1. JUSTIFICATION FOR FILLING POSITION /IMPACT OF NOT FILLING POSITION:

Position required per staffing plan

2. SUMMARY OF DUTIES:

Position Summary:
The Manager of Materials and Processes will call upon his extensive engineering experience to lead the engineering and manufacturing efforts with respect to materials and processes (M&P) in support of FloDesign Wind Turbine (FDWT) Company goals. The duties include responsibility for materials research, testing and trade studies as well as engineering processes documentation and substantiation of all product design, certification, manufacturing liaison and product support efforts. This position includes the responsibilities for work force requirements, consultant coordination and establishing engineering practices and processes needed to support the job tasks. The Manager of Materials and Processes will directly report to the Vice President of Engineering.

Key Responsibilities:

- Provide overall leadership and management for engineering activities associated with the M&P development and substantiation to meet FDWT and certification authority’s compliance requirements
- Provides expert judgment and analysis to support FDWT products and processes including ideas for new products, processes and product enhancements
- Performs extensive research and validation of materials to meet FDWT goals for Safety, Cost of Energy, Structural Integrity, Reliability and Maintainability and the ability to perform value engineering trade studies to down-select/recommend materials and processes commensurate with these company goals
- Provide the lead/direction of the materials and process engineers assigned to development, product improvement and sustaining programs including international FDWT personnel
- Coordinate M&P requirements with appropriate company functions such as structural analysts, detail design engineers manufacturing and quality
- Coordination and acceptance of supplier’s materials and processes
- Certification authority coordination of M&P compliance plans, reports and testing
- Development and testing of NDI methods in coordination with FDWT Quality and Engineering Design personnel
- Establish and maintain a M&P lab to support materials and processes engineering development and product investigations as well as NDI methods
- Develop project schedules, budget forecasts, and manpower plans that support team goals
- Aggressively control project schedules and budget
- Define and document system requirements in support of level one requirements
- Work with Supply Chain Management (SCM) to secure and manage outsourced supplier contracts and deliverables
- Work with internal and external test organizations and suppliers to ensure required development and certification analysis and testing is effectively accomplished in a timely manner
- Support of MRB and Liaison activities during aircraft build

3. WORK EXPERIENCE: (INCLUDE SPECIFIC AREAS, LENGTH OF TIME, TYPE OF WORK, ETC.):
FDWT JOB REQUISITION and QUALIFICATION PROFILE

MUST HAVE:

- Minimum 10 years of experience in materials and processes engineering including metals and composites
- Candidate must have a strong background in materials research and usage for light weight structures and processes
- Ability to perform value engineering trade studies to evaluate the lowest cost material and processes in support of the whole value chain and company goals
- Applicant must have the experience and capability to produce and oversee M&P compliance analyses and reports capable of meeting aircraft development and certification requirements
- Must have proven excellence in the documentation and reviewing of reports, processes and specifications
- Highly proficient computer skills including MS Office products and PLM systems
- Experience with design to build product structure and design for manufacturability
- Laboratory experience in supporting materials and processes development and qualification including destructive and non-destructive investigations to coordinate design, analysis and manufacturing functions
- Ability to manage international team members
- Candidate must be able to travel internationally frequently in support the engineering and supply chain materials and process development and sustaining activities
- Strong understanding of NDI methods

PREFER:

- 15+ years of experience in M&P
- Previous management and/or team leadership experience is highly desired including responsibilities for work force planning and budgeting
- Experience with WindChill PDM
- Master model and electronic drawing design definition experience and control through the use of a PDM
- Expertise in the areas of design and analysis of composites
- Experience with full-scale and component static and fatigue testing

4. OTHER REQUIREMENTS:

- Bachelor of Science Degree (PHD Preferred) in Materials Science, or the equivalent.

