

**Issued: November 19, 2018**

**Program: Insulator (Heat and Frost)**

**To:** ITA Training Providers  
Articulation Chair  
System Liaison Person  
School Districts

**Subject:** **Insulator (Heat and Frost) Program Update**

**OPSN No.:** **OPSN 2018 021**

**Effective Date:** September 1, 2019

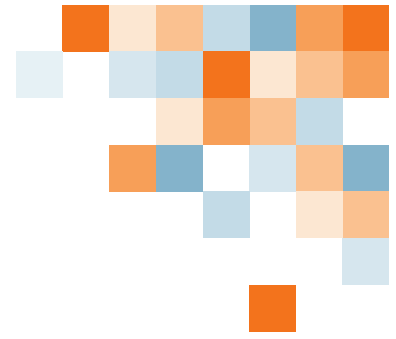
**Summary of Change:** Please be advised that a new Program Outline has been posted to the Industry Training Authority (ITA) [website](#). For details, please see ***Insulator Competency Migration*** (attached).

The following changes have been made to the Insulator (Heat and Frost) program in BC:

- **Trade Name:** The Red Seal trade name only will be used: Insulator (Heat and Frost). The BC trade name, Heat and Frost Insulator, will no longer be used.
- **Technical training:** There will be an increase of 60 hours for technical training:
  - **Level 1** will increase 30 hours (from 120 hrs to 150 hrs)
  - **Level 2** will increase 30 hours (from 120 hrs to 150 hrs)
- **Work-based training:** There will be an increase of 800 hours for work-based training.
- **Challenge pathway:** There will be an increase of 1,110 hours for the challenge pathway.

	Current	Harmonized	Increase
Level 1	120	150	30
Level 2	120	150	30
Level 3	120	120	0
Level 4	120	120	0
WBT	5,920	6,660	740
<b>Total</b>	<b>6,400</b>	<b>7,200</b>	<b>800</b>

<b>Challenge</b>	8,880	9,990	1,110
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**Rationale:** The Insulator (Heat and Frost) National Occupational Standard (NOA, 2012) was reviewed and updated as part of **the Harmonization Initiative** (see *General Information* below for more details). After a series of consultations, workshops and pan-Canadian webinars, a new Red Seal Occupational Standard (RSOS) was developed to replace the NOA, including the following finalized priorities for Insulator (Heat and Frost):

What's changing for <b>INSULATOR?</b>	Changing in BC?	What will it be?
<b>TRADE NAME</b>	<b>YES</b>	<b>Insulator (Heat and Frost)</b>
<b>NUMBER OF TRAINING LEVELS</b>	<b>NO</b>	<b>4</b>
<b>TOTAL HOURS</b> <small>technical + work-based training</small>	<b>YES</b>	<b>7,200 hours</b> <small>Increased by 60 TT hours and 740 WBT</small>
<b>TRAINING SEQUENCE</b> <small>order of subjects taught</small>	<b>YES</b>	<b>Some changes to sequence</b>

The revised RSOS (2017) and the finalized harmonization recommendations triggered a full program review in BC, which resulted in a new Program Outline and the changes to the program as outlined above.

**Details:**

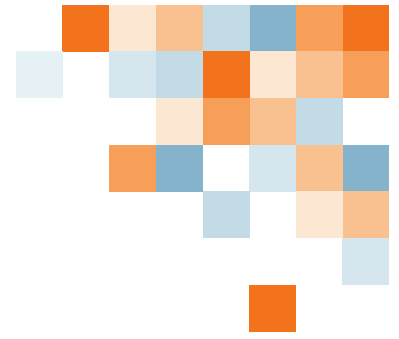
A review of the BC Insulator (Heat and Frost) Program to align it to the RSOS (2017) was conducted in May-June 2018.

ITA will be working with the training provider to identify strategies for transitioning to the harmonized program. ITA is also working on a communication plan to inform apprentices and employer-sponsors of the changes to the program.

**GENERAL INFORMATION: The Harmonization Initiative**

At the request of industry, the Canadian Council of Directors of Apprenticeship (CCDA)'s Harmonization Initiative was launched in Fall 2013 and endorsed by the Forum of Labour Market Ministers (FLMM) in 2014. The goal of Harmonization is to *substantively align* apprenticeship systems across Canada by making apprenticeship training requirements more consistent in Red Seal trades.

