



TECHNICAL INSULATION GLOBAL TRAINING PROGRAMS

OUR SITE | YOUR SITE | VIRTUAL



ADVANCING INDUSTRY EDUCATION

Owens Corning's commitment to the insulation sector extends beyond material science and manufacturing to include career education for engineers, contractors and installers. As the insulation industry evolves to meet the emerging needs of energy-efficient, sustainability-focused facilities, education is foundational to achieving high-performing insulating systems across the supply chain – from specification to install and inspection.

The Owens Corning Technical Insulation Training Center in Pasadena, Texas, USA, is our latest investment in educating the next generation of industry professionals. Equipped with state-of-the-art equipment, advanced technologies and seasoned experts, the 22,000 ft² (2,040 m²) space complements our purpose-built training center in Tessenderlo, Belgium, to help expand training across the globe.

Real-World Experience

Our training centers combine classroom education with hands-on experience across a wide range of applications from cryogenic to high temperatures, including special modules focused on fire protection, acoustics, buried piping and corrosion mitigation. Our training programs are designed to benefit a range of industry stakeholders, including owners, contractors, channel partners, engineers, specifiers and inspectors.

Multi-Use Centers

Owens Corning training centers also serve as hubs for special industry gatherings and are ideal for team meetings held in conjunction with exhibitions and trade shows. The facilities can also be used for application test staging, practical application development and as platforms for thought leadership.

Training That Fits Industry Needs

In addition to our flagship training center sites, Owens Corning offers mobile training centers and virtual training capabilities. This nimble, customer-focused approach to education enables us to deliver training opportunities wherever they are needed.

We are proud to develop and deliver standardized and customized training programs that support the industry professionals who work with the Technical Insulation products contributing to high-performing mechanical and industrial process systems.

“Whether a customer wants insulation education delivered at our facility, at their location or through digital learning, Owens Corning is committed to delivering training relevant to customers' needs and situations.”

Brandon Stambaugh
Technical Services Director





U.S. TECHNICAL INSULATION TRAINING CENTER

826 East Sam Houston Pkwy S
Pasadena, Texas 77503, USA

Experience

Visitors can expect a memorable experience starting from the welcoming arrival at our facility. The Training Center is digitally integrated and Wi-Fi enabled, ensuring that visitors are connected. Conditioned workspaces provide comfort while engaging in technical demonstrations and application displays. Guests will enjoy both theoretical and hands-on activities that make their visit interactive and educational.

Site Features

- 22,000 ft² (2,040 m²) Facility
- Multi-use Design
- 3,000+ ft² (280+ m²) Application Floor

Equipment

- 5 ft Horizontal Tank
- 6 ft Diameter Sphere
- 24-in. Pipe with E90, Tee
- 12 ft x 3-in. Pipe Rigs
- Tabletop Copper & Steel Rigs
- Duct and Air Handling Rigs
- Fabrication Equipment





TESSENDERLO FOAMGLAS® INSULATION TRAINING CENTER

Albertkade 1, 3980 Tessenderlo, Belgium

Experience

Visitors to our facility can enjoy a comprehensive tour of the production area, exploring how our products are made. They can then proceed to our well-equipped meeting rooms for discussions and collaborations. Additionally, guests are treated to engaging science demonstrations and can explore our digital showroom featuring application displays. The experience is further enriched with sessions that combine both theory and practice, ensuring a holistic understanding of our offerings.

Site Features

- 186,000 m² (2 million ft²) Production facility
- 180 m² (1,940 ft²) Showroom
- 630 m² (6,780 ft²) Training Center with multi-use design

Equipment

- 1.5 m OD Horizontal tank (dia 1500mm)
- 24-in. pipe with E90, Tee, Redu, Flange, Valve
- 10-in. pipe with E90, Tee, Redu, Flange, Valve
- 4-in. pipe with E90, Tee, Redu, Flange, Valve
- 3-in. pipe with E90, Tee, Flange, Valve
- Tabletop Tank Head
- Mock-up for steel deck & continuous support roofs
- Mock-up for pitched roofs
- Mock-up for wall applications
- Bio-circle Vario SL Compact tool cleaner (sustainable tool cleaner)
- Fabrication equipment



TYPICAL TRAINING PROGRAMS

A typical visit to one of our training centers will include a tour of our facilities, and all of our programs may include both theoretical and practical training options. Learning about Technical Insulation products and systems, and the science behind how insulation works, and why it is needed in our classroom complement our practical, hands-on sessions.



