

ABA-PGT, Inc.
JOB DESCRIPTIONS

Position: Gear Engineer
Reports To: Gear Engineering Manager
Status: Exempt

Date: January 2024
Department: Tooling
Grade: XX

Position Summary: Plastic gear design. The Gear Engineer has the primary responsibility of developing sound gear designs that will meet or exceed customer requirements for their given application. Given inputs from the customer, the Gear Engineer will evaluate current gear system and make required changes for optimized short- and long-term performance, guaranteeing proper tooth geometry, tolerances, wear, and strength performance. Once the design is established, the Gear Engineer provides electrode or wire EDM data and/or geometry to the tool room personnel for the manufacture of the gear tooling. Additional responsibilities include providing product design assistance to sales staff and customers related to new potential gear applications. Gear engineers have control over specified gear tolerances and will review and disposition any requested changes to these tolerances. The candidate must be able to work in a team environment and be able to communicate clearly across all disciplines within the company and with our customers.

Primary Tasks:

Responsibilities include but not limited to the following:

- Design single gears based on customer information.
- Design gear meshes based on customer information.
- Develop gear data sheets for inspection.
- Apply shrinkage to plastic gear data for gear cavity data.
- Develop a wire path for spur gear, pulley, and etc. cavities.
- Design electrodes and hobs for helical gear.
- Design electrode for worm, and screw cavities.
- Design gear trains for unscrewing molds.
- Work alongside with;
 - Program managers, Sales, Quality, Tool room, Molding and Customer
 - Possible travel
- Review inspection results
- Based on inspection results decide if tool rework or data deviation request is best.
 - Develop new cavity data based on inspection.
 - Rework wire path as needed.
 - Develop new data for a deviation request including review the gear mesh.

Education/Experience Requirements:

- BS-Engineering or other relevant Degree and/or 10 years of relevant practical gear/quality engineering.
- Sound knowledge of effective gear design, quality systems.
- Product design and tool design experience is a plus.
- Experience with plastics injection molding is a plus.
- Strong verbal and communication skills.
- Computer Programs such as Excel, Word, Solidworks, PGT Program (internal), Web Gear, KISSsoft and TK Solver.
- Inspection: Zeiss CMM, Double flank gear checker, Micrometer, Caliper, Height gauge, Gage pins and Visual.

Physical Demands/Requirements:

This position consists of sitting and keyboarding. Occasional standing, walking, kneeling, reaching, gripping and neck rotation will be required. Lifting and carrying objects will not surpass 25 pounds per object.

Work Environment:

The worker will be subject to inside environmental conditions. This position can be subject to hazards such as, rare to occasional proximity to moving mechanical parts and electrical currents when down by the machines.