AEROTEK R&D Engineer

Position Summary:
The R&D Engineer, Specialist level is responsible to apply research and advanced analytical methods, appropriate testing, and expert experience to solve complex, technical problems, to develop new products and technology, and to improve the reliability and manufacturability of existing products in production. The main focus of this job is on control valves, actuators, and related accessories. This job also involves technical support to customers, sales representatives, field service technicians, and employees through phone conversations, in-plant visits, off-site visits, and training classes. The R&D Specialist Engineer reports to and receives assignments from the Director of Engineering and/or Project Team Leaders.

Education Preferred:
Master’s or Doctorate Degree in Mechanical Engineering from an accredited university and at least ten years related experience and/or training; or a BSME degree and Professional Engineer License/Registration in the USA or Canada and at least ten years related experience; or equivalent combination of education and experience.

Essential Knowledge, Skills, and Abilities:

LANGUAGE SKILLS
Ability to speak, read, and write proficiently in English; proficiency in a second language is desirable. Ability to read, analyze, and interpret general engineering periodicals, professional journals, technical procedures, industry standards, and governmental regulations. Ability to write clear and professional technical reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, customers, and the general public.

MATHEMATICAL SKILLS
Ability to comprehend and apply principles of advanced calculus, trigonometry, modern algebra, and advanced statistical theory. Ability to work with concepts such as limits, matrixes, vectors, quadratic and differential equations, proofs of theorems.

REASONING ABILITY
Ability to apply extensive engineering experience and scientific principles to solve complex problems and deal with a variety of abstract and concrete variables in situations where only limited standardization exists. Ability to interpret and communicate a variety of instructions furnished in written, oral, diagram, or schedule form.

REQUIRED SKILLS
· Proficiency with computer software and design tools (word processor, spreadsheet, internet, 2-D and/or 3-D CAD).
· Design experience using 3-D CAD (SolidWorks) and working knowledge of ASME Y14.5M dimensioning and tolerancing standard. Ability to apply familiarity with manufacturing processes and product applications to optimize the safety, performance, and cost of product designs.
· Proficiency with numerical analysis theory and computational methods (such as finite element analysis or computational fluid dynamics)
· Ability to use test equipment and perform common or standard tests on valves and actuators and to apply statistical theory to the design of experiments and test data.
· Ability to write clear and concise technical reports and training materials and to keep a laboratory notebook.
· Proficient to understand and perform complex design analyses in fluid mechanics, thermodynamics, heat transfer, mechanics of materials, and machine design.
· Ability to apply a working knowledge of metallurgy, materials, or corrosion science.
· Ability to apply basic concepts of physics, chemistry, electricity and electronics.
· Proficient with the application of codes and standards for materials, design, and construction of valves or other pressure vessels (ASME, ASTM, ISA, etc.).
· Ability to communicate effectively orally and in writing.
· Ability to complete assignments on schedule with minimal supervision. Ability to work professionally and effectively with customers, suppliers, Flowserve associates, management, and in teams.
· Ability to plan, schedule, budget, and execute projects according to plan. Assist management to overcome or mitigate effects of roadblocks and setbacks and to accommodate changes in project priorities.
· Creative abilities.

**Beneficial Knowledge, Skills and Abilities:**
· Mechanical and pneumatics background.
· Training or experience in computer programming languages and macros
· Advanced control theory knowledge and experience with process control instrumentation.