

About the Company

VSAP LAB is a fully-funded Vietnamese startup specializing in Advanced Packaging solutions for semiconductor chips. We focus on research and innovation to provide design, manufacturing, prototyping, and testing services. Our mission is to deliver the best form factors, performance, and fastest time to market for our customers' chips. We aim to enable a complete semiconductor ecosystem in Vietnam. Through pioneering technology, we accelerate the growth of the local semiconductor industry.

If you are a talented person with a growth mindset, start-up spirit, keen on learning new things everyday and wants to be part of a journey that have a big impact for generations to come, this might be a perfect role for you.

Position Overview

The **Facility Engineer** ensures the 24/7 reliability and performance of critical MEPF, utility systems, and building infrastructure supporting semiconductor cleanroom operations. This role oversees the full lifecycle—installation, commissioning, and maintenance—of essential systems including HVAC, UPW/DIW, gas delivery, and wastewater treatment in compliance with ISO 14644 and SEMI standards.

Key responsibilities include leading equipment hook-up activities during the setup phase and performing shift-based monitoring, troubleshooting, and preventive maintenance to guarantee uninterrupted production and strict EHS compliance.

Key Responsibilities

System Design & Engineering

- Participate in detailed MEPF design review and value engineering for cleanroom HVAC (make-up air units, FFU, recirculation AHU), process cooling water loops, exhaust/scrubber systems, CDA, vacuum, UPW/DIW distribution, wastewater collection & treatment, and specialty gas delivery.
- Perform hydraulic calculations, pressure drop analysis, pump & fan selection, duct sizing, and piping stress analysis.
- Ensure designs meet ISO 14644 cleanroom classification, and local TCVN standards.

Installation, Testing & Commissioning

- Supervise MEPF installation works performed by multiple subcontractor.
- Lead or support FAT/SAT, functional testing, system balancing, leak detection, vibration analysis, and cleanroom qualification (particle count, airflow visualization, recovery test).
- Manage interface coordination between mechanical packages and other disciplines (electrical, process piping, architectural).

Operation & Maintenance

- Develop and execute preventive, predictive, and condition-based maintenance programs for mechanical assets (chillers, cooling towers, pumps, fans, AHU, scrubbers, exhaust fans, valves, detector, etc.).

- Perform root cause analysis (RCA) for mechanical failures, downtime events, or performance degradation.
- Daily monitor system performance KPIs (temperature/humidity stability, pressure differential, energy consumption, water usage efficiency) and propose optimization actions.

Project & Vendor Management

- Act as mechanical focal point for tool hook-up, fab expansion, capacity upgrade, and retrofit projects.
- Review vendor drawings, method statements, risk assessments, and permits-to-work; ensure safe and quality execution.
- Support procurement by preparing technical specifications, evaluating bids, and participating in vendor selection

EHS, Compliance & Documentation

- Ensure all mechanical works comply with Vietnam law, chemical safety, confined space entry, and lockout/tagout (LOTO).
- Lead, support mechanical-related safety audits, HAZOP, FMEA, and change control processes.
- Maintain accurate as-built drawings, P&ID, equipment data sheets, maintenance records, and spare parts lists.

Continuous Improvement & Energy Efficiency

- Identify and implement energy-saving initiatives (chiller optimization, VFD application, heat recovery, demand-controlled ventilation) to improve and reduce environmental footprint.
- Participate in total productive maintenance (TPM) programs

Requirements

- Bachelor's degree in Mechanical, Electrical Engineering, Refrigeration & Air Conditioning Engineering or related field
- Minimum 3 years of hands-on mechanical, electrical engineering experience in semiconductor, cleanroom, data center, high-tech or electric manufacturing / critical facility.
- Strong experience with MEPF, BMS, Fire protection system, cleanroom HVAC, process cooling, exhaust/scrubber, UPW/DIW, and wastewater systems is highly preferred.
- Proficient in AutoCAD, Revit MEP, or similar for piping/duct design.
- Knowledge of hydraulic & airflow simulation tools
- Familiarity with ISO 14644, and Vietnamese TCVN/QCVN regulations
- Certifications (Preferred): Cleanroom technology training, HVAC design/operation certification, Energy management or LEED/green building knowledge
- Strong analytical & problem-solving ability
- Ability to work under pressure in 24/7 fab setting
- Willing to participate in on-call/rotating shift support for critical system issues
- Fluent communication in English and Vietnamese

- Entrepreneurial mindset: willing to take on tasks beyond core responsibilities when needed in a fast-paced startup environment.
- Detail-oriented, organized, and able to work independently as well as in a team.
- Strong teamwork spirit with a positive, collaborative attitude.
- Friendly, approachable, and driven by a sense of community service and long-term impact.

Contact

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