



YES (Yield Engineering Systems, Inc.) is a leading developer and manufacturer of high-tech, cost-effective equipment for transforming surfaces, materials and interfaces at the nanoscale. From life science startups to Fortune 50 semiconductor companies, our customers rely on YES solutions to unleash products that change lives -- from cellphones and IoT devices, to AI and virtual reality, to diagnostic tests for COVID.

Our industry-leading technologies and capital equipment products are driving innovation in a wide range of exciting and growing markets. YES is headquartered in Fremont, CA. We are adding a range of Wet Clean systems, potentially in Phoenix AZ, to expand our product portfolio and are looking for a Process Engineer/Technologist to support the research, development, and effective manufacture of current and future products in our domain.

Job Title: Process Engineer/Process Technologist (Wet Process)

Location: Tempe, AZ

Key Responsibilities

- Research, design, and development of process solutions, including research into wet clean systems and process, wet chemistry selection/development, and wet process improvements. Expertise in vacuum anneal and low/high temperature curing of polymer materials is a plus.
- Contribute and run wet process development of new processes, hardware, and controls to develop new processes, achieve improved process and productivity performance specifically for wet clean process, electroplating, electrodeless plating and edge bead removal.
- Research, design, develop and implement polymer cure, monolayer coat and photoresist strip/descum chambers, and wet processes, including design criteria for operating pressures, temperatures, gas mixtures and flows, chemical bath preparation and chemical reaction tests.
- Manage process development equipment and metrology systems in Apps Lab.
- Characterize and document processes and films.
- Evaluate and report system performance (software/hardware).
- Apply principles of engineering, thermal or fluid sciences, mathematics, or statistics to optimize curing, coating, or wet processes as per customer requirements.
- Decide gas flow, operating pressures, chemical bath mixtures, bath temperature and chemical flows to meet tool process specifications.
- Use strong semiconductor, advanced packaging, or life sciences device knowledge to apply and characterize processes for front-end or backend semiconductor devices or microfluidic devices.
- Develop methods and bench tests for troubleshooting processes and systems and gathering data via empirical testing and data acquisition.
- Plan, coordinate and execute R & D tests of process hardware (electrical, electronic, mechanical, or integrated systems or equipment), with clear formal documentation of results.

- Participate in the design, planning, setup, and configuration of testbeds with integrated electronics modules, coating systems and high vacuum equipment.
- Oversee hands-on assembly, in-process testing, and system-level testing of full-scale semiconductor/life sciences OEM equipment, both production equipment & prototypes.
- Select and use laboratory, operational, or diagnostic techniques or test equipment to assess equipment, processes, systems, or subsystems.
- Support the planning efforts for and execution of system-level hardware and process qualification activities, including functional and process testing and development of associated test specifications and plans.
- Write test protocols, perform tests to fully characterize new equipment or processes utilizing DOE methodology or other statistically sound methods, and write completion reports. Familiarity with JMP statistical analysis tool will be an added advantage.
- Train, develop, and/or provide work direction to operators, technicians, and junior level engineers.
- Apply statistical methods to the design of experiments. Create test plans for DOEs and process developments.
- Identify, analyze, and provide solutions and alternate approaches to complex problems using independent creativity and judgment.
- Present and publish patents, papers and white papers about technical analysis and new inventions/discoveries. Exposure to Wet Cleans-related seminar/conference organizations will be an added advantage.

Qualifications & Experience

- Masters or Ph.D. in physics, chemistry, materials engineering, electrical engineering, or related technical field
- 5+ years in semiconductor or life sciences-related process engineering
- Experience in wet clean process, electroplating, electrode-less plating, backside or edge wet cleaning and other wet processes
- Documented work experience commensurate with a senior technical R & D role
- R & D leadership and cross-functional team engagement experience
- Excellent general knowledge of the practical application of engineering science and technology, including applying principles, techniques, procedures, and equipment to the design and production of various technical solutions
- Excellent knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding chemical reactions, polymerization, surface chemistry fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic, and sub-atomic structures and processes
- Experience with data acquisition systems, and development and implementation of vacuum systems, wet systems, plasma chambers, and vapor phase deposition systems
- Experience planning, coordinating, and executing R & D tests of process hardware, with clear formal documentation of results
- Experience with developing methods for testing and troubleshooting CVD and plasma systems.
- Working understanding of quality statistical models and metrics (confidence/reliability intervals, DOE, regression/trending, SPC, acceptance plans)
- Strong problem-solving skills and willingness to learn new skills, new technologies, and develop solutions based on project needs

- Ability to complete work on time consistently and with minimal guidance
- Proven oral and written communication skills
- Ability to function well in a diverse, team-focused, fast-paced environment with changing requirements
- Up to 20% local/international travel may be required

Compensation

YES offers a stimulating and fun working environment, competitive salaries and benefits, and company stock.

Additional Information

- Applicants must be currently authorized to work in the United States on a full-time basis.
- YES is an equal opportunity employer and values diversity. All employment is decided on the basis of qualifications, merit and business need.

Come find out why YES is such a great place to work. Apply today!