

## **Process Engineer with Coating Experience located in Greenville, TX**

### **Company Description:**

Cytec Industries Inc. is a global specialty chemicals and materials company focused on developing, manufacturing and selling value-added products. Our products serve a diverse range of end markets including aerospace, adhesives, automotive and industrial coatings, chemical intermediates, inks, mining and plastics. We use our technology and application development expertise to create chemical and material solutions that are formulated to perform specific and important functions in the finished products of our customers.

Cytec Engineered Materials (CEM) is a global provider of technologically advanced materials and material solutions for aerospace, high-performance automotive, launch and other extreme-demand applications. As division of Cytec Industries Inc., (NYSE:CYT), the company employs over 1,700 people at 10 plants, four technology centers and numerous sales offices throughout North America, Europe and Asia. Sales in 2007 were \$670 million. Global headquarters is in Tempe, Ariz., and European headquarters resides in Wrexham, UK.

CEM produces high-performance, pre-impregnated composites and adhesives, abrasives, carbon-carbon materials for high-temperature applications, high-temperature silicone-based sealants, a variety of specialty thermoplastic materials, and PAN and pitch-based carbon fibers. The company also offers a range of vacuum-only-cure prepregs that enable the manufacture of large aerospace parts—without the use of autoclaves. CEM's exclusive toughened resin transfer molding (RTM) materials offer engineers greater design flexibility over traditional materials as well as the option to use low-cost fabrication techniques for structural parts.

### **Job Description/Responsibilities:**

#### **Major Responsibilities:**

##### **ROLE**

Ascertains the failure modes and operating costs associated with existing process technologies and develops improved processes that enable the necessary step change in manufacturing to occur. The incumbent will also be called upon by the Program Management team to develop new process technologies that achieve the growth or insertion of CEM products.

##### **PROCESS TECHNOLOGY DEVELOPMENT**

Works closely with the Research and Development , Operations and Facilities Engineering Departments to:

- Gain a clear understanding of existing and new composite product forms and formulations, performance characteristics, and material technologies.
- Develop process maps and a clear understanding of current composite prepreg processing technology and operational constraints.
- Develop a thorough understanding of manufacturing processes and costs and benchmark competitor or like-industry manufacturing cost structures.
- Work with Product Stewardship/SHE to understand safety aspects of all product forms, including shipping, and import/export constraints for both raw materials and for semi-finished and finished products.
- Identify novel enabling processing technologies, methods, equipment configurations, or service vendors and conduct a technical and cost analysis of same to determine whether they meet product performance and manufacturing quality and operational cost targets.
- Using Six Sigma and best-in-class project management tools plan and conduct internal shop trials and external service vendor trials including material, labor and machine time logistic management.
- Work closely with Supply Chain to secure appropriate external vendor agreements and NDA's necessary for external communications and for conducting off-site trials.
- Work with Facilities Engineering to develop capital cost estimates for various process equipment and infrastructure and use these estimates in evaluating manufacturing options.
- Where necessary, obtain approvals for capital expenditures for machine modifications, test-scale equipment and other infrastructure necessary to conduct process development trials and testing.

## **MANUFACTURING SCALEUP**

Lead scaleup efforts for the transfer of newly developed process technologies to prepreg manufacturing:

- Work closely with Finance to develop high-fidelity cost models to clearly understand the economics of new processing technologies and to ensure that manufacturing cost targets established by the business are met and improved upon.
- Using Lean manufacturing and other appropriate tools, downselect and deliver a robust and consistent manufacturing process specification for optimal performance in product/process consistency, product quality, short cycle time, reduced labor, reduced energy costs, and the elimination of scrap and waste.
- Work with supply chain to identify alternate consumables and other materials used in manufacturing to reduce cost while meeting performance and quality targets.
- Work with Facilities Engineering to justify capital projects for new prepreg facilities and for the modification of existing facilities .....or.... work with Supply Chain and the business teams to develop external service vendor contracting strategies and agreements.

- Ensure that Facilities Engineering is designing and installing infrastructure to meet the manufacturing process specification.
- Once new equipment is installed or equipment is modified, work with Manufacturing to validate that processes meet quality, performance and cost targets.

## **ADMINISTRATIVE**

Work closely with Business Teams to identify, justify and obtain sanctioning for process technology development initiatives:

- Develop project charters, schedules, and costs estimates for assigned process technology projects. Manage projects to the charter, schedule and budget.
- Work as part of an internal team member to achieve the objectives of each project as outlined.
- Works closely with the Business Team, Technology and with Legal IP to ensure that manufacturing process technologies being implemented are not infringing on existing protected technology or that new CEM manufacturing process technologies are reviewed for intellectual property protection.
- Provide executive-grade progress reports on a monthly basis including detailed financial and schedule reviews.

## **Qualifications/Requirements:**

### **Business/Technical Skills and Experience:**

- Minimum 5-7 years process engineering or manufacturing engineering related experience.
- Preferably has experience in composite material manufacturing or other similar continuous web process industries (paper, films, food, textile industries).
- Knowledge of Chemical Industry practices and processes, particularly in the area of SHE.
- Knowledge of 6 Sigma including process mapping, thought mapping, DOE and data analysis.
- Some technical competence in capital project management.
- A proven track record of successful project leadership/management.
- Strong and disciplined project management skills (scheduling, budgeting, etc.).

- Strong oral and written communication skills.
- Some financial acumen and understanding of cost modeling and the relationship between processes parameters and final product production costs.
- Strong computer skills and a working knowledge of project management tools (MS Project, SAS Jump, etc.).

**Additional Technical Skills (Must have):**

Preferably a strong technical understanding of the following:

- Process design
- Equipment design
- Resin mixing technologies
- Resin reaction technology
- Heat and mass transfer processes
- Coating, spraying and filming process technology
- Particle distribution manufacturing technology
- Continuous fiber wetting technologies
- Slitting technologies
- Packaging technologies
- Manufacturing automation and controls
- Cross-machine control systems
- Six Sigma

**Education "Required"** (Must Have):

- B.S. Degree in Engineering, preferably Chemical, Mechanical, or Manufacturing Engineering.
- Working knowledge of Six Sigma

Cytec Industries Inc. is an Equal Opportunity Employer M/F/D/V

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