5. COMMUNICATION AND INTERPERSONAL SKILLS:

- Highly-motivated and creative self-starter with the abilities and dedication to work in a lean company improving and developing technology for use in wind energy
- Good communication and interpersonal skills and the ability to work effectively in a cross-functional team environment

6. SUPERVISORY RESPONSIBILITIES: (NO. OF PEOPLE, SCOPE, ETC.):

7. COMMENTS:

DEPT APPROVAL & DATE: PERSONNEL APPROVAL & DATE: EXECUTIVE APPROVAL & DATE:

PERSONNEL OFFICE USE ONLY:

DATE RECEIVED: DATE FILLED: TOTAL DAYS OPEN:

PERSON HIRED: RATE: REPORTING DATE:

PERSONNEL RECRUITER: HIRE SOURCE: ☑ BACKGROUND CHECK ☐ PHYSICAL ☐ MIS NOTIFIED

COMMENTS:
# FDWT JOB REQUISITION and QUALIFICATION PROFILE

**JOB TITLE:** Project Manager  
**LEVEL:** Manager  
**REQUESTED BY:** John McCoury

**DEPARTMENT:** Engineering, Project Management  
**DEPARTMENT INTERVIEWER(s):** John McCoury and TBD

<table>
<thead>
<tr>
<th>JOB CODE:</th>
<th>GRADE:</th>
<th>DATE REQUIRED:</th>
<th>SALARY RANGE:</th>
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<tbody>
<tr>
<td></td>
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<td>January 1st, 2010 (or sooner)</td>
<td>TBD</td>
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</tbody>
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**HOURS:** 8am-5:00pm  
**SHIFT:** 1st  
**FACILITIES REQUIRED:**  
**DEPARTMENT UNDERUTILIZED:**

**NEW POSITION**  
**REPLACEMENT FOR:**

1. **JUSTIFICATION FOR FILLING POSITION / IMPACT OF NOT FILLING POSITION:**  
Position required per staffing plan

2. **SUMMARY OF DUTIES:**

**Position Summary:**  
The Project Manager will call upon his experience to lead the project management efforts in support of FloDesign Wind Turbine (FDWT) Company goals. The duties include responsibility for both the strategic and tactical project management of the product development cycle and support of the companies IPT structure. This position also includes the development of processes and tools needed for a lean company using best practices aligned with company goals and customer focus. The Manager of Materials and Processes will directly report to the Vice President of Engineering.

**Key Responsibilities:**
- Provide overall leadership and management for project management activities to meet FDWT corporate and product strategies
- Prepare and maintain project plans, schedules and cost estimates and proposals in accordance with integrated program and IPT management practices
- Establishes an executable baseline and manages the program risk and opportunity, in accordance with specific financial goals and obligations.
- Continuously monitors program effectiveness, helps develop and design effective program strategies, and implement improvements to improve program strategies as needed.
- Sets milestones and monitors adherence to program master plans and schedules. Uses approved control systems and reports that accurately measure progress and identifies potential problems in sufficient time for corrective action to be taken and ensures the meeting of company's contract and technology development commitments.
- Supervises and integrates the performance of the program Integrated Product Teams.
- Assist IPTs in the development and tracking of project tasks and milestones
- Responsible for risk management of programs and leading risk mitigation management across all functional area.
- Focuses, evaluates, motivates and rewards the program team, enabling them to achieve desired results.
- Administer engineering cost management activities including maintenance of budgets, analysis and reporting of monthly costs and performance, and preparation of periodic forecast updates. Analysis and reporting of program performance will include supplier engineering activity and use earned value management principals.
- Gather, organize and track production unit cost and direct operating cost projections
- Assist IPTs in value engineering trade studies to meet overall cost of BOM to reach company goals based on Cost of Energy
- Assist in the evaluation of supplier proposals and preparation and negotiation of contracts and resolution of contract issues. Estimate and evaluate costs and schedule performance associated with manufacturers or suppliers through financial data analysis.
- Provides expert judgment and analysis to support FDWT products and processes including ideas for new products, processes and product enhancements
- Aggressively control project schedules and budget
- Establish, and assist with, the development and documentation of engineering practices and processes with respect to the assigned project management duties
- Work with Supply Chain Management (SCM) to secure and manage outsourced supplier contracts and deliverables