The practical sessions cover safe handling and working with insulation materials, accessories and offer the opportunity to install insulation on pipe rigs in a realistic range of sizes and settings. We consider the most common problems that can be encountered on a job site and demonstrate the techniques to easily solve these.

“Since industry technologies and processes are constantly developing, there is always something new to learn in the mechanical insulation world. That makes our job exciting.”

Cassie Perryman
Technical Services Engineer





WHO SHOULD ATTEND

Programs are designed for and can be adapted to accommodate facility owners, maintenance teams, contractors/installers, engineers/specifiers, distribution teams, and inspectors.

Often, companies choose installation demonstration to supplement the education of their new-hires, students and apprentices to give them rapid familiarization with technical insulation systems. Major engineering companies and owners of industrial processes such as upstream and downstream oil and gas facilities, and pharmaceutical plants value these demonstrations for their engineering staff because they enhance their ability to design and specify better performing insulation systems.

Commercial mechanical and HVAC contractors can learn practical installation techniques, and material features that can help to improve the installation processes and efficiencies. Inspectors will gain valuable experience in how to evaluate installations in detail typically not covered by many standard industry courses.



ID #: 2307-06
Date: July 11, 2023
Location: Ft. Lauderdale FL

Certificate of Participation

John Doe

XZY INSULATION

Has successfully participated in the Training Session

FOAMGLAS® Chilled Water Systems

Bobby Ferrell
Sr. Technical Support Specialist

Timothy Board
Sr. Technical Services Lead

WHAT WILL MY TEAM ACHIEVE?

Our goal is to provide a platform that helps everyone who specifies, installs, or inspects insulation systems the opportunity to enhance their abilities and help their companies to improve installed system quality, installation efficiency and time.

In recognition of participation, each attendee will be awarded a certificate of completion at the end of each workshop. Certificates may be obtained for general topics, specifications, or specific projects.

Disclaimer – Training Sessions are not intended to replace the policies and procedures enforced by your Company or the Customer, and in no way makes Owens Corning, and/or its affiliated companies and their respective shareholders, members, directors, managers, officers, employees or agents liable for any failure by any of your personnel to follow said policies and procedures.

"As specifying engineers, installers and inspectors retire, we have a responsibility to help prepare the next generation of workers. Customers need people with the expertise to specify, install and maintain insulating systems designed to stand up to the extreme conditions involved in industrial processes."

Bobby Ferrell
Technical Service Engineer

MOBILE TRAINING AND SITE SUPPORT

The maximum benefit from the training programs will be experienced in the training center locations, but where it is not possible for clients to travel to our training centers, our technical services unit can be brought to your offices or job site. Depending on location, Owens Corning may deploy our mobile training unit or work with local teams to prepare for onsite training program.

VIRTUAL TRAINING

If our site or your site is not an option, many of our classroom programs may be adapted to virtual setting. Contact us to see how we might be able to help your team. We have a wide range of slide decks for all different applications, movies and animations showing our systems and a detailed drawing library for specific installation procedures.



CUSTOMIZED TRAINING

Typical training includes a facility tour; safety briefing; introduction to insulation; review of specifications, codes and standards; and installation of insulation for various application types and conditions. Some of our training options also include special topics. Training takes place in both classroom and application settings, for an engaging combination of theoretical discussions, demonstrations and hand-on activities.

Whether you're an owner, engineering company, distributor or contractor, Owens Corning training can be tailored to your business and learners. Choose from the wide range of training programs below, with the option to expand or consolidate lessons based on relevance to your team.

FIBERGLAS™ PIPE & MECHANICAL INSULATION

Introduction to Insulation

- Fundamentals of Heat Transfer
- Fundamentals of Acoustics
- Fundamentals of Condensation Control
- Freeze Protection
- Vapor Retarders
- How do Insulations Function (Fibrous & Cellular)
- NAIMA 3E Plus Application
- Types of Insulation
- Material Standards (ASTM)
- Owens Corning Products
- Insulation Critical Product Characteristics & Methods
- Insulation Selection Criteria

Specifications, Guide Specifications, Codes, & Standards

- ASHRAE/IECC
- Guide Specifications
- Highlights of Codes

Installation

- Insulation PPE & Safety
- Installation Tools
- Insulation Accessories
- Pipes-Chilled Water Installation Details
 - Proper Storage of Insulation
 - Role of Pipe Insulation in Chilled Water Systems
 - Pipe Insulation Product Details (Dimensions, Vapor retarder, Closure System)
 - Pipe Insulation Mastics and Tapes
 - Common Tools of The Trade
 - Insulation Thickness Determination and Importance
 - Nesting of Pipe Sections
 - Installation of Straight Sections
 - Installation of Fittings
 - Installation of Valves
 - Installation of Hangers
 - Installation of Special Equipment
 - Installation at Terminations
 - Installation of Vapor Dams (Importance, Method, & Frequency)
 - Field Applied Jackets & Covers.
 - Installation of FlexWrap and Pipe&Tank



