

## JOB DESCRIPTION

Released Date: 08/12/2023

Revised Date: 02/20/2024

Functional Area: Manufacturing



**POSITION:** Electrical Assembly Technician, Control Panel Builder

**REPORTS TO:** Production Operations Manager

### **General Description:**

Utilize skills and abilities to complete layout and electrical wiring of company control panels and system components to customer required/ANSI electrical specification. Read and/or analyze engineering schematics and CAD drawing and company work orders/job instructions to determine/perform specific electrical related activities and utilize materials effectively. Apply in depth knowledge of electronics, electrical properties, and various U.S. safety and ANSI electrical specifications to the fabrication, modification, and repair of electrical instruments and parts as required in production and customer installation and repair environments.

### **Essential Responsibilities:**

- Assemble systems, control panels, and support structures, and install components, units, and printed circuit boards, following specifications and using hand tools and power tools.
- Read and interpret schematic drawings, diagrams, charts, blueprints, specifications, work orders, and reports to determine materials requirements and assembly instructions. Proceed alone or with assistance to determine layout of particular wiring, panels or electric boxes in accordance with unit being assembled and perform electrical duties and wire equipment and build electrical control panels to complete work orders on time and within quality specs.
- Drill and tap holes in specified locations to provide openings for elements, wiring, and instruments and pull and/or mount wiring and control units per drawing.
- Measure and adjusts voltage to specified value, normally 480 voltages, to determine operational accuracy of instruments.
- Fabricate and form parts, coils, and structures according to specifications, using drill, calipers, cutters, and saws.
- Test wiring installations, assemblies, and circuits for resistance factors and operational defects, and record results.
- Position, align, and adjust workpieces and electrical parts to facilitate wiring and assembly.
- Utilize time, electrical inventory supplies and tools effectively and efficiently.
- Complete work orders and return to team leader or production board as outlined in production process documentation.
- Assist with manufactured machine/equipment set up and adjustment, including company testing requirements, as required in the plant and at customer installation locations..
- Prepare finished job for shipment by packaging related parts and components per reverse sequence of operations, and/or ship instructions and mark components appropriately.
- Make occasional visits to customer plants to assist with installation and/or correct electrical-related equipment breakdowns and perform field service.
- Use floor controlled overhead crane and/or forklift equipment as necessary to move parts and materials; use care to lift and balance loads properly; operate equipment in a safe manner.

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- Exercise proper care in the use of tools, equipment and materials.
- Detect and report faulty equipment, defective material, improper operations and unusual conditions to supervision and maintain work area in a neat and orderly condition.

### **Training Objectives:**

- Within 3 months, have solid overall understanding of Company machinery products, including electrical knowledge of machines and tools.
- Within one month, have the ability to read and understand prints and work orders/production processes to work independently under the day-to-day direction of the Electrical Team leader.

### **Measures of Effectiveness:**

- Maintain a high quality of electrical wiring work according to ANSI and customer standards and specifications.
- Teamwork - Able to work with other production personnel to meet team and company production goals.
- Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking - Utilize problem identification and solving skills, including getting information needed to do the job and combining, reasoning and evaluating this information to provide information to supervisors/peers and to advise and/or make decisions and adjust actions to solve problems.
- Proactive - Take the initiative to influence events to achieve work group goals and carry our work processes and procedures in a proactive manner.
- Continual Improvement - Assess processes, material and activities to detect problems, control resources, identify the causes or errors or defects and suggest improvements to team leader and management.
- Handling and Moving Objects — Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things up to 60 pounds.

### **Minimum Requirements:**

- Education: Electrical Certification or equivalent preferred, plus a minimum of one to five years' electrical experience in a manufacturing, or similar, environment using 480 voltage electrical components.
- Skills/Knowledge: Ability to understand and utilize appropriate machines, hand and power tools, including their design, uses, benefits to assemble, repair and maintain electrical components.

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- Able to travel in support of equipment installation approximately 10% of time.
- Providing own tools is a plus
- Able to effectively use/demonstrate most of the following skills:
  1. Effectively communicate technical information written or verbally and distinguish colors
  2. Move or lift medium to heavy objects up to 40 pounds.
  3. Plan and organize work and complete assigned tasks in a timely manner
  4. Read technical drawings and understand technical operating, service or repair manuals
  5. Analyze operation of malfunctioning electrical or electronic equipment and conduct sequential tests to locate electronic malfunction.
  6. Construct or fabricate electrical parts or fixtures.
  7. Install, maintain and repair electrical conduit or tubing, electrical wiring, fixtures or components and install electronic equipment, components, or systems.
  8. Install lead-in wires to control boxes and other components.
  9. Install/connect electrical equipment to power circuit.
  10. Install/string electrical or electronic cable or wiring.
  11. Maintain electrician's tools or equipment.
  12. Modify electrical or electronic equipment or products.
  13. Solder electrical or electronic connections or components and splice electric cable.
  14. Clean equipment or machinery as required.
  15. Install gantry robotic industrial machinery and related heavy equipment.
  16. Monitor production machinery/equipment operation to detect and repair electrical problems.

Able to use most or all of the following tools\*

1. C clamps
2. Chain falls
3. Chalk line markers
4. Claw hammers
5. Combination plies
6. Component insertion machines
7. Cornice brakes
8. Digital calipers
9. Digital dynamometers
10. Digital micrometers
11. Digital oscilloscopes
12. Dynamic actuators
13. Electric hoists
14. Electric rotary wire brushes
15. Flat hand-held files
16. Gyroscopes
17. Hand reamers
18. Hydraulic crimpers
19. Inspection microscopes

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21. Metal chisels
22. Metal shears
23. Multifunction digital multimeters
24. Multipurpose wrenches
25. Nail pullers
26. Optical squares
27. Personal computers
28. Pipe taps
29. Plumb lines
30. Pneumatic riveters
31. Portable power drills
32. Power brakes
33. Precision levels
34. Precision rulers
35. Socket wrench sets
36. Steel wedges
37. Straight screwdrivers
38. Temperature testers
39. Test lights
40. Torque drivers
41. Vernier calipers
42. Vernier height gauges
43. Wire cutting tools
44. Wire-routing tools
45. Workpiece positioning jigs
46. Workshop bench vises

20. Locking ratchet wrenches