3. **WORK EXPERIENCE:** (INCLUDE SPECIFIC AREAS, LENGTH OF TIME, TYPE OF WORK, ETC.):
MUST HAVE:

- Minimum of 5 years of experience as a project manager
- Good track record of project leadership and successful management
- Expert abilities with project management software like MS Project
- Certification in Project Management preferred
- A dedicated, focused work ethic
- Ability to handle a variety of tasks and work well under pressure and project deadlines
- Good organizational skills
- Ability to communicate diplomatically, openly, and effectively, with good judgment and tact
- A facilitator for consensus decision making in an aggressive schedule environment
- Highly developed leadership skills and the ability to work effectively with others as a team member
- Excellent writing, editing and proofreading skills
- Ability to mentor team members in project and time management skills
- Must have proven excellence in the documentation and reviewing of reports
- Highly proficient computer skills including MS Office products
- Experience with Integrated Product Team (IPT) programs and design to build product structure
- Ability to manage international team members
- Candidate must be able to travel internationally frequently

PREFER:

- 15+ years of experience in project management with increasing levels of responsibilities
- Experience with new companies in lean environments
- Previous management experience is highly desired including responsibilities for cost and schedule in a earned value system of performance measuring
- Configuration management skills/knowledge in a PDM environment

4. OTHER REQUIREMENTS:

- BA in Engineering and/or Business/Finance

5. COMMUNICATION AND INTERPERSONAL SKILLS:

- Highly-motivated and creative self-starter with the abilities and dedication to work in a lean company improving and developing technology for use in wind energy
- Good communication and interpersonal skills and the ability to work effectively in a cross-functional team environment

6. SUPERVISORY RESPONSIBILITIES: (NO. OF PEOPLE, SCOPE, ETC.):

7. COMMENTS:
FW JOB REQUISITION and QUALIFICATION PROFILE

REQUISITION #       CURRENT DATE: October 6th, 2010

JOB TITLE: Design and Integration Engineer     LEVEL: Engineer     REQUESTED BY: John McCoury

DEPARTMENT: Engineering, Structures and Integration     DEPARTMENT INTERVIEWER(s): John McCoury and TBD

JOB CODE: GRADE: DATE REQUIRED: January 1st, 2010 (or sooner)     SALARY RANGE: TBD

HOURS: 8am-5:00pm     SHIFT: 1st     ☑ HOURLY ☐ EXEMPT ☑ DIRECT ☐ INDIRECT

☑ FULL-TIME ☐ PART-TIME ☐ TEMP ☑ INTERNAL ☐ SUMMER HELP ☐ CO-Op ☐ ADDITIONAL ☑ NO ADDITIONAL (ATTACH FACILITY/EQUIPMENT REQUEST)

DEPARTMENT UNDERUTILIZED:

☒ NEW POSITION ☐ REPLACEMENT FOR:

REASON EMPLOYEE VACATED:

1. JUSTIFICATION FOR FILLING POSITION /IMPACT OF NOT FILLING POSITION:

Position required per staffing plan

2. SUMMARY OF DUTIES:

Position Summary:
The Design and Integration Engineer will call upon his engineering experience and education to develop the required engineering trade studies, conceptual design and final detailed engineering documentation in support of FloDesign Wind Turbine (FDWT) Company goals. The duties include responsibility for design and systems integration of all products, certification, manufacturing liaison and product support. The Design and Integration Engineer will report to the Director of Structures and Integration.

