

Senior Vacuum Melt Operator/Supervisor

SeaCast Inc. is seeking an experienced, safety-focused, and highly motivated vacuum melt operator to support and optimize precision investment casting operations. This role is responsible for safely operating vacuum and air casting processes while providing technical leadership in metallurgy, melt operations, shell processing, casting quality, and continuous improvement initiatives. The Metallurgical Foundry Specialist ensures compliance with all process control procedures, standard operating procedures (SOPs), technique cards, and quality requirements while supporting production goals, reducing operational costs, and driving process excellence.

The ideal candidate combines hands-on foundry experience with strong metallurgical knowledge, problem-solving skills, and a commitment to safety, quality, productivity, and employee development.

Mission

Safely operate and continuously improve vacuum and air casting processes to achieve SeaCast's quality, delivery, productivity, and cost objectives. Ensure adherence to all process controls, work instructions, and quality standards while delivering superior workmanship and supporting operational excellence.

Key Objectives

- Develop cross-trained employees across all casting methods and foundry operations.
- Promote operational flexibility to meet changing customer demands while minimizing inventory requirements.
- Support a culture that rewards leadership, accountability, teamwork, and technical excellence.
- Continuously improve process capability, product quality, throughput, and cost efficiency.

Essential Responsibilities

Metallurgical Engineering & Process Control

- Develop, maintain, and improve alloy specifications, melt procedures, and metallurgical process controls.
- Monitor chemical composition, microstructure, and mechanical properties of cast materials.
- Investigate metallurgical and casting defects using root cause analysis methodologies and implement corrective actions.
- Support heat treatment process development, validation, and optimization.
- Ensure compliance with customer, industry, regulatory, and internal quality requirements.
- Maintain process documentation, work instructions, technique cards, and operating procedures.
- Utilize statistical analysis, SPC methods, and continuous improvement tools to enhance process performance.

Melt Operations & Casting

- Create and execute written furnace plans to support daily production schedules.
- Review casting schedules and communicate operational requirements with Supervisors and Shift Leads.
- Operate vacuum and air casting furnaces, induction melting systems, hydraulic systems, cranes, hoists, and supporting equipment.

- Melt and pour ferrous, non-ferrous, stainless steel, and specialty alloys in accordance with established procedures.
- Verify alloy chemistry, charge weights, shell identification, and casting schedules prior to pouring.
- Monitor and maintain critical process control parameters throughout melting and casting operations.
- Perform calibrations and maintain accurate process records.
- Transfer and handle hot molds safely between burnout and casting operations.
- Troubleshoot melting and casting issues to improve yield, quality, and productivity.
- Document process observations, production data, and continuous improvement opportunities using required reporting systems.

Equipment Maintenance & Reliability

- Maintain furnaces and support equipment to maximize uptime, efficiency, and operational performance.
- Perform furnace cleaning, preventive maintenance, minor repairs, and calibrations.
- Change pots, leads, furnace oil, and related components as required.
- Monitor vacuum systems, hydraulic systems, power supplies, and furnace controls.
- Troubleshoot equipment problems and support maintenance personnel during repairs.
- Record equipment performance data, identify trends, and implement corrective actions.
- Maintain accurate maintenance logs, production records, and process documentation.
- Participate in equipment audits, process trials, and improvement initiatives.

Leadership, Training & Continuous Improvement

- Train, mentor, and certify employees in casting methods, foundry operations, and metallurgical best practices.
- Maintain required proficiency levels and progression standards as defined by SeaCast's Job Progression Records (JPR).
- Provide technical guidance and work direction to team members as assigned.
- Support new product introduction and process validation activities.
- Lead or participate in continuous improvement projects utilizing Lean Manufacturing and Six Sigma principles.
- Collaborate with Operations, Engineering, Quality, and Customer teams to resolve technical issues and improve performance.
- Participate in customer audits, technical reviews, and cross-functional improvement efforts.
- Foster teamwork, accountability, and a culture of operational excellence.

Required Qualifications

- Minimum 5 years of experience in precision investment casting, foundry operations, or melt deck operations.
- Strong knowledge of metallurgy, alloy behavior, melting practices, and casting processes.
- Experience operating induction melting furnaces, vacuum casting systems, and associated foundry equipment.
- Knowledge of ceramic shell systems, burnout processes, and investment casting methods.
- Experience with casting defect analysis and root cause investigation.
- Ability to read and interpret engineering drawings, specifications, and technical documentation.
- Strong troubleshooting, communication, and organizational skills.
- Proficiency with manufacturing data collection systems and computer-based process controls.

Preferred Qualifications

- Experience in investment casting, aerospace experience, metallurgical engineering or related technical field.
- Experience with aerospace, defense, marine, or other highly engineered cast products.
- Lean Manufacturing, Six Sigma, ASQ, or related certifications.
- Experience with casting simulation and CAD software (MAGMASoft, ProCAST, SolidWorks, or similar).
- Familiarity with AS9100, NADCAP, and other industry quality systems.
- Forklift, crane, rigging, or hazardous material certifications.