Manufacturing Engineer Scientist

FLSA:	Non-Exempt	Department:	Manufacturing
Revision Date:	3/1/2019	Reports To:	Mfg./Engineering Mgr.

Job Summary:

The Manufacturing Engineer Scientist leads efforts in the assigned department with the goal of improved quality, productivity, cost, timeliness, and safety by utilizing continual process improvement techniques and providing Plus One service.

Essential Duties:

1. Oversee new and high priority products through the manufacturing process while collaborating with vested departments to ensure customer satisfaction.
2. Assist in developing new fixturing for specific customer parts and fine tuning equipment.
3. Lead new customer, new process & spec. implementations.
4. Perform evaluation and scale-up of new and/or existing product manufacturing technologies and processes. Perform experiments and collect data to support products within assigned area
5. Develop, configure and optimize industrial processes from inception through to start up and certification.
6. Assess processes, take measurements and interpret data.
7. Design, run, test and upgrade systems and processes
8. Develop best practices, routines and innovative solutions to improve production rates and quality of output
9. Perform process simulations
10. Perform risk assessments
11. Provide process documentation and operating instruction
12. Troubleshoot production system failures.
13. Document experiments. Write experience reports detailing experimental design, results and conclusions, and circulate for review and comment with the appropriate departments.
14. Train manufacturing personnel on any new procedures, processes, raw material testing and specifications, product handling, equipment, product manufacture, or final product testing and specifications.
15. Train manufacturing personnel on troubleshooting, maintenance and repair techniques.

16. Keep current with methods applicable to field by attending seminars, workshops, and continuing education.
17. Practice safe working procedures and follow guidelines specified by the Environmental Health and Safety Department, especially when working in the production and laboratory areas. Understand the safe handling of materials and the quality of processes under the domain of the job responsibilities.

Additional Responsibilities:

1. Other duties as requested.

Qualifications:

Education/Experience:

- Entry-level: (Level 1) Bachelor's degree in Engineering, Chemistry or other related science with minimal related experience or experience in an unrelated field. Associate's degree in related science with at least 2 years of specific experience in chemistry, engineering, or a related scientific area may be acceptable. Experience in CVD, semi-conductor, or ceramic manufacturing (Silane chemistry) a plus.
- Mid-level: (Level 2) Bachelor's degree in Engineering, Chemistry or other related science with at least 5 years of related experience or an advanced science degree with nominal related experience in a specific area of expertise. Experience in CVD, semi-conductor, or ceramic manufacturing (Silane chemistry) a plus.
- Senior level: Level 3) Bachelor's degree in Engineering, Chemistry, or other related science with at least 10 years of related experience or an advanced science degree with at least 5 years of related experience in a specific area of expertise. Experience in CVD, semi-conductor, or ceramic manufacturing (Silane chemistry) a plus.

Knowledge/Skills/Abilities:

Entry-level:

- Ability to work independently and handle minor projects under the direction of a manager.
- Good troubleshooting and analytical skills with ability to assist in complex problem solving.
- Has applied knowledge of statistical methods and techniques.
- Ability to prepare experience reports to document work in an accurate and complete manner.

- Competent use of computers, including spreadsheets, word processing, statistics, and database applications.
- Good oral and written communication skills.
- Ability to work well with others in a team environment and regularly contribute to project team and initiatives.
- Knowledge of and adherence to lab safety practices.

Mid-level:

- Ability to handle work of moderate complexity with excellent understanding of core responsibilities and processes.
- Ability to select work and operate with minimal direction.
- Ability to present to and interact with others in a competent and professional manner both internally and externally.
- Ability to train entry level engineers on basic techniques and technologies.
- Can publish and present work internally.

Senior level:

- Can lead the technology/discipline/market in assigned area and act as an internal or external consultant in area of expertise.
- Significant contribution in revenue and/or profit to the organization based on experience and skills.
- Ability to assist with vision, goal setting, and plan execution in assigned area.
- Ability to review work of and mentor others in assigned or related areas.
- Ability to teach advanced techniques and applied knowledge in area of expertise.
- Can publish internally and externally, including journals and technical guides, and develop seminars.