Industrial Insulation and Refractory Work Control Training Course

2 – 6 May 2027
Johannesburg

AGILE LEADERS
Training Center

Industrial Insulation and Refractory Work Control Training Course

Ref: 490_169052 **Date:** 2 – 6 May 2027 **Location:** Johannesburg **Fees:** 6000 Euro

Overview

Industrial Insulation and Refractory Work Control Training Course is a one-week course for maintenance engineers, refractory supervisors, insulation inspectors, quality engineers, shutdown planners, and construction supervisors who leave with an Insulation and Refractory Work Control File. Participants connect service conditions, material selection, installation, inspection, dry-out, moisture protection, and repair. The course turns specifications and field evidence into controlled work acceptance. Agile Leaders Training Center presents insulation and refractory work through execution and quality controls.

Who Should Attend

- Maintenance-engineering functions responsible for thermal systems and repair decisions
- Refractory-supervision functions responsible for lining preparation, placement, curing, and dry-out
- Insulation-inspection functions responsible for materials, vapor barriers, cladding, and workmanship
- Quality functions responsible for inspection plans, hold points, testing, and records
- Shutdown and construction functions responsible for sequencing, access, interfaces, and turnover

The course assumes participants can read technical specifications and inspection records, and it leaves out basic trade instruction, furnace operation, and laboratory material formulation.

Departments and Industries

The course supports departments and industries that install, maintain, inspect, or accept insulation and refractory systems.

- Process, petrochemical, and energy facilities
- Power generation and utility operations
- Cement, metals, and mineral-processing plants
- Industrial maintenance and shutdown contractors
- Engineering, quality, and asset-integrity departments

Learning Objectives

By the end of this course, participants will be able to:

- Analyze service conditions and material properties for system selection
- Evaluate design interfaces, substrates, anchors, joints, barriers, and cladding
- Apply storage, traceability, mixing, placement, curing, and dry-out controls
- Build inspection and test plans with defined hold points
- Diagnose insulation and refractory defects from field evidence
- Create an Insulation and Refractory Work Control File

Course Agenda

Day 1: Service Conditions and Material Selection

- Operating Temperature and Exposure Profile
- Insulation Heat-Flow and Surface-Temperature Review
- Refractory Material Property Selection Matrix
- Corrosion and Moisture Compatibility Assessment
- System Requirement and Material Schedule

Day 2: Design Interfaces and Work Preparation

- Insulation Thickness and Layering Review Sheet
- Refractory Lining, Anchor, and Joint Interface Map
- Substrate Condition and Surface Preparation Checklist
- Material Storage and Traceability Register
- Method Statement and Inspection Test Plan

Day 3: Installation and Process Control

- Refractory Mixing and Water-Control Record
- Casting, Gunning, Ramming, and Brickwork Placement Check
- Curing and Thermal Dry-Out Schedule
- Insulation Joint, Support, and Layer Installation Check
- Vapor Retarder, Weather Barrier, and Cladding Detail Review

Day 4: Inspection, Defects, and Turnover

- Installation Hold-Point and Witness-Point Log
- As-Installed Density and Test-Specimen Record
- Insulation Moisture and Damage Inspection Map
- Refractory Defect Classification and Repair Decision Tree
- Completion Dossier and Turnover Release Matrix

Day 5: Insulation and Refractory Control Practice

- Suggested Exercise: Select Materials for Service Conditions
- Suggested Exercise: Review an Installation Method Statement
- Suggested Exercise: Diagnose Lining and Insulation Defects
- Suggested Exercise: Decide Repair and Release Status
- Capstone Exercise: Insulation and Refractory Work Control File

Practical Exercises

The course uses suggested activities to convert specifications and field observations into work-control decisions.

- Suggested activity: compare service temperature, exposure, substrate, moisture, and process requirements for material selection.
- Suggested activity: review anchors, joints, layers, barriers, cladding, mixing, placement, curing, and dry-out in a method statement.
- Suggested activity: classify defects and select inspection, repair, or replacement actions from field evidence.
- Suggested activity: assemble material, execution, testing, nonconformance, repair, and turnover records into a control file.

FAQs

What does insulation and refractory work control training address?

Insulation and refractory work control training addresses material selection, design interfaces, storage, preparation, installation, curing, dry-out, barriers, cladding, inspection, defects, repair, and turnover evidence.

Who suits insulation and refractory training, and what does it assume?

Maintenance engineers, refractory supervisors, insulation inspectors, quality engineers, shutdown planners, and construction supervisors suit the training. It assumes experience reading specifications and inspection records.

How does insulation and refractory work control differ from trade-skills training?

Insulation and refractory work control focuses on engineering selection, supervision, inspection, acceptance, and records across the work. Trade-skills training focuses on performing individual installation techniques.

How are refractory installation defects controlled?

Refractory defects are controlled through material and applicator checks, substrate and anchor inspection, mixing and placement records, curing and dry-out control, as-installed testing, defect classification, and documented repair decisions.

How is industrial insulation protected from moisture?

Industrial insulation is protected through compatible materials, sealed joints, vapor retarders, weather barriers, protective cladding, penetration repairs, drainage or venting where specified, and inspection of damaged areas.

Conclusion

Participants take back an Insulation and Refractory Work Control File linking service conditions, materials, interfaces, execution, inspection, defects, repair, and turnover. It changes separate contractor and inspection records into a traceable acceptance path. The file gives maintenance, quality, shutdown, and construction functions a shared basis for work decisions.