



## Insulator (Heat & Frost) - Upgrading A Guide to Course Content

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

**Training Requirements:** All candidates applying for upgrading training must be eligible to challenge the Red Seal Journeyperson examination.

This program is designed to prepare individuals to challenge the Insulator (Heat & Frost) Red Seal Journeyperson examination.

Upgrading for Insulator (Heat & Frost) is designed to help apprentices learn and reinforce skills needed to become competent Journeyperson Insulators.

The information contained in this pamphlet serves as a guide for employers and apprentices.

The pamphlet briefly summarizes the training delivered in the upgrading program. The content of the technical training components is subject to change without notice.

### **Materials and Accessories**

- insulation materials
- cements
- adhesives
- reinforcing fabrics
- piping, duct and equipment
- mastics
- mitre tubes and mitre box

### **Asbestos Abatement (Commercial Course)**

- awareness
- asbestos abatement
- regulations
- removal equipment
- worksite planning
- worksite procedures
- spraying
- clean-up and inspection

### **Trade Mathematics**

- whole numbers
- fractions
- decimals
- conversions
- percentages
- perimeters, areas and volumes

### **Print Reading**

- introduction to print reading: lines, rulers, orthographic projections, major/monor divisions of drawings, architectural symbols, interpreting basic prints

### **Materials and Accessories (Commercial)**

- canvas jacketing
- metal
- tees and valves
- lags
- weather proofing
- coolers and freezers
- expansion joints

### **Hand Tools and Power Equipment**

- insulator hand tool recognition and application
- competent use
- maintenance and adjustment
- stud welder set up and operations procedures
- safe operation, application and regular maintenance of power equipment

### **Trade Mathematics**

- board feed and band spacing
- surface area of solids
- insulation quantities
- bevels on lags
- canvas quantities

### **Materials and Accessories (Industrial)**

- selection of finishing materials
- extruded foam plastic

### **Pattern Development**

- geometric construction – draw basic geometric shapes
- define terms/use each method to draw geometric shapes
- patterns – develop, cut and fabricate patterns
- installation of fabricated jacketings
- tank heads
- removable valve covers

### **Estimating Techniques**

- material takeoff and estimating
- extend insulation requirements to actual cost
- estimate commercial and industrial material requirements

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