In consultation with stakeholders, the CCDA identified four harmonization priorities:



1. Use of Red Seal **trade name**
2. Consistent **total training hours** (in-school and on-the-job)
3. Same number of **training levels**
4. Consistent **sequencing** of training content, including use of most recent Red Seal Occupation Standard.

For more information on the Harmonization Initiative, please visit our website at <http://www.itabc.ca/our-trades-training-system/pan-canadian-harmonization-initiative>.

**Attachments: *Insulator (Heat and Frost) Program Outline Review Details***

This attachment provides details of the revisions made to the Insulator (Heat and Frost) Program Outline during the review process.

**For more  
information  
contact:**

ITA Program Standards  
email: [programstandards@itabc.ca](mailto:programstandards@itabc.ca)

**cc:** All Staff

## Insulator (Heat and Frost) Program Outline Review Details

### Key

Black Text = No change to level  
 CL = Current Level  
 HL = Harmonized level

Blue Text = Content moved to lower level = HL←CL (creates an gap)  
 Purple Text = Content moved to higher level = CL→HL (creates an overlap)  
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### Summary - Competency Migration

The BC Occupational Analysis Chart (OAC) was aligned to the structure of the Red Seal Occupational Standard (RSOS). Therefore, **all of the competencies have been renamed and restructured**. This chart shows the finalized competency distribution for the Harmonized Insulator (Heat and Frost) program. It summarizes the major changes to the competencies.

HARMONIZED LEVEL 1 (HL1)		HARMONIZED LEVEL 2 (HL2)		HARMONIZED LEVEL 3 (HL3)		HARMONIZED LEVEL 4 (HL4)	
<b>A</b>	<b>PERFORM SAFETY-RELATED FUNCTIONS</b>						
	A1 Use personal protective equipment (PPE) and safety equipment						
	A2 Maintain safe work environment						
<b>B</b>	<b>USE AND MAINTAIN TOOLS AND EQUIPMENT</b>						
	B1 Use tools and equipment						
	B2 Use access equipment						
<b>C</b>	<b>ORGANIZE WORK</b>						
	C1 Perform task scheduling						
	C2 Organize materials on site						
<b>D</b>	<b>USE COMMUNICATION AND MENTORING TECHNIQUES</b>					<b>D</b>	<b>USE COMMUNICATION AND MENTORING TECHNIQUES</b>
	D1 Use communication techniques						
							D2 Use mentoring techniques
<b>E</b>	<b>PERFORM ROUTINE TRADE PRACTICES</b>	<b>E</b>	<b>PERFORM ROUTINE TRADE PRACTICES</b>	<b>E</b>	<b>PERFORM ROUTINE TRADE PRACTICES</b>	<b>E</b>	<b>PERFORM ROUTINE TRADE PRACTICES</b>
	E1 Perform measurements and calculations		E1 Perform measurements and calculations		E1 Perform measurements and calculations		E1 Perform measurements and calculations
			E2 Interpret specifications and drawings		E2 Interpret specifications and drawings		E2 Interpret specifications and drawings
	E3 Prepare substrates		E3 Prepare substrates				
	E4 Select materials		E4 Select materials		E4 Select materials		
	E5 Perform layout		E5 Perform layout		E5 Perform layout		
<b>F</b>	<b>INSULATE PIPING AND FITTINGS</b>			<b>F</b>	<b>INSULATE PIPING AND FITTINGS</b>		
	F1 Install insulation on piping, fittings and hangers						
	F2 Apply vapour barriers on piping and fittings						