Key Responsibilities:

- This Engineer will create CAD solid models of MEWT components, assemblies and installation drawings in support of the engineering product development efforts.
- This Design and Integration Engineer will both develop and gather data from FDWT Product Team members and will be responsible for documenting all component geometry and physical characteristics of the complete assembly.
- He/she will be the primary steward of the physical characteristics that will be used in engineering design and analysis.
- Design will be accomplished through electronic drawings (3D models) and the engineer will be responsible for meeting design for manufacturability, reliability, maintenance and safety requirements.
- Provides expert judgment, documentation and analysis to support FDWT products including ideas for new products and product enhancements
- Coordinate structural requirements with appropriate engineering functions such as aerodynamics, weight, loads, mechanical systems and detail design engineers
- Responsible for value engineering trade studies to support structural compliance requirements considering weight and manufacturing cost
- Aggressively adhere to project schedules and budget
- Establish, and assist with, the development and documentation of engineering practices and processes with respect to the assigned engineering specialties including electronic design definition, simulation management and analysis documentation
- Support of MRB (Material Review Board) and Liaison activities during product build
- Define and document system requirements in support of product level requirements
- Work with Supply Chain Management (SCM) to secure and manage appropriate outsourced supplier contracts and deliverables
- Work with internal and external test organizations and suppliers to ensure required development and certification analysis and testing is effectively accomplished in a timely manner

3. WORK EXPERIENCE: (INCLUDE SPECIFIC AREAS, LENGTH OF TIME, TYPE OF WORK, ETC.):
MUST HAVE:

- **Education** - BS or MS in Engineering or a related technical field.
- **CAD** – 2+ years of Pro-E, SolidWorks or similar CAD software experience.
- **3D Modeling Software** - The ability to gather information from concepts, drawings, hardware specifications and from actual components and integrate them together in a 3D model. As indicated above, this experience ideally would be in Pro-E or SolidWorks, but experience with other solid modeling CAD software will also be given serious consideration.
- **Surface Modeling** - Experience modeling complex surface geometries such as those on wind turbine blades, aircraft wings, boats or cars would be a plus. **PDM Experience** – Previous experience in using a product data manager (PDM) is a plus (e.g. Team Center Engineering or SmarTeam).
- **Hands-On Experience** - Prior hands-on experience in design, testing, and/or manufacturing environments will be a plus.
- **Geometric Dimensioning & Tolerancing (GD&T)** - Though not required, GD&T Experience will be a definite plus.
- **Documentation & Specification** - Prior experience with documentation and specification will be a plus.
- **Communication and Organizational Skills** - Our client seeks a good communicator with excellent organizational skills.
- **Must be physically and mentally capable** of performing all aspects of this position specification, to include some long days, and some travel, as needed to accomplish assigned tasks and support the FDWT Team.
- **Integrity** must be above question and will be a required standard agreement to protect intellectual property.
- **Candidate must verify, in writing, that they are not** encumbered with any relevant non-compete agreements.
- **PC Skills** – comfortable using Adobe Acrobat, Microsoft Word, Excel, PowerPoint and Outlook.
- **Comfort working in lean environment** - Comfortable working in a high energy lean environment with the ability to work on projects with other team members and limited day-to-day supervision.
- **Attention to safety will be absolutely essential.**

PREFER:

- **Seven + years of experience** in aircraft primary structure or turbine blade design, analysis and substantiation
- **Previous responsibilities for work force planning and budgeting**
- **Master model and electronic drawing design definition experience and control through the use of a PDM**
- **Expertise in the areas of design and analysis of composites**
- **Expert Pro-E CAD Skills**

4. OTHER REQUIREMENTS:
- Bachelor of Science Degree (MS Preferred), or the equivalent, in Mechanical, Civil, Electrical or Aerospace engineering

5. COMMUNICATION AND INTERPERSONAL SKILLS:
- Highly-motivated and creative self-starter with the abilities and dedication to work in a lean company improving and developing technology for use in wind energy
- Good communication and interpersonal skills and the ability to work effectively in a cross-functional team environment