FIBERGLAS™ PIPE & MECHANICAL INSULATION (CONTINUED)

Installation

Pipes- Ambient and Hot System Installation Details

Proper Storage of Insulation

Role of Pipe Insulation in Hot Systems

Pipe Insulation Product Details (Dimensions, Vapor Retarder, Closure System)

Pipe Insulation Mastics and Tapes

Common Tools of The Trade

Insulation Thickness Determination and Importance

Nesting of Pipe Sections

Installation of Straight Sections

Installation of Fittings

Installation of Valves

Installation of Hangers

Installation of Special Equipment

Installation at Terminations

Field applied Jackets & Covers.

Installation of FlexWrap and Pipe&Tank

Polymer Pipes in Plenums

What is a Plenum Space

Fire Risks in Plenums

Code Compliance Requirements (Polymer Pipes)

Compliance with OC FG Pipe Insulation (PVC/CPVC & PP)

- Installation Requirements

- Plenum Wrap Alternative

- Frequently Asked Questions

Commercial Equipment & Ducts Installation details

Insulation Type Options

Board Insulation Installation Methods

Blanket Insulation Installation Methods

FlexWrap and Pipe&Tank Installation Methods

Vapor Barrier Considerations for Chilled Systems

Commercial Acoustic Insulation Installation details

SelectSound Board and Blanket Information

Board Insulation Installation Methods

Blanket Insulation Installation Methods

Industrial Equipment & Tanks Installation Details

Insulation Type Options

Board Insulation Installation Methods

Blanket Insulation Installation Methods

FlexWrap and Pipe&Tank Installation Methods

Vapor Barrier Considerations for Chilled Systems

Metal Building Insulation Insulation

Role of Insulation in Metal Buildings

Climate Zones

Code Compliance Requirements (MBI)

NAIMA 202-96 & NIA 404 Requirements

Job Site Material Storage Recommendations

Roof Installation Methods

Single layer Faced Insulation

Double layer Insulation

Single layer with Liner System

Single layer with filled Cavities

Through fastened Insulated Roofs

Wall Installation Methods

Single Layer Compressed

Single Layer in Cavity

Double layer Insulation

Vapor Barrier Fastening Methods

Fabricated Insulations

UtiliCore HP5

UtiliCore L-Series

Fiberglas Fabrication Board

Thermal Range System

FIBERGLAS™ AIR DISTRIBUTION INSULATION

Introduction to Insulation

- Fundamentals of Heat Transfer
- Fundamentals of Acoustics
- Fundamentals of Condensation Control
- Vapor retarders
- How do Fibrous Insulations Function
- NAIMA 3E Plus Application
- Types of Insulation
- Material Standards (ASTM)
- Owens Corning AD Products
- Insulation Critical Product Characteristics & Methods
- Insulation Selection Criteria
- Proper Storage of Insulation
- Insulation Thickness Determination and Importance
- What is a Plenum Space
- Fire Risks in Plenums
- Competitive Insulation Comparative

Specifications, Guide Specifications, Codes, & Standards

- ASHRAE/IECC
- Climate Zones
- Guide Specifications
- Highlights of Codes
- ICC/IBC/IRC/IECC/IMC
- IAPMO
- NAIMA
- SMACNA

Installation / Fabrication

- Insulation PPE & Safety
- Installation Tools
- Insulation Accessories
- Closure Methods
- Tapes and Mastics
- Outward Clinching Staples



FIBERGLAS™ AIR DISTRIBUTION INSULATION (CONTINUED)

Installation / Fabrication

Rooftop Duct Insulation Installation Method

Duct Wrap

Properties and Component roles of Duct Wrap

Package label Thickness & R-Value

Dual Role Purpose of Duct Wrap (DW & Industrial Blanket)

Stretch-Out Calculations

Installation on Different Geometry Ducts

Installation on Fittings and Transitions

Installations Around Hangers and Supports

Installation Obstacles (Pipes and other Mechanicals)

