

## TIAC's 57<sup>th</sup> Annual Conference Montreal, QC

#### Introducing

#### **NIA's Thermal Insulation Inspector Certification™**



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# Thermal Insulation Inspection Certification ™



A course designed to teach individuals to inspect mechanical insulation systems against the project specification, contract document, or controlling document according to the **NIA Insulation Inspection Standard** TM

This is not a consultation that passes judgment on the quality of the installation or whether the inspector subjectively feels that a different insulation should have been used on the project.

The inspector will compare the specification or the controlling document to determine if the insulation installation matches these guidelines.



## Why is this Program Needed



- Eliminate the Continued Use of Outdated and Poor Specifications
- Conflicting Documents—Unclear Directions
- Enhance QA/QC Programs
- Provide Insulation Inspectors that Are Highly Trained
- Improve Profitability
- Liability Support
- Cost Control/Budgeting





# NIA's Thermal Insulation Inspector Certification™ Program



#### **Certification Prerequisite**

#### Introduction Level

- The need and importance of inspection
- The insulation industry market segments
- Why insulate?
- Defining mechanical insulation and protective covering materials
- Safety data sheets (SDSs)
- Codes, standards, specifications, and guidelines
- · Resources available
- Review and testing (Certificate of Level Completion obtained with successful results)

**Inspection Certification** 

# **Certification Level**

- Roles and responsibilities of an inspector
- Basis of inspection—what are you inspecting to?
- The inspection process (new construction and maintenance)
- Importance of pre-inspection conference
- Inspection tools and techniques
- Common occurrences—problem areas
- · Inspection documentation and reporting
- Certification process, procedures, and recertification
- Review and testing (Inspector Certification obtained with successful results)

#### Course Prerequisite: Refresher

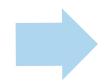
- 3-Years of Experience
- Good Communication Skills

# E-Learning Modules

- Defining mechanical insulation
- Benefits of mechanical insulation
- Mechanical insulation science & technology
- Mechanical insulation design objectives
   & considerations
- Mechanical insulation maintenance
- Testing (Certificate of Completion obtained with successful results)

Prerequisite





Part 2 – 2 days

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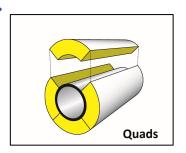


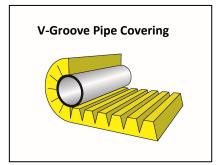
**Defining Insulation Categories and Forms:** 





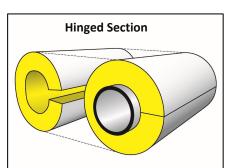


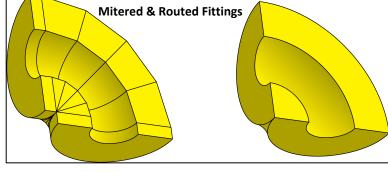






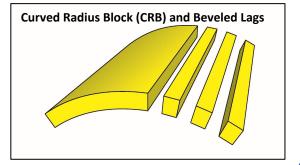










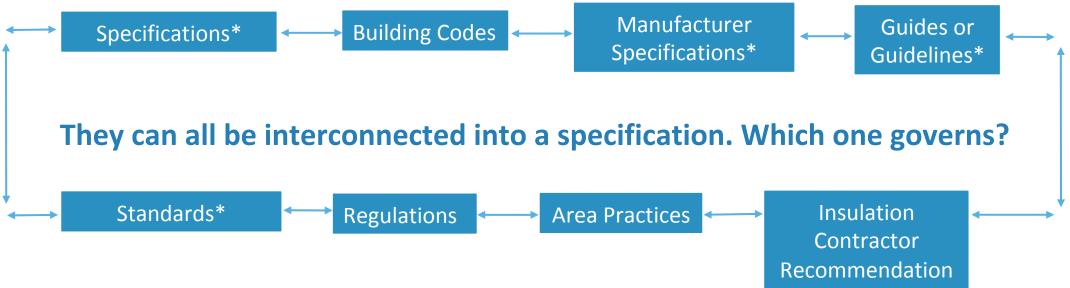






# Standards, Codes, Regulations, Guidelines, and Specifications:

How to Read and Interpret a Specification



\*) Denotes representative—actual documents are reviewed and discussed in class.





### The Inspector's Role and Responsibility

Inspect, Verify, Document, and Report

Regardless of who you work for, or who the client may be, you are not a design engineer, consultant, facility owner, or mechanical or insulation contractor.

Looking at mechanical insulation from a specification compliance or assessment, the inspection perspective provides a different view from other levels of the decision ladder.





#### **Corrosion under Insulation (CUI):**

- New Construction Applications: Inspections can help with prevention efforts
- Maintenance on Previous Installations: Inspections or assessments can support identification of high-risk areas and a call for action



The course will review the elements required for corrosion to occur and debunk the myth that insulation causes it.