6. SUPERVISORY RESPONSIBILITIES: (NO. OF PEOPLE, SCOPE, ETC.): Engineering test engineers and technicians

7. COMMENTS:

FloDesign Wind Turbine    PERSONNEL FORM # REQXXX, October 6th, 2010
Position Summary:
The Director, Structures and Integration will call upon his extensive engineering experience to lead the structural design analysis team in support of FloDesign Wind Turbine (FDWT) Company goals. The duties include responsibility for structural design, systems integration and structural substantiation of all product design, certification, manufacturing liaison and product support. This position includes the responsibilities for workforce requirements, consultant coordination and establishing engineering practices and processes needed to support the job tasks. The Director, Structures and Integration, will directly report to the Vice President of Engineering.

Key Responsibilities:
Provide overall leadership and management for structural design, analyses (stress, fatigue and damage tolerance), and systems integration of components/assemblies to meet FDWT and certification authority’s compliance requirements
- Provide the lead/direction of the structural and integration design and analysis engineers assigned to development, product improvement and sustaining programs
- Provides expert judgment, documentation and analysis to support FDWT products including ideas for new products and product enhancements
- Coordinate structural requirements with appropriate engineering functions such as aerodynamics, weight, loads, mechanical systems and detail design engineers
- Responsible for value engineering trade studies to support structural compliance requirements considering weight and manufacturing cost
- Work product responsibilities include models (electronic drawings), simulations, analysis reports and/or applicable test plans
- Develop project schedules, budget forecasts, and manpower plans that support company goals
- Aggressively control project schedules and budget
- Establish, and assist with, the development and documentation of engineering practices and processes with respect to the assigned engineering specialties including electronic design definition, simulation management and analysis documentation
- Support of MRB (Material Review Board) and Liaison activities during product build
- Define and document system requirements in support of product level requirements
- Work with Supply Chain Management (SCM) to secure and manage appropriate outsourced supplier contracts and deliverables
- Work with internal and external test organizations and suppliers to ensure required development and certification analysis and testing is effectively accomplished in a timely manner

3. WORK EXPERIENCE: (INCLUDE SPECIFIC AREAS, LENGTH OF TIME, TYPE OF WORK, ETC.):
MUST HAVE:

- **Education** – Bachelor of Science Degree – or the equivalent in Mechanical or Civil Engineering is required. MS Preferred.
- **10 Years Minimum Experience**: Minimum 10 years of experience in structural design, analysis, simulation, test and substantiation.
- **Structural analysis experience – Primary Structures**: Structural design and analysis experience should be focused around primary structures (e.g. wind turbine blades or aircraft wings).
- **Composites Structure Experience**
- **Structural Analysis Management**: Applicant must have the proven experience and capability to produce and oversee structural compliance analyses, FEA modeling, plans and reports capable of meeting development and regulatory authority certification requirements, and the Proven ability to manage, develop and post-process FEA models and results.
- **Communication and Interpersonal Skills**: Well-developed verbal, written, listening and presentation skills are required; in addition to solid interpersonal skills, including the ability to work effectively in a cross-functional team environment.
- **CAD Experience**: Working knowledge of Pro-E or similar CAD environment.
- **Proven Team Management Experience**
- **Computer Skills – MS Office**: Must be highly proficient with MS Office products. (Word, Excel and Outlook).
- **Experience with design to build product structure and design for manufacturability is required**
- **Relocation**: this position is based at the Engineering Center in Waltham, MA. Candidate must be prepared to relocate promptly to a location within reasonable commuting distance.
- **Must be physically and mentally capable** of performing all aspects of this position specification, to include some long days, and some travel, as needed to accomplish assigned tasks and support the FDWT Team.
- **Integrity must be above question and there will be a required standard agreement to protect intellectual property.**
- **Candidate must verify, in writing, that they are not encumbered with any relevant non-compete agreements.**
- **Comfortable in lean environment**: Comfortable working in a high energy lean environment with the ability to work on projects with other team members and limited day-to-day supervision.
- **Attention to safety will be absolutely essential.**
- **Travel**: The candidate engineer must be able to travel as required to support test activities as well as customer interactions to coordinate design, analysis and manufacturing functions; this will include international travel.

