



Job Description

Process Equipment Design Engineer

Job Summary

Orbis Machinery, LLC is a leading OEM manufacturer of custom industrial batch process equipment based in Waukesha, specializing in mixing, blending, drying, milling, and size reduction systems for demanding applications across industries including chemical processing, metals and minerals, industrial manufacturing, and bulk solids processing.

We are seeking a Process Equipment Design Engineer to support the design, development, testing, troubleshooting, and continuous improvement of custom industrial process equipment including double arm mixers, ball mills, ribbon blenders, paddle mixers, dryers, and related mechanical systems. This role is ideal for an experienced, hands-on engineer who enjoys solving real-world mechanical challenges while working closely with manufacturing, vendors, customers, and engineering teams to develop practical, high-performing equipment solutions.

The ideal candidate will have strong experience with rotating equipment, power transmission systems, fabricated machinery, and custom OEM industrial equipment within a manufacturing environment.

Essential Duties and Responsibilities

(Including the following; additional duties may be assigned as needed)

Equipment Design & Engineering

- Design custom industrial process equipment and related mechanical systems using 3D modeling software.
- Create detailed assemblies, bills of materials, fabrication drawings, machining prints, and manufacturing documentation.
- Perform engineering calculations related to horsepower sizing, torque requirements, shaft loading, bearing selection, drive system design, motion, heat transfer, and rotating equipment performance.
- Design and support rotating mechanical systems including shafts, bearings, gearboxes, couplings, chain drives, seals, and power transmission equipment.
- Develop manufacturing-ready fabrication and machining drawings including GD&T, fits, tolerances, weldment detailing, and assembly requirements.
- Support redesign, modernization, and reverse engineering efforts for existing or legacy equipment systems.
- Assist in the design and integration of vacuum-rated systems, jacketed vessels, thermal transfer systems, inert gas purging systems, and sealing arrangements where applicable.
- Support equipment selection and configuration based on customer application requirements.
- Collaborate closely with fabrication and assembly teams to ensure practical, manufacturable, and serviceable equipment designs.

Product Testing & Optimization

- Develop and support testing procedures for mixers, mills, blenders, dryers, and related equipment.
- Participate directly in equipment assembly reviews, pilot testing, troubleshooting, and startup support activities.
- Provide hands-on support during fabrication, assembly, equipment testing, and commissioning to identify and resolve mechanical or process-related issues.
- Analyze equipment performance and identify opportunities for improved efficiency, throughput, reliability, manufacturability, and ease of maintenance.



- Recommend and implement design improvements based on testing results, field feedback, manufacturing observations, and equipment performance data to improve reliability, durability, throughput, and serviceability.
- Assist with prototype evaluation, product refinement, and continuous product improvement initiatives.

Continuous Improvement & Product Development

- Support ongoing refinement, innovation, and expansion of Orbis Machinery's product offerings.
- Identify opportunities to improve product reliability, performance, and manufacturing efficiency.
- Collaborate with manufacturing teams to improve fabrication efficiency and ease of assembly.
- Assist in standardizing components and improving design consistency where appropriate while maintaining flexibility for customized customer applications.
- Participate in root cause analysis and corrective actions related to equipment or process performance.
- Support product innovation initiatives and continuous improvement of existing equipment platforms and process technologies.

Project Coordination & Customer Support

- Communicate with customers, vendors, and internal departments regarding technical requirements and project progress.
- Assist sales and applications teams with equipment recommendations and technical support.
- Coordinate with suppliers and outside vendors on fabricated components and purchased equipment.
- Support equipment commissioning, troubleshooting, and startup activities as needed.
- Occasionally travel to customer or vendor locations for project support, equipment evaluation, startup assistance, or troubleshooting.

Qualifications

- Bachelor's degree in Mechanical Engineering or related field preferred.
- 5–10 years of experience designing heavy industrial machinery, rotating equipment, or custom OEM process equipment preferred.
- Proficiency with 3D CAD software such as SolidWorks or AutoCAD required.
- Strong understanding of rotating equipment and power transmission systems including bearings, shafts, seals, gearboxes, couplings, and drive systems required.
- Experience with weldments, structural steel, fabricated machinery, and manufacturing environments required.
- Strong mathematical, mechanical, troubleshooting, and hands-on problem-solving skills required.
- Proficiency interpreting and applying GD&T principles, fits, tolerances, weldment detailing, and manufacturing-ready drawing standards required.
- Understanding of machining, fabrication, assembly, and design for manufacturability principles required.
- Experience supporting fabrication, assembly, troubleshooting, testing, and equipment startup activities preferred.
- Experience with industrial mixing, blending, milling, drying, bulk solids processing, or custom process equipment preferred.
- Familiarity with vacuum systems, thermal transfer systems, sealing arrangements, inert gas systems, controls, or automation is a plus.
- ASME code or pressure vessel experience is a plus.
- Ability to manage multiple projects and collaborate cross-functionally with engineering and manufacturing teams.
- Comfortable working in a hands-on manufacturing environment with regular involvement in fabrication, assembly, testing, and troubleshooting.
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Why Join Orbis Machinery?

- Opportunity to work on highly customized industrial process equipment.
- Collaborative and hands-on engineering environment.
- Ability to directly influence product performance and innovation.
- Exposure to a wide variety of industrial applications and customer challenges.
- Stable, growing organization with a strong reputation for specialized equipment solutions.

Benefits

We offer a competitive benefits package that includes health, dental, and vision insurance. Orbis also provides free direct primary care through QuadMed and many free surgery options. Orbis Machinery is dedicated to supporting the well-being and success of our employees both professionally and personally.

Equal Opportunity Employer

Orbis Machinery, LLC is an equal opportunity employer. We encourage applications from candidates of all backgrounds.