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Data & Control Systems Technician (Dragon)

at SpaceX

McGregor, TX, United States

SpaceX was founded under the belief that a future where humanity is out exploring the stars is fundamentally more exciting than one where we are not. Today SpaceX is actively developing the technologies to make this possible, with the ultimate goal of enabling human life on Mars.

DATA & CONTROL SYSTEMS TECHNICIAN (DRAGON)

The Data & Control Systems Technician will support the build-up and maintenance of our data and control systems. These systems consist of varying data acquisition and control hardware, wiring and interface harnesses, and a wide variety of instrumentation. The goal of the Data & Control Systems group is to meet a variety of test requirements to achieve safe, economical, and reliable access to space.

RESPONSIBILITIES:

- Perform complex technical assignments involving instrumentation and data acquisition/processing systems
- Maintain, calibrate, configure, monitor, test, troubleshoot, install, and repair instrumentation, process controls, data acquisition systems, and electrical systems
- Investigate, diagnose, correct, and document instrumentation or system malfunctions
- Analyze results of calibrations and processed data and assist in the interpretation of test data
- Fabricate and install parts and systems to be tested in test equipment, using hand tools, power tools, and test instruments
- Adjust, repair, or replace faulty components of test setups and equipment
- Complete necessary instrumentation of test stands, wiring and data acquisition systems
- Lay out, build, test, troubleshoot, repair, and modify developmental and production electrical and electronic units, assemblies, components, parts, equipment, and systems
- Configure the data acquisition hardware
- Connect and verify pressure transducers, thermocouples, and other sensors
- Install connectors, connector pins, terminals and lugs
- Perform continuity checks, locate and correct wiring errors using measuring instruments such as ohmmeters and sequential continuity checkers
- Adjust, calibrate, align, and modify circuitry and components and record effects on unit performance
- Read and interpret planning documents, schematics, wiring diagrams, specifications, drawings, manuals, blueprints and engineering sketches
- Perform lay out and wiring of electrical panels
- Collaborate with design engineers to troubleshoot failures and issues derived from test data
- Perform other related duties, as assigned, for the purpose of ensuring an efficient and effective work environment

BASIC QUALIFICATIONS:

- Associate degree in instrumentation, control technology, electrical systems, or other electrical field (5 years of professional experience working with controls or electrical systems will be considered in lieu of degree)
- 3+ years of experience working with any of the following instrumentation: resistance temperature devices (RTDs), silicon diode temperature devices, strain gauges, load cells, displacement transducers, pressure transducers, thermocouple, and flow meters (turbine, coriolis, and ultrasonic)

PREFERRED SKILLS AND EXPERIENCE:

- Basic knowledge of Wheatstone bridge theory, ability to apply ohms law, and an understanding of DC electronics
- Operational knowledge of an oscilloscope & multi-meter, soldering wires & connectors, operation of various crimping tools, wire stripping, continuity testing, pinning out a military type connector, routing & tie wrapping cables, drilling & tapping holes, and building junction boxes
- System level trouble-shooting skills and the ability to logically solve instrumentation system problems and determine corrective action
- Knowledge in signal conditioning concepts for various types of sensors, to include the following: thermocouple Types K, S, and E; TC bonding concepts: resistance weld on and adhesive bond on types; TC probes through thermowell sheaths; cold junction compensation concepts
- Background should include experience with the following devices: DC power supplies, DC-DC converters, UPS installations, heat shrink tubing, cable harnessing, lacing, and proper strain relief concepts
- Working knowledge of transducers, operational amplifiers, and the knowledge of measurement techniques for temperature, pressure, flow, displacement, vibration and the application strain gauges
- Ability to identify required data, data acquisition plans and test parameters, setting up equipment to conform to these specifications
- Working knowledge multiple bus architectures (PCI/PCle, PXI/PXIe, GPIB, Serial, USB, etc.) and data communication technologies
- Demonstrated capabilities in the development of comprehensive project plans that include all tasks; stage/gate milestones, and reviews necessary to successfully develop and implement solutions
- Intermediate skill level using Windows Operating Systems
- Intermediate skill level using Microsoft Office (Excel, PowerPoint, Word, Outlook, OneNote)
- Knowledge in data acquisition concepts, hardware, and interfacing (SCXI and PXI based)

ADDITIONAL REQUIREMENTS:

- Flight hardware is typically built in tight quarters and physical dexterity is required
- Ability to lift heavy objects is required in this position, up to 35lbs unassisted
- Ability to perform job duties that require standing, kneeling, crouching, twisting upper body, working in cramped positions in small openings and climbing hand over hand
- Ability to work at elevated heights
- Typically exposed to work in extreme outdoor environments – heat, cold, rain
- Work performed in an environment requiring exposure to fumes, odors, and noise
- Typically 50-55 hour work weeks, schedule varies depending on site operational needs; flexibility required
- Valid driver's license

ITAR REQUIREMENTS:

- To conform to U.S. Government space technology export regulations, including the International Traffic in Arms Regulations (ITAR) you must be a U.S. citizen, lawful permanent resident of the U.S., protected individual as defined by 8 U.S.C. 1324b(a)(3), or eligible to obtain the required authorizations from the U.S. Department of State. Learn more about the ITAR [here](#).

SpaceX is an Equal Opportunity Employer; employment with SpaceX is governed on the basis of merit, competence and qualifications and will not be influenced in any manner by race, color, religion, gender, national origin/ethnicity, veteran status, disability status, age, sexual orientation, gender identity, marital status, mental or physical disability or any other legally protected status.

Applicants wishing to view a copy of SpaceX's Affirmative Action Plan for veterans and individuals with disabilities, or applicants requiring reasonable accommodation to the application/interview process should notify the Human Resources Department at (310) 363-6000.

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* Required

First Name *