

Insulator (Heat & Frost) On-the-Job Training Guide

Insulators (Heat & Frost) maintain and apply thermal insulation to commercial and industrial structures and equipment.

Training Requirements: 7200 hours (4 years) including: two 6-week and one 8-week training sessions in Regina or at NAIT in Edmonton, Alberta.

Journeyman to apprentice ratio for this trade is: 2:1

The information contained in this pamphlet serves as a guide for employers and apprentices. Apprenticeship training is mutually beneficial to both employer and apprentice. The employer's investment in training apprentices results in skilled and certified workers.

The pamphlet summarizes the tasks to be covered by the apprentice during the on-the-job portion of apprenticeship training.

An apprentice spends approximately 85% of the apprenticeship term training on-the-job.

It is the employer's or journeyman's training responsibility to supervise an apprentice's practical skills development until a satisfactory level of proficiency has been reached.

EMPLOYER TRAINING RESPONSIBILITY

- introduce the apprentice to daily practice in approved safety procedures
- provide guided, hands-on, practical experience and theory in the tasks and skills of the Insulator trade
- where possible, expose the apprentice to new technology in the trade.

Employers should make every effort to expose their apprentices to work experience in as many areas of the trade as possible.

Below, in-school instruction is listed first; suggestions to help employers assist the apprentice to prepare for in-school training are listed next.

The content of the training components is subject to change without notice.

Level One

Technical Application

Safety and regulations

The employer can assist the apprentice to prepare for this section of technical training by:

- *ensuring the delivery of the Construction Safety Training System (CSTS)*
- *reviewing OH&S Rights and Responsibilities*
- *delivering site-specific orientation*
- *reviewing contractor-specific safety procedures*
- *ensuring training in trade-specific safety equipment (wet-bulb thermometer)*

Materials and accessories

insulation materials; cements; adhesives; fasteners; reinforcing fabrics; piping, ducts and equipment; mastics; mitre tubes and mitre box; metal lath blankets

The employer can assist the apprentice to prepare for this section of technical training by:

- *giving demonstrations and orientations to the products and materials used for the assigned tasks*
- *familiarizing the apprentice with sizes and thicknesses of materials*
- *explaining the theory and demonstrating the practical skills of tasks i.e. roughing-in*

Hand Tools and Power Equipment

Hand tools and power tools

The employer can assist the apprentice to prepare for this section of technical training by:

- *demonstrating the proper use and care of common hand and power tools*
- *ensuring the proper availability, use and care of personal protective equipment*

Asbestos Abatement or Removal

Awareness

Asbestos abatement

Regulations

Removal equipment

Worksite planning

Worksite procedures

Spraying

Clean-up and inspection

The employer can assist the apprentice to prepare for this section of technical training by:

- *ensuring safety orientation (awareness of the hazards associated with asbestos)*
- *providing site specific training and supervision*
- *providing the apprentice with the project-specific written procedures*
- *ensuring on-site training in the operation and maintenance of equipment associated with asbestos removal*
- *reviewing the safety rules and procedures of the abatement at hand*
- *holding a daily tool-box talk (briefing) to prepare for day's activities*

Trade Mathematics

The employer can assist the apprentice to prepare for this section of technical training by:

- *training and supervision in basic mathematical and measurement calculations*

Print Reading

The employer can assist the apprentice to prepare for this section of technical training by:

- *identifying pipes, ducts, etc. on the site*
- *training in general blueprint awareness*

Level Two

Technical Applications

Safety and regulations

The employer can assist the apprentice to prepare for this section of technical training by:

- *continuing to promote and enforce safe work practices and procedures*

Materials and accessories

canvas jacketing; poly vinyl chloride; mastic; metal; heat tracer coverings; breaching; tee's and valves; lags; underground systems; pre-fab fittings; weather proofing; coolers and freezers; expansion joints; industrial noise control; firestopping and fireproofing

The employer can assist the apprentice to prepare for this section of technical training by:

- *providing enhanced understanding and hands-on practical training in the application of materials*

Hand Tools and Power Equipment

Hand tools and power tools

The employer can assist the apprentice to prepare for this section of technical training by:

- *demonstrating the proper use and care of common hand and power tools*
- *confirming the proper availability, use and care of personal protective equipment*

Explosive actuated tools

The employer can assist the apprentice to prepare for this section of technical training by:

- *ensuring proper training and supervision before use*

Stud welder

The employer can assist the apprentice to prepare for this section of technical training by:

- *supporting proper training in the use and maintenance of the stud welder*

Trade Mathematics

The employer can assist the apprentice to prepare for this section of technical training by:

- *exposing the apprentice to advanced tasks which involve layout and mathematics*

Print Reading

The employer can assist the apprentice to prepare for this section of technical training by:

- *further instruction in blueprints and site plans that are relevant to the task at hand*

Level Three

Technical Applications

Safety

Codes and regulations

The employer can assist the apprentice to prepare for this section of technical training by:

- *continuing to promote and enforce safe work practices and procedures*
- *developing an awareness of specifications and regulations relevant to the trade (Thermal Insulation Association of Canada or TIAC)*

Materials and accessories

rigid finishing materials, selection of finishing materials; overlapping; fastening methods; temporary fasteners; compatible materials; extruded foam plastic

The employer can assist the apprentice to prepare for this section of technical training by:

- *providing hands-on training in the fabrication and installation of the finished product*

Hand Tools and Power Equipment

Hand tools and power tools

The employer can assist the apprentice to prepare for this section of technical training by:

- *demonstrating the proper use and care of common hand and power tools*
- *verifying the proper availability, use and care of personal protective equipment*

Heat loss detection equipment

The employer can assist the apprentice to prepare for this section of technical training by:

- *provide awareness of heat loss and demonstration of heat loss detection equipment where applicable*

Pattern Development

Geometric construction

Patterns

Tank heads

Removable valve covers

Utilidors

The employer can assist the apprentice to prepare for this section of technical training by:

- *exposing apprentice to the theory and practical skills required in pattern development*

Trade Mathematics

The employer can assist the apprentice to prepare for this section of technical training by:

- *exposing the apprentice to advanced calculations related to estimating, layout and pattern development*

Print Reading

The employer can assist the apprentice to prepare for this section of technical training by:

- *practicing system identification, material take-off and estimating*
- *promoting awareness in the use of prints in scheduling and planning*

Consider apprenticeship training as an investment in the future of your company and in the future of your workforce. Ultimately, skilled and certified workers increase your bottom line.

Get involved in the apprenticeship training system. Your commitment to training helps to maintain the integrity of the trade.

Do you have employees who have been working in the trade for a number of years but don't have trade certification? Contact your local apprenticeship office for details on how they might obtain the certification they need.

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