PREFER:

- **Fifteen + years of experience** in aircraft primary structure or turbine blade design, analysis and substantiation
- **Previous responsibilities for work force planning and budgeting**
- **Master model and electronic drawing design definition experience and control through the use of a PDM**
- **Expertise in the areas of design and analysis of composites**
- **Experience with full-scale and component static and fatigue testing**

4. OTHER REQUIREMENTS:

- Bachelor of Science Degree (MS Preferred), or the equivalent, in Mechanical, Electrical or Aerospace engineering

5. COMMUNICATION AND INTERPERSONAL SKILLS:

- Highly-motivated and creative self-starter with the abilities and dedication to work in a lean company improving and developing technology for use in wind energy
- Good communication and interpersonal skills and the ability to work effectively in a cross-functional team environment

6. SUPERVISORY RESPONSIBILITIES: (NO. OF PEOPLE, SCOPE, ETC.): Engineering test engineers and technicians

7. COMMENTS:
FW JOB REQUISITION and QUALIFICATION PROFILE

COMMENTS:

FloDesign Wind Turbine   PERSONNEL FORM # REQ XXXX, October 6th, 2010
TITLE:

Wind Turbine Test Engineer

SUMMARY:
Support the evaluation of wind turbine technology product design and performance attributes in support of future technology development.

DUTIES AND RESPONSIBILITIES:
• Development and execution of test plans in compliance with existing standards and/or other specific company objectives. The type of test programs include, but are not limited to: power performance, structural loads, acoustic characteristics, aerodynamic testing, and electrical/mechanical sub-component performance.
• Specification and/or procurement of various instrumentation systems and sensors as necessary to develop and execute test programs.
• Coordinate with outside contractors as necessary to execute test programs including: instrumentation installation, sensor calibration, test execution and test program documentation.
• Analyze test data and develop test reports in accordance to the test objectives and in compliance with the standards prescribed within the test plans.
• Conduct root-cause analysis investigations as necessary in support of the product design team for product reliability performance enhancement.

REQUIRED KNOWLEDGE, SKILLS and ABILITIES:
• Bachelor of Science Degree in Engineering, Engineering Mechanics, or Applied Math and/or Physics. Masters Degree ideal.
• Minimum of 3 years experience in testing of machinery is required. Wind turbine testing experience is preferred.
• Demonstrated competence in the operation of data acquisition systems is required.
• Proficiency in the use of LabView, MATLAB, Excel VBA, IGOR and/or other data analysis software preferred.
• Proficiency in the use of SolidWorks, Pro/E, or other 3D CAD software
• Understanding and use of dynamic analytical methods for the determination of forces and loads, as well as vibration-related behavior is required.
• Proficiency in statistical and uncertainty analysis of data
• Strong communication and organizational skills are required.
• Ability to work under pressure in a fast paced team environment.

WORKING CONDITIONS:
• Field test conditions that experience inclement weather and occasional exposure to the elements.
• Frequent travel (up to 50%) to field test sites where test subject equipment and programs are located.

PREFERRED QUALIFICATIONS:
• Experience and demonstrated capability in the use and setup of PC driven test equipment and associated communication interfaces.
• An excellent understanding of wind turbines or closely related machinery.
• Familiarity with IEC Testing Standards as they relate to wind turbine technology.
• Experience with Data Acquisition Systems (DAS), including design, implementation, and troubleshooting in lab and field environments
• Experience with LabView, National Instruments (e.g. cRio) and Campbell Scientific equipment
• Hands-on lab and field experience with strain gauges, pressure transducers, signal conditioning and fiber optics.
• Experience with lab equipment and instrumentation such as power meters, signal generators, spectrum analyzers, oscilloscopes and calibration equipment
• Familiar with network devices and protocols such as TCP/IP, WLAN and CAN
• Field testing experience in wind turbine industry or other heavy industry such as aerospace
• Highly proficient computer skills including MS Office products
FLODESIGN WIND TURBINE

