Propulsion Control Systems Engineer-00004886

Description

The Propulsion Control System Engineer applies diversified knowledge of engineering principles and practices to produce and/or coordinate the solutions to highly complex problems encountered in the design and development of integrated mechanical/electrical systems. This position will elicit and validate customer and sub-system requirements; conceptualize, design, develop, and evaluate control system architectures and components to satisfy broad criteria including component life, functionality and cost; prepare system specifications (functional and interface definitions) and drawings as necessary; participate in process definition, develop metrics, make risk assessments, estimate cost & schedule impacts, and write Independent Research and Development (IR&D) reports; perform impact analysis of changes (e.g. component reliability) and assessment of test plans as fit-for-purpose and provide oversight of vendor activities including hardware and software design / development activities. The Propulsion Control Systems Engineer will also perform informal system verification, and oversight of formal system verification analyses and testing; prepare documentation to substantiate flight test release and certification / qualification of development hardware and software; represent Rolls-Royce Corporation in technical discussions with customers, vendors and Government agencies including FAA; coordinate customer support with respect to control system problem resolution; perform accident / incident investigation and litigation support as appropriate.

Qualifications and experience

Basic:
Bachelors degree in Electrical or Mechanical Engineering with 9+ years of experience in design, development, and testing of Aero control architectures for Aero propulsion systems. US citizenship is required and must be able to obtain a secret security clearance.

Preferred:
Masters or PhD in Electrical or Mechanical Engineering is preferred. The ideal candidates will possess practical experience defining and running engine tests; possess the ability to model system behavior using MATLAB SIMULINK and develop control and data bus architectures; develop interface between Engine controller, power electronic systems, and Electric machines controllers possess knowledge of starter/Generator systems for aero engine and standards such as MIL-STD-1553B, A429, 629, AFDX, and IEEE 1394b; possess a strong understanding of Avionics System functions, Engine control interfacing techniques; Engine starting; Fuel management and fuel gauging and environmental control systems, cabin temperature control; and flight control systems; possess knowledge of hardware and software aspects of gas turbine control, power electronics, electric machines, and secondary power system and working knowledge of engine FADECs; be familiar with COTS Data Buses - IEEE 1394 etc.and Electro-Magnetic Interference issues in aircraft system.

Job Electrical
Primary Location US-IN-Indianapolis
Schedule Full-time
Opening Date 17-Mar-2010
Closing Date 17-Apr-2010