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HARMONIZED LEVEL 1 (HL1)		HARMONIZED LEVEL 2 (HL2)		HARMONIZED LEVEL 3 (HL3)		HARMONIZED LEVEL 4 (HL4)	
					F3 Install cladding, jacketing and finishes on piping and fittings		
		<b>G</b>	<b>INSULATE TANKS, VESSELS AND EQUIPMENT</b>	<b>G</b>	<b>INSULATE TANKS, VESSELS AND EQUIPMENT</b>		
			G1 Install insulation on tanks, vessels and equipment				
			G2 Apply vapour barrier on tanks, vessels and equipment				
					G3 Install cladding, jacketing and finishes on tanks, vessels and equipment		
<b>H</b>	<b>INSULATE PLUMBING AND MECHANICAL PIPING SYSTEMS</b>	<b>H</b>	<b>INSULATE PLUMBING AND MECHANICAL PIPING SYSTEMS</b>				
	H1 Install insulation on plumbing and mechanical piping systems						
	H2 Apply vapour barrier on insulated plumbing and mechanical piping systems						
		CL1→HL2	H3 Install cladding, jacketing and finishes on plumbing and mechanical piping systems				
		<b>I</b>	<b>INSULATE MECHANICAL DUCTING</b>	<b>I</b>	<b>INSULATE MECHANICAL DUCTING</b>		
			I1 Install insulation on mechanical ducting				
			I2 Install vapour barrier on insulated mechanical ducting				
					H3 Install cladding, jacketing and finishes on insulated mechanical ducting		
		<b>J</b>	<b>INSULATE MECHANICAL EQUIPMENT</b>				
			J1 Install insulation on mechanical equipment				
			J2 Apply vapour barrier on insulated mechanical equipment				
<b>K</b>	<b>INSTALL FIRE STOP SYSTEMS</b>					<b>K</b>	<b>INSTALL FIRE STOP SYSTEMS</b>
	K1 Identify approved fire stop system					CL1→HL4	K1 Identify approved fire stop system
	K2 Apply fire stop materials to architectural, structural, mechanical and electrical components						

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		<b>L</b>	<b>INSULATE FOR SOUNDPROOFING</b>				
		CL1→HL2	L1 Insulate piping and equipment for soundproofing				
		CL1→HL2	L2 Install acoustic assemblies for soundproofing				
				<b>M</b>	<b>INSTALL REMOVABLE COVERS</b>	<b>M</b>	<b>INSTALL REMOVABLE COVERS</b>
				HL3←CL4	M1 Fabricate removable covers (soft)		M1 Fabricate removable covers (hard)
				HL3←CL4	M2 Fasten removable covers (soft)		M2 Fasten removable covers (hard)
		<b>N</b>	<b>INSTALL UNDERGROUND INSULATING SYSTEMS</b>				
			N1 Install pipe insulation to underground systems				
			N2 Install pour-in-place and spray-on insulation to underground systems				
		<b>O</b>	<b>SPRAY SEALERS, COATINGS AND SPRAY-ON INSULATION</b>				
			O1 Prepare material, equipment and surrounding work area and substrate for spraying				
			O2 Apply reinforcing materials, spray insulation, coatings and sealers				
<b>P</b>	<b>INSTALL FIREPROOFING</b>					<b>P</b>	<b>INSTALL FIREPROOFING</b>
	P1 Apply fireproofing to architectural, structural, mechanical and electrical components						
						CL1→HL4	P2 Apply protective coating to fireproofing materials
		<b>Q</b>	<b>INSTALL INSULATION FOR REFRACTORY SYSTEMS</b>				
			Q1 Apply insulation to refractory systems				
			Q2 Install reflective systems				
			Q3 Install cladding, jacketing and finishes to refractory systems				
		<b>R</b>	<b>INSTALL INSULATION FOR CRYOGENIC SYSTEMS</b>				
			R1 Apply insulation to cryogenic systems				

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			R2 Apply vapour barriers to insulated components of cryogenic systems				
			R3 Install cladding, jacketing and finishes to cryogenic systems				
				<b>S</b>	<b>INSULATE FOR MARINE APPLICATIONS</b>		
					S1 Insulate bulkheads, deckheads and hulls		
					S2 Install cladding, jacketing and finishes on marine applications		
<b>T</b>	<b>PERFORM ASBESTOS ABATEMENT</b>						
HL1←CL2	T1 Prepare for asbestos abatement						
HL1←CL2	T2 Remove asbestos						
HL1←CL2	T3 Maintain asbestos						
New	T4 Perform lead abatement and mould remediation						