POSITION DESCRIPTION

CFD Engineer

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<tr>
<th>Location:  Waltham</th>
<th>Salary Level:  TBD</th>
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<tbody>
<tr>
<td>Department: Aero Research</td>
<td>Supervisor: TBD</td>
</tr>
<tr>
<td>Approved by: R. Dold</td>
<td>Date: 10/26/10</td>
</tr>
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</table>

**General Responsibilities:** Responsible for performing fluid dynamic analysis utilizing analytical methods, testing, and CFD to support mixer ejector wind turbine design and certification. Expert in the use of fluid dynamic analytical and computational codes to advance the state of the art in wind turbine design. Must be knowledgeable with CFD modeling and proficient in applying and/or modifying commercial CFD codes plus developing new codes where needed. Must be capable of identifying appropriate computational resources and managing access thereto. Work in a multi-disciplined team environment with in-house engineering staff, manufacturing staff, consultants, and vendors. This position is responsible for providing innovative solutions to enhance the efficiency and timely development of wind turbines.

**Specific Responsibilities:**
- Work under the funding, time, and performance deliverables as required by FDWT’s development plan
- Document test, computational, and analytical efforts through technical reports.
- Design and conduct CFD studies to verify aerodynamic performance of mixer ejector wind turbines individually or in wind farm settings
- Optimize mixer ejector system design through modeling and simulation.
- Determine rotor and shroud design loads using computational modeling and model testing
- Ensure that state-of-the-art tools, programs and systems are used to advance FDWT’s engineering department
- Interact with turbine product development, certification, and testing
- Analyze and improve CFD prediction procedures using wind tunnel test results
- Provide technical services to other departments such as manufacturing, purchasing, service, sales and marketing
- Prepare solid/surface models for meshing, run and post process CFD code results.
Supervisory Responsibilities:
None

Standards of Performance:
- The creativity, passion, and energy displayed in solving problems.
- The degree to which project deliverables are met.
- The quality and effectiveness of communications.
- Leadership of junior staff

Qualification Requirements:

Education and/Experience:
- BS, MS degrees
- Major or minor in advanced fluid mechanics
- Proficient in analytical modeling, multiple CFD codes

Computer Skills:
- Proficient in Microsoft Office, Windows 7, Linux
- CFD & Engineering modeling tools including Fluent, CFX, COBALT, Pointwise.

Physical Demands:
The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Work Environment:
The surrounding working environment would be considered normal and usual for a typical, climate controlled office or engineering laboratory environment.
FW JOB REQUISITION and QUALIFICATION PROFILE

JOB TITLE: Engineering Test Director
LEVEL: Director
REQUESTED BY: John McCoury

DEPARTMENT: Engineering, Test
DEPARTMENT INTERVIEWER(s): John McCoury and TBD

JOB CODE: GRADE: DATE REQUIRED: January 1st, 2010 (or sooner)
DATE REQUIRED: January 1st, 2010 (or sooner)
SALARY RANGE: TBD

HOURS: 8am-5:00pm SHIFT: 1st
HOURLY EXEMPT DIRECT INDIRECT
FULL-TIME PART-TIME TEMP
INTERN SUMMER HELP CO-Op
FACILITIES REQUIRED:
ADDITIONAL NO ADDITIONAL (ATTACH FACILITY/EQUIPMENT REQUEST)

DEPARTMENT UNDERUTILIZED:
FEMALE MINORITY NONE

NEW POSITION REPLACEMENT FOR:
REASON EMPLOYEE VACATED:

1. JUSTIFICATION FOR FILLING POSITION /IMPACT OF NOT FILLING POSITION:
Position required per staffing plan

2. SUMMARY OF DUTIES:

Position Summary:
The Engineering Test Director will call upon his extensive test experience in the areas of data acquisition, instrumentation, test planning and test execution to support FloDesign Wind Turbine (FDWT) company goals. The Test Manager will be responsible for coordination and execution of all product development and certification testing and will directly report to the Vice President of Engineering and Products.

