

Materials Engineer, Metals [Apply Online](#)

Department

Engineering

Location

Palo Alto

Req. ID

44130

Job Type

Full-time

Tesla Materials & Processes Engineering – Body Materials Engineer

The purpose of the Tesla Materials Engineering organization is to facilitate the Tesla mission of accelerating the world to sustainable transportation via identification, development and insertion of advanced materials and processes while supporting other Tesla Engineering and Manufacturing functions with materials expertise.

Role

The team is seeking a Materials Engineer to be dedicated to metallic materials associated with Body design, simulation, test and manufacturing.

Responsibilities:

- Provide direction to Body Structure Design Engineers on optimal Materials & Processes selection.
- Identify needs not addressed by current material solutions and lead development of new materials technologies for Body Engineering.
- Determine properties and appropriate design values for design and analysis.
- Establish test plans when necessary to characterize application specific material properties.
- Develop, author and publish material and process specifications.
- Qualify materials, parts and processes used in Body.

Requirements :

- Materials Engineering degree. Metallurgical Engineering focus and advanced degrees are preferred.
- Knowledge of process-structure-property relationships in aluminum (5xxx & 6xxx) and steel sheet (Low Carbon, Low Alloy, Multi-Phase, Martensitic), aluminum extrusions (6xxx), and their relevant manufacturing processes.
- Familiarity with competing non-metals, such as composites.
- Experience selecting materials, developing specifications and qualifying suppliers.

- Ability to characterize materials and create “material cards” for use in dynamic crash simulations as well as stamping feasibility simulations.
- Knowledge of plating processes and other surface modification techniques.
- Ideal candidate will have examples of designing materials, preferably using advanced computational methods, to solve specific design challenges in vehicle body structures; from concept to implementation.