of best in class mechanical design practices for its products in order to achieve product and company objectives.

### Specific Duties

- By the use of benchmarking, education, attendance of conferences, liaison with customers and suppliers etc, develops and maintains state of the art knowledge of the mechanical design of power electronics including:
  - Thermal and stress management (cooling mechanisms and devices, mounting/retention methods, stress management methods)
  - Device implementation (packaging, mounting, connection etc)
  - PCBA and DFM techniques
  - Enclosure design
  - Sealing design
  - Connection systems (within the product and external)
  - Manufacturing process and material applications
- Develops in-house mechanical design excellence within the functional group.
- Mentors and trains other team members.
- Develops design, analysis and simulation tools/processes/techniques.
- Recommends appropriate mechanical design strategy to concept and product development teams.
- Leads/participates in design reviews at strategic points of a products development.
- Identifies unique IP opportunities for Delta-Q to develop, protect, build and maintain competitive advantage.
- Represents Delta-Q at conferences and symposiums including the presentation of papers as required.
- Leads or participates in root cause analysis of issues with existing product.

### Requirements

- A Degree in Mechanical Engineering or equivalent combined with world class knowledge of state of the art mechanical design practices as applied to power electronics products.
- Significant design and delivery experience of power electronics products into high volume (preferably automotive) manufacturing.
- State of the art knowledge of:
  - Device types and applications
  - Cooling mechanisms
  - Materials
  - Manufacturing processes
  - DFM
  - Analysis and simulation techniques (firm foundation in hand calc's essential)
- Familiar with regulatory standards from body's such as the EU, UL, and CSA.
- Familiarity with UL2202 "Safety for Electric Vehicle (EV) Charging System Equipment" and IEC61851 "Electric vehicle conductive charging system" are assets.

- Knowledge of and practice in Advanced Product Quality Planning tools and techniques.
- Familiar with ANSI/ASME Y14 & GDT drawing practices.
- Diligent, reliable, thorough, tenacious and detail oriented with excellent communication and interpersonal skills.

Delta-Q is located in Burnaby, BC, the geographical centre of Metro Vancouver. With a diverse economy and a growing high-technology sector, Vancouver is a world-class multi-cultural city set amidst the natural beauty of the ocean, lakes, rivers and mountains of the Pacific Northwest region. It is no wonder that so many people from around the world have made Vancouver their home and those raised here have chosen to remain.

Challenging career opportunities, competitive benefits and an outstanding location make Delta-Q a great place to be.

For more information about Delta-Q Technologies and current career opportunities please visit us at [www.delta-q.com](http://www.delta-q.com) .

A competitive salary, bonus, options, benefits and relocation package will be offered to the selected candidate.

### **Response Information**

Please send your resume as an attachment to [careers@delta-q.com](mailto:careers@delta-q.com) and please ensure that you include the job title in the "subject" line of your e-mail