## **How Much of This Is Out There?**













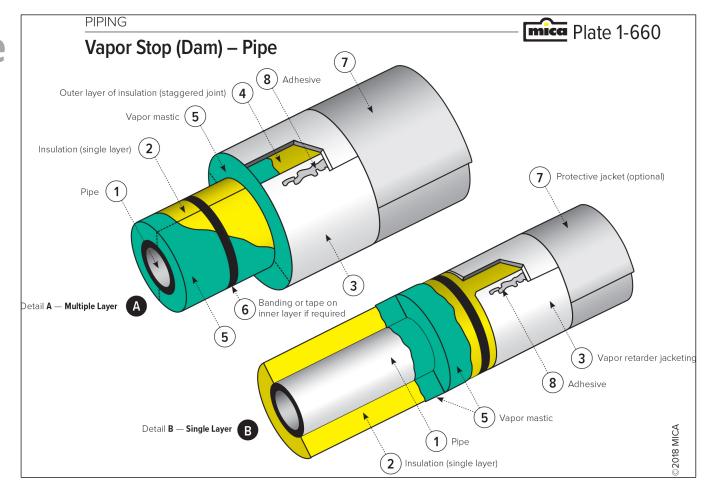






### Example

# Inspection Exercises Probable Areas of Concern



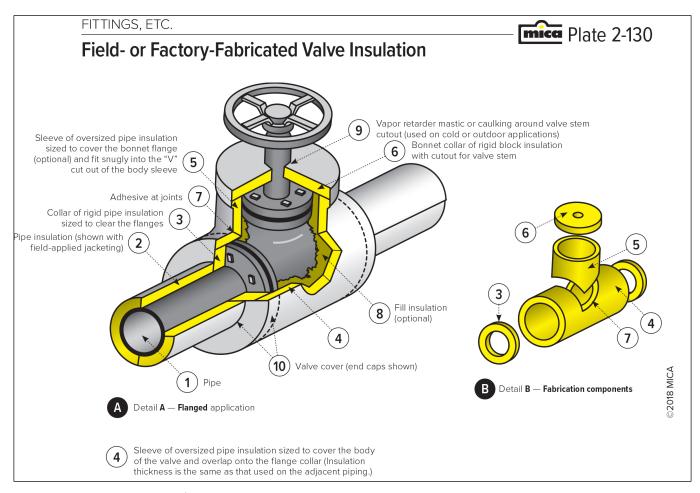
Reprinted from the  $8^{th}$  edition of the National Commercial & Industrial Standards Manual with permission from the Midwest Insulation Contractors Association (MICA).





### Example

# Inspection Exercises Probable Areas of Concern



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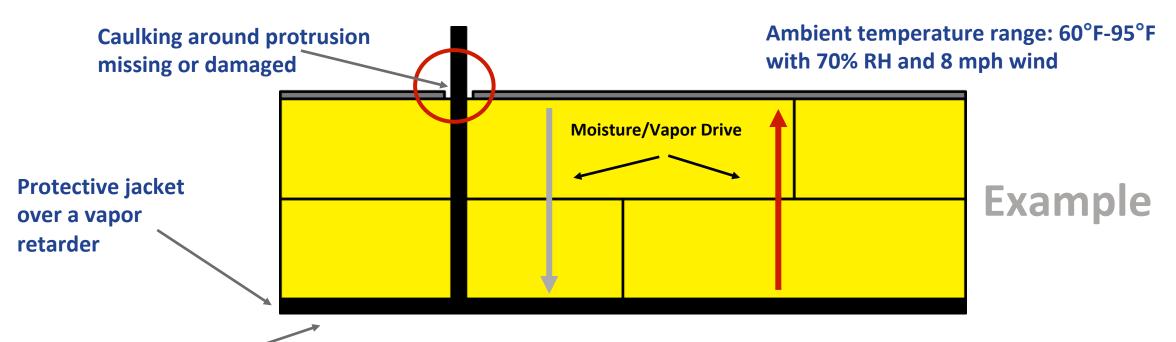


**Uncoated substrate** 

# Program Scope



#### Inspection Exercises: Common Occurrences—Common Sense Approach



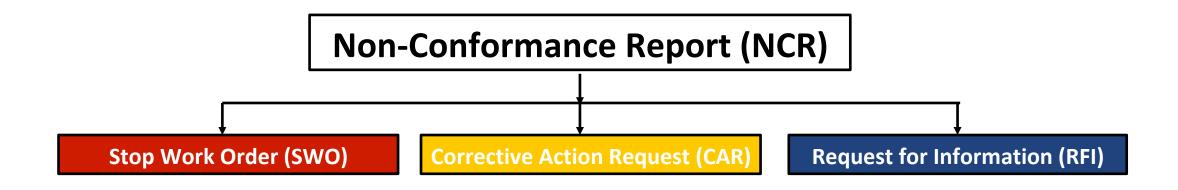
**Service Temperature: -20°F** 

**Service Temperature: 250°F** 





# Inspection Process Documentation and Reporting



**Hold Point Notifications and Release Documents** 

Including the Extensive NIA Insulation Inspection Standard Non-Conformance Listing



