

Now and Tomorrow **Excellence in Everything We Do** 

**Essential Skills and Apprenticeship** 

# **Essential Skills for Success** as a Sheet Metal Worker

Sheet metal workers 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 comments on scale drawings, such as modifications to the design.
- Read instructions and warnings on equipment labels to understand the safe operation of equipment.
- Read memos and bulletins, such as explanations of changes to work processes.
- Read product brochures and articles in trade magazines for information about industry practices and new equipment and tools.
- Read and understand equipment manuals.

#### **Document Use**



- Find information on labels and signs, such as hazardous materials symbols on containers of solvent.
- Complete entry forms such as work orders, parts requisitions, timesheets and inspection checklists.
- Locate data in lists and tables, such as part numbers, descriptions and dimensions.
- Study technical drawings to locate data and identify the placement of parts, such as thermostats or plumbing fixtures.



# **Numeracy**



- Measure distances, temperatures and angles using basic measuring tools.
- Compare measurements of airflows, humidity and temperatures to specifications.
- Estimate cut lengths and seam allowances when exact measurements are not required.
- Estimate time required to complete projects.
- Manage small material and supply inventories.
- Calculate invoices, including labour, materials, taxes and discounts.
- Calculate capacities, air flows and temperature differentials in heating and ventilation systems.
- Take measurements using specialized measuring tools.
- Determine the quantity of materials needed for construction projects by calculating the area of complex shapes.

### Writing



- Write logbook entries and short notes to co-workers, such as design changes on work orders.
- Write entries in forms, such as the sequence of events leading to workplace accidents in incident report forms.
- Write short reports on projects, such as heating system installations.

#### Oral Communication



- Discuss sheet metal work products with suppliers.
- Discuss specifications, timelines, procedures and other work-related matters with co-workers, general contractors and other tradespersons.
- Explain fabrication, construction and installation procedures to customers and address their concerns.

# Working with Others



- Coordinate job tasks and share tools, workspace and equipment with coworkers and other tradespersons, such as plumbers and electricians.
- Participate in formal discussions about work processes or product improvement.
- Demonstrate how to perform tasks to other workers.

# Thinking



- Inform supervisors and adjust schedules when equipment breakdowns or shortages of materials cause delays.
- Assign tasks to apprentices, taking into account the apprentice's skill level, timelines and the complexity of the tasks.
- Evaluate the feasibility of proposed designs and installations.
- Evaluate the safety of workplaces and work procedures, such as the safety of ladders and hoists.
- Choose methods and materials for sheet metal fabrication and installation jobs that meet specifications and requirements.
- Inform supervisors and colleagues, such as engineers, about design flaws and suggest modifications.
- Organize daily activities to meet targets established by supervisors and adjust schedules when delays occur.

### Computer Use



- Use word processing software to create documents, such as change notices.
- Use the Internet to search for information, such as new products and equipment on supplier websites.
- Use computer-assisted design programs and manufacturing equipment.

# Continuous Learning



- Take training provided by employers, unions, suppliers and organizations.
- Learn about changes to building codes, safety standards and new installation and manufacturing techniques by reading building codes and regulations.
- Maintain current product knowledge by reading trade magazines and brochures and by talking to suppliers.

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