Installation Over Other Insulating Materials for Increase R-Value

Double Layer Duct Wrap

FRK DW over FRK DW

FRK DW over UF DW

Duct Wrap over Duct Board

Installation at Terminations

Commercial Equipment & Ducts Installation Details

Insulation Type Options

Board Insulation Installation Methods

Blanket Insulation Installation Methods

Duct Board

Tools Review

Hand Groove Tools

Glassmaster 220/420 & Associated Tools/Knives

Staplers

Tapes and Mastics

Knives

Angle Templates for Fittings

Hole Cutters

Cuts-All Shiplap Tools

Glassmaster Grooving Machine

Duct Board Product Review

Machine Overview and Safety

Knives/Tools and Machine Setup

Grooving 4ft Modules

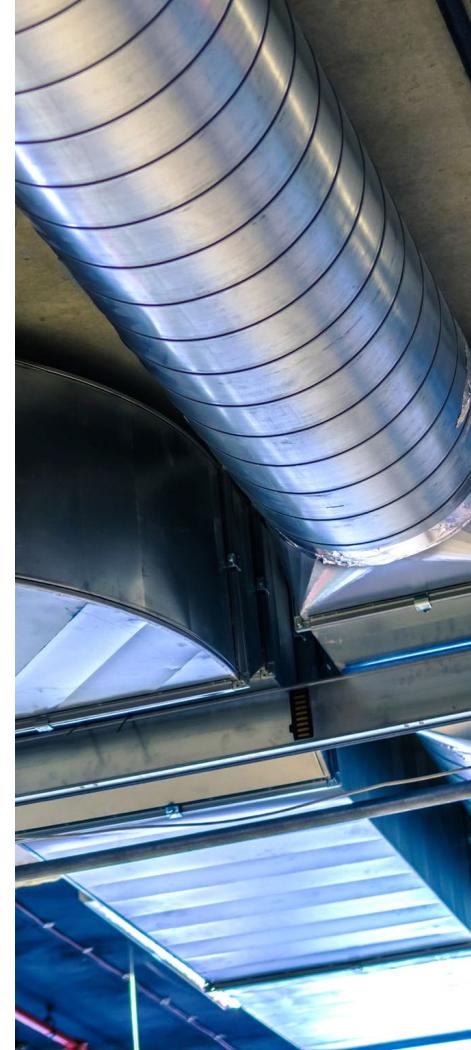
Module Fabrication and Closure Methods

Fittings, End-Caps, Offsets, and Transitions Fabrication

Duct Board AHU Plenum Fabrication

Branch Collars and Flex Duct Branch Attachment

Duct Board Duct System Installation



“Owens Corning feels that it's important to be able to provide the industry and our customers with the best possible information to make an educated decision on what product – thickness and so forth – is going to best serve the needs and the goals that you're trying to meet in this building.”

David Burd
Technical Manager

FIBERGLAS™ AIR DISTRIBUTION INSULATION (CONTINUED)

Installation / Fabrication

Duct Board

Hand Groove Tools

Knives/tools Identification

Grooving 4ft Modules

Module Fabrication and Closure Methods

Fittings, End-Caps, Offsets, and Transitions Fabrication

Duct Board AHU Plenum Fabrication

Branch Collars and Flex Duct Branch Attachment

Spiral Duct Liner

Tools Review

Hand Groove Tools

Glassmaster 220/420 & Associated Tools/Knives

Tapes and Mastics

Knives

3, 4, & 5 Gore Elbow Templates

Reducer / Transition Templates

Glassmaster Grooving Machine

Duct Board Product Review

Machine Overview and Safety

Knives/Tools and Machine Setup

Grooving 4ft Round liner Modules

Grooving 4ft Oval liner Modules

Grooving 10ft Round liner Modules

Grooving 10ft Oval liner Modules

Module Fabrication and Closure Methods

Installation round Pipe Liner

Installation Oval Pipe Liner

Fabrication of Fittings, End-Caps, Offsets, and Transitions

Installation of Fittings, End-Caps, Offsets, and Transitions

Duct T Fabrication

Hand Groove Tools

Knives/Tools Identification

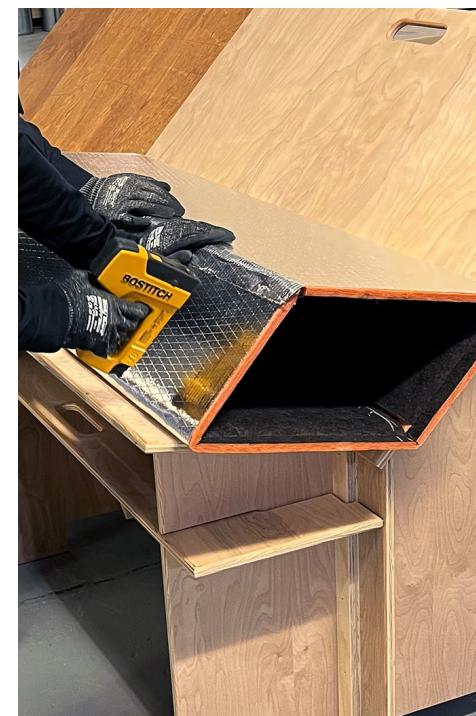
Fittings, End-Caps, Offsets, and Transitions Fabrication

Duct T Fabrication

"By doing the application together in our training center, an engineer can learn how fabrication techniques may help to lower the installed cost of different insulating materials in a process application."