# What Is The Value Of The Program To Your Company?

#### **Course Audience**

- Insulation contractors
- Code/regulatory officials
- CUI and educational extensions
- Engineering firms
- Facility owners
- Inspection—QA/QC firms
- Manufacturers
- Mechanical and other contractors
- Mechanical insulation distributors/fabricators

**QA/QC Program** 

Risk Assessment

Knowledge

**Liability Support** 

**Maintenance Support** 

**Employee Training** 

**Cost Control/Budgeting** 

**Conformance Monitoring** 

Marketing/Sales

**Continuing Education** 

Inspector'

**Craft Training** 

**Profitability** \$

Growth

**Productivity** 

**Commissioning** 

**Service** 



## NIA's Thermal Insulation Inspector Certification Program™



#### **Summary of Course:**

- Comprehensive—starts with the basics through the inspection process and reporting
- Applicable to the commercial and industrial mechanical insulation industry segments (all service temperature ranges)
- Course is product and labor generic in nature
- Contains multiple class participant exercises—participation and interaction are encouraged
- Review and discussion of actual documents
- Product samples from all basic groups are present during the course
- Allows time for networking with fellow participants
- Test measures students' comprehension of the material
- Take-aways are extensive
- Developed, reviewed, and taught by experienced industry professionals

Certified Insulation Inspectors have been requested by industry and are needed in the industry



### NIA's Thermal Insulation Inspector Certification Program™



#### **Marketing the Course:**

- Certified Inspectors
- Manufacturers
- Engineers, Facility Owners, and Specifiers
- Allied NGOs
- Government Agencies
- State Codes
- State Licensing

Certified Insulation Inspectors have been requested by industry and are needed in the industry



## NIA's Thermal Insulation Inspector Certification Program™



"Now we have the opportunity to filter out a lot of errors before they become an expense. In addition, this certification gives respect and a brand to the insulation industry. I think the program will spread quickly. Engineers and contractors in my company are already asking how they too can become certified. People recognize the value and it will continue to grow."

-Simon Rix, QC Engineer, Chiyoda Corporation
Chiyoda handles about 40% of the global LNG market for engineering design and construction.



Mr. Rix took the May 2019 Insulation Inspector Course.

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### Sign up for the last 2019 class!

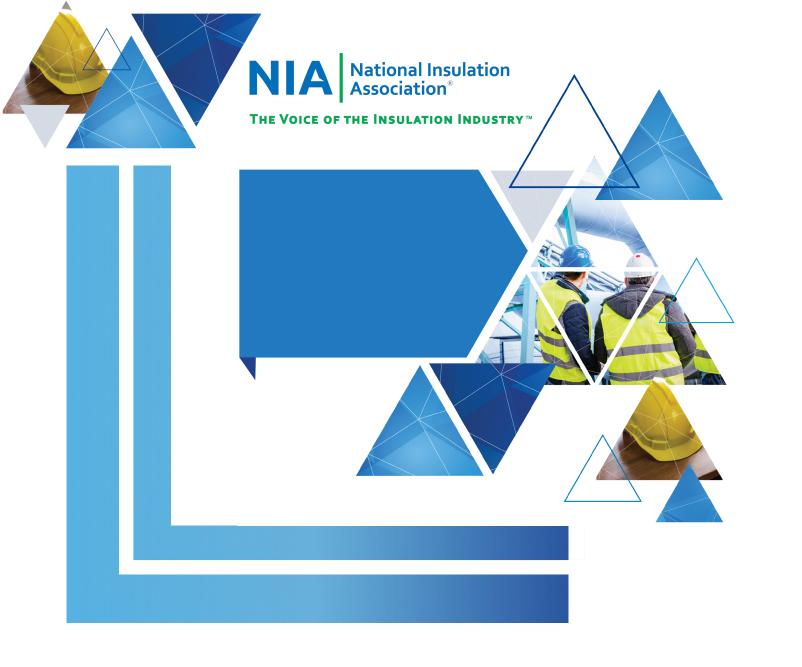
August 6–9, 2019, Houston, TX SOLD OUT!

December 3-6, 2019, Houston, TX

Stay tuned for more class options in 2020. In house/sponsored classes are also available.

<u>training@insulation.org</u> www.insulation.org/inspector





## Questions?

Thank You!
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