



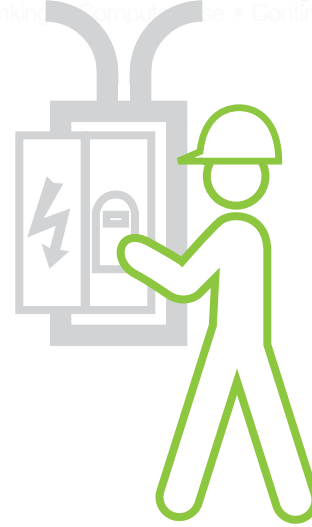
Now and Tomorrow
Excellence in Everything We Do

Essential Skills and Apprenticeship

Essential Skills for Success as an Industrial Electrician

Industrial electricians use Essential Skills to complete trade-related tasks. Use this fact sheet to:

- learn how Essential Skills are used on the job;
- find out the skills you need to succeed in your trade; and
- help prepare yourself for your career.



Reading



- Read notices and Material Safety Data Sheets (MSDS) about health and safety policies.
- Read emails from supervisors and co-workers that include information about work to be done and malfunctions that require troubleshooting.
- Read manuals to install, maintain and repair equipment.
- Read, understand and interpret the Canadian Electrical Code for information on regulations to apply to job site situations.

Document Use



- Read meters and digital readouts to record the number of hours equipment has been operating at the time of maintenance.
- Identify Workplace Hazardous Materials Information System (WHMIS) labels on materials.
- Interpret diagrams to determine where to drill holes to mount panels on a wall.
- Read information from icons, lights, numbers and short text entries on equipment display panels.
- Take information from pre-maintenance work orders to determine the location and type of work to be completed.
- Scan tables in the Canadian Electrical Code for specifications.
- Examine construction drawings to plan the routing of electrical and control wiring when installing new equipment.
- Interpret schematic drawings to troubleshoot and repair equipment.

Numeracy



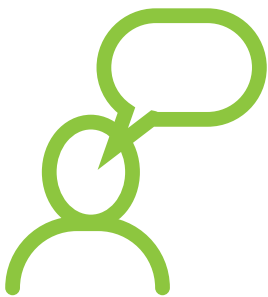
- Measure lengths of cable needed to install equipment.
- Compare readings from gauges to values found in operating and installation manuals.
- Total and report on the costs of small projects and repairs.
- Take measurements using high voltage testing equipment.
- Schedule several small concurrent jobs, each with different requirements and due dates.
- Use formulas from the Canadian Electrical Code to solve problems such as the size of cable needed when the size of the motor and the length of cable run are known.
- Use electrical measurements to analyze circuit operation and troubleshoot electrical problems.
- Apply formulas from the Canadian Electrical Code to determine equipment and wiring specifications and to analyze measurements.

Writing



- Write short comments in a logbook for the next shift.
- Write notes and descriptions of changes made when programming logic controllers.
- Write emails or notes to co-workers and managers to provide information about equipment and repair work or to give details of the work to be completed during the next shutdown.

Oral Communication



- Ask suppliers about products and prices.
- Talk to several different crews to coordinate repairs and maintenance in order to minimize disruption of production.
- Talk to machine operators about equipment and machinery breakdowns.
- Explain the cause of equipment breakdowns to plant managers by making technical and complex information easy to understand for people who may not have an electrical background.

Continuous Learning



- Participate in safety training to update certifications for WHMIS, Transportation of Dangerous Goods (TDG) First Aid and Cardio-Pulmonary Resuscitation (CPR).
- Take training to learn new skills to safely operate equipment such as forklifts, scissor lifts and scaffolding.
- Learn on the job by reading manuals and by getting hands-on experience.

For more information on Essential Skills and related resources, visit

hrsdc.gc.ca/essentialskills

For more information on the Interprovincial Standards Red Seal Program, visit

www.red-seal.ca

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Paper
Cat. No.: HS18-10/12-2011E
ISBN: 978-1-100-17919-3

PDF
Cat. No.: HS18-10/12-2011E-PDF
ISBN: 978-1-100-18049-6