Bill Tolliver

Product Technical Manager



FOAMGLAS® CELLULAR GLASS INSULATION

Factory tour

Factory visit content

Introduction

Overview of Manufacturing Process

Basic health & safety

Tour of FOAMGLAS® Production Facility *

*Only available in Tessenderlo training center.



Laboratory demonstrations

Standard content

Compressive-Strength Testing

Closed-Cell Measurement

Density Measurement

Thermal Conductivity Measurement

Smoke Development/Fire Propagation

Water Vapor Permeability

Water Absorption

Properties of Accessories



FOAMGLAS® insulation theory

Standard content

Introduction to FOAMGLAS® Insulation

Key FOAMGLAS® Insulation Properties

Application Overview

Water in Insulation

Prevention of Insulation Failures

Prevention of Corrosion Under Insulation (CUI)

FOAMGLAS® Insulation Above-Ambient Systems

FOAMGLAS® Insulation Cryogenic Systems

Fire Protection

Owens Corning Accessory Products

Owens Corning Value-Added Services



FOAMGLAS® CELLULAR GLASS INSULATION (CONTINUED)

Handling FOAMGLAS® insulation

Working Safely with FOAMGLAS® Insulation

Safety Data Sheets & Warning Symbols

Safe use of Tools

Demonstration of FOAMGLAS® pipe insulation

Inspection of Pipe-Surface Condition

Inspection of Insulation and Accessory Materials

Verification of Documentation for Materials

Verification that Correct Material, Coatings, Fab Adhesives Used

Verification of Physical Condition of Materials

Installation of Straight Sections of Insulation

Square cuts Using a Miter Box

Demonstration of Joint Staggering in Single-Layer Systems

Selection & Application of Joint Sealants: Cryogenic, Chilled Water, Hot

Securement of Insulation Using Filament Tape or Metal Banding

Fitting Insulation to Irregular Surfaces (Rubbing, Gouging)

Application of Insulation Over Trace Heating

Repair or Replacement of Damaged Pieces

Installation of Fittings: Elbows, T-Pieces, Reducers

Fabricating T Pieces by Making Angled Cuts with a Miter Box

Installation of Valve & Flange Boxes

Terminations: End of Day & Vapor Stops

Penetrations: Sealing

Joint staggering in Double-Layer Systems

Application of PITTCOTE® Mastic Coatings

Application of PITTWRAP® Jacketing

Application of pre-jacketed Insulation Sections

Hot Work Additional Skills

Application of Insulation Over Trace Heating

Simple Terminations

Penetrations: Sealing

Application of PITTCOTE® Mastic Coatings

Application of PITTWRAP® Jacketing

Cold/cryogenic Work Additional Skills

Simple Terminations

Cryogenic Vapor Stops

Penetrations: Sealing

Application of PITTCOTE® Mastic Coatings

Application of PITTWRAP® Jacketing

Mixing & Application of Adhesives

Inspection of FOAMGLAS® insulation systems

Acceptance Criteria for Fabricated FOAMGLAS® Insulation

Acceptable Joints

Acceptable Joint Sealing

Acceptable Repairs

Acceptable PITTCOTE® Mastic Coating Thicknesses

Acceptable Penetration Sealing

Acceptable Vapor Stopping

FOAMGLAS® Insulation Training Courses for your Special Requirements

Pre-project/Startup Re-Familiarization

Pre-project/Startup Familiarization with New Products / Techniques

Client Specification Familiarization

Facilities for Comparative Insulation Installations

Support for & Integration Into, your Existing Training Program

EXAMPLES OF KEY SKILLS TAUGHT FOR WORKING WITH FOAMGLAS® INSULATION



Application of joint sealants



Spreading of joint sealants to full-depth



Accurate cutting



Correct staggering of joints



Use of factory pre-fabricated fittings



Production of more-accurate joints



Application over trace heating



Application of scrim and mastic



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