

O.8
WORK PROCESS SCHEDULE
HEAT & FROST INSULATOR
O*NET-SOC CODE: 47-2132.00 RAPIDS CODE: 0909

This trade schedule is attached to and a part of the Apprenticeship Standards for the above identified occupation. This sequence of Related Classroom Instruction is competency based and will be offered as traditional classroom training or independent study, which may include electronic media.

1. TERM OF APPRENTICESHIP

The term of the occupation shall be four (4) years with an OJL attainment of 8,000 hours supplemented by the required hours of related technical instruction.

2. RATIO OF APPRENTICES TO JOURNEYPERSONS

One (1) Apprentice to four (4) Journeypersons: one apprentice for the first skilled journeyperson employed, and one additional apprentice for each four (4) additional skilled journeypersons employed thereafter. A fraction-there-of will be adhered to.

3. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyperson wage rate.

Term: 8000 Hours

- 1st 1000 hours = 50 % of journeyperson's rate
 - 2nd 1000 hours = 60% of journeyperson's rate
 - 3rd 1000 hours = 70 % of journeyperson's rate
 - 4th 1000 hours = 80 % of journeyperson's rate
- (Each step is one (1) year)

4. SCHEDULE OF WORK EXPERIENCE (See attached Work Process Schedule)

Apprenticeship Oversight Committee may add to the work processes prior to submitting these Standards to the Division of Apprentice Training for approval.

5. SCHEDULE OF RELATED TECHNICAL INSTRUCTION (See attached Related Classroom Instruction Outline)

Instruction can incorporate elements of both electronic media and traditional classroom including online training, distance learning, or independent study of established curriculum.

Curricula modules are based on industry standardized applications of current construction practices. Modules are knowledge and skill based including a system for assessment. The

assessment will include task objectives, procedures, review materials, and competency-based performance tests.

O.8 - WORK PROCESS SCHEDULE

HOURS

This instruction and experience shall include the following operations, but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Pre-fabrication of fittings	700
2. Making plastic cement fitting-applying canvas	500
3. Blocking boiler, tanks and flues	400
4. Applying finish reinforcements and comer board	300
5. Applying rigid board on duct work and housings	400
6. Insulating valves and flanges with blocks or curved segments	400
7. Low temperature insulation, such as, cellular glass, fibrous glass, expanded forms, etc.	1300
8. Applying sectional pipe covering	400
9. Applying manufactured fittings	300
10. Vapor sealing of fittings, flanges, etc.	300
11. Applying finish cements	600
12. Applying clip type and welded pins	300
13. Applying flexible duct insulation	300
14. Canvassing large areas, tanks, ducts, etc.	700
15. Fabricating removable insulation for turbines and vessels with rigid and flexible materials	800
16. Applying felt paper and metal for weather protection of pipes and fittings	300
TOTAL HOURS	8000

O.8 - INSULATION WORKER RELATED CLASSROOM INSTRUCTION

Note: Due to regional and local code differences and climate conditions, duration of instructional competencies/modules is suggested estimates only.

Modules

Hours

Module Level 1

170

Orientation

Trade Relations

Tools of the Trade

Material Handling, Storage and Distribution

Characteristics of Pipe Insulation

Installing Fiberglass Pipe Insulation

Installing Pipe Fittings, Valves, and Flanges

Module Level 2

147.5

Installing Flexible Foam Insulation

Installing Blanket Insulation for Ducts

Installing Board Insulation for Ducts
Installing Calcium Silicate/Expanded Perlite Pipe Insulation
Installing Mineral Wool Insulation
Installing Rigid Foam Insulation
Installing Board and Block Insulation
Cement and Fabric Finishes & Mastics
Plumbing Systems
Chilled and Hot Water Heating Systems

Module Level 3

147.5

Trade Math
Air Duct Systems
Theory of Heat Transfer and Moisture Effects
Adhesives and their Uses
Steam, Condensate, and Process Water Systems
Large Boilers, Breechings, Precipitators and Apparatus
Refrigeration and Cryogenic Systems
Specialized Insulation Systems
Blueprints and Specifications
Jacketing Fabrication-Piping and Fittings
Jacketing Fabrications- Vessels and Equipment
Sheet Metal Lagging

Field Safety

47.5

Hazard Communications
Personal Protective Equipment
Work-Zone Safety
Electrical and High Voltage Hazards
Fire Protection and Prevention
Hand and Power Tool Safety
Welding Safety
Fall Protection
Steel Erection
Walking and Working Surfaces
Ladders and Scaffolding
Horizontal Directional Drilling Hazards
Heavy Equipment, Crane and Rigging Safety
Trenching Safety
Forklift Safety
Lockout/Tag out
Confined Spaces
Concrete and Masonry

Project Supervision

Orientation to the Job
Human Relations and Problem Solving
Safety
Quality control
Contract and Construction Documents
Document Control and Estimating
Planning and Scheduling
Resource Control and Cost Awareness

TOTAL HOURS

597.5

DAT apprenticeship program standards recommend 150 hours of related technical instruction per year.