Key Responsibilities:
Provide team leadership and engineering test expertise to meet FDWT and certification authorities requirements

- Provides expert judgment and analysis, specifically in the area of testing, to support FDWT product development including ideas for new products and product enhancements
- Coordinate testing requirements with appropriate engineering functions such as mechanical systems, structures, electrical and controls
- Responsible for specifications and procurement of data acquisition and instrumentation equipment that meets the applicable test plans
- Responsible for the daily direction and technical oversight of test engineers and technicians
- Work product responsibilities include test project management, test plans, test reports, lab and field setup, budget and manpower plans and other tasks to support product development as determined by the VP of Engineering and Products
- Aggressively control project schedules and budget
- Establish, and assist with, the development and documentation of engineering manpower, test practices, procedures and processes
- Work with Supply Chain Management (SCM) to secure and manage appropriate equipment, outsourced supplier contracts and deliverables
- Coordinate external test organizations and suppliers to ensure required development and certification testing is effectively accomplished in a timely manner

3. WORK EXPERIENCE: (INCLUDE SPECIFIC AREAS, LENGTH OF TIME, TYPE OF WORK, ETC.):
MUST HAVE:

- Minimum 10 years of experience in engineering test preferably in the field of wind turbine testing
- Experience with Data Acquisition Systems (DAS), including design, implementation, and troubleshooting in lab and field environments
- Experience with LabView, National Instruments (e.g. cRio) and Campbell Scientific equipment
- Hands-on lab and field experience with strain gauges, pressure transducers, signal conditioning and fiber optics.
- Experience with lab equipment and instrumentation such as power meters, signal generators, spectrum analyzers, oscilloscopes and calibration equipment
- Familiar with network devices and protocols such as TCP/IP, WLAN and CAN
- Project planning and management experience required with test plan development, processes, procedures, manpower planning and budgeting
- Industry expert in accepted test standards
- Field testing experience in wind turbine industry or other heavy industry such as aerospace
- Highly proficient computer skills including MS Office products
- Previous management and/or team leadership experience
FW JOB REQUISITION and QUALIFICATION PROFILE

PREFER:
- 15+ years of experience in Engineering Test
- Previous responsibilities for work force planning and budgeting
- Wind turbine test experience, including certification testing experience, for a major lab or manufacturer to IEC standards
- Experience operating and managing engineering prototype labs (e.g. System Integration Lab (SIL) and Highly Accelerated Life Testing (HALT))

4. OTHER REQUIREMENTS:
- Bachelor of Science Degree (MS Preferred), or the equivalent, in Mechanical, Electrical or Aerospace engineering

5. COMMUNICATION AND INTERPERSONAL SKILLS:
- Highly-motivated and creative self-starter with the abilities and dedication to work in a lean company improving and developing technology for use in wind energy
- Good communication and interpersonal skills and the ability to work effectively in a cross-functional team environment

6. SUPERVISORY RESPONSIBILITIES: (NO. OF PEOPLE, SCOPE, ETC.): Engineering test engineers and technicians

7. COMMENTS:

DEPT APPROVAL & DATE: PERSONNEL APPROVAL& DATE: EXECUTIVE APPROVAL & DATE:

PERSONNEL OFFICE USE ONLY:
DATE RECEIVED: DATE FILLED: TOTAL DAYS OPEN:
PERSON HIRED: RATE: REPORTING DATE:
PERSONNEL RECRUITER: HIRE SOURCE: BACKGROUND CHECK PHYSICAL MIS NOTIFIED
COMMENTS: