CORE CONCEPT

Dimension Stone and Marble Processing Course: Block Sawing, Slab Lines, Finishing and Grading

11 – 15 January 2027
Amsterdam - Zuidas business district hotel

Dimension Stone and Marble Processing Course: Block Sawing, Slab Lines, Finishing and Grading

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Introduction:

Dimension stone and marble processing, covering block sawing, slab lines, finishing and grading, is a 1-week course for stone factory production, process engineering and quality control staff, ending with a Slab Yield and Finish Quality Plan for a case stone factory. Factories lose margin when blocks are sawn without a cutting plan, saws drift out of tolerance, resin lines leave voids and slabs are graded inconsistently. Nominees already supervise sawing halls, slab lines or inspection benches and learn through inspection walkthroughs of line records. CoreConcept Training Center delivers this dimension stone and marble processing course.

Course Objectives:

- Assess incoming marble, granite and limestone blocks for soundness, veining, colour and defects and set a cutting orientation that protects slab value
- Set gang saw and diamond multi-wire saw parameters, including feed rate, wire tension and coolant flow, to hold slab thickness and limit kerf loss
- Run resin, mesh backing and vacuum reinforcement lines so that fissured and brittle slabs reach the polishing line without breakage
- Control calibrating, honing, polishing and flamed finishing heads and abrasive sequences to deliver specified gloss, flatness and texture
- Grade slabs and tiles against ASTM dimension stone specifications and EN natural stone product standards and prepare packing and dispatch records
- Produce a Slab Yield and Finish Quality Plan that raises usable square metres per cubic metre of block and reduces sawing sludge and offcut waste

Target Audience:

- Factory management staff responsible for block purchasing decisions, sawing hall output and cost per square metre of slab
- Production engineering staff responsible for gang saw, multi-wire, block cutter and polishing line settings
- Quality control staff responsible for slab inspection, sample testing, grading and customer claim investigation
- Maintenance staff responsible for saw blades, diamond wire, abrasive heads, water recycling and dust extraction equipment
- Dispatch and sales support staff responsible for slab bundling, labelling, packing lists and project order matching

Course Outline:

Day 1: Dimension Stone Materials and Factory Yield Baseline

- ASTM C119 Terminology for Marble, Granite and Limestone
- Block Soundness, Veining and Colour Variation Assessment
- Block Squaring and Dressing Before Primary Sawing
- Square Metre per Cubic Metre Block Yield Baseline
- Stone Factory Current-State Map From Block Yard to Dispatch

Day 2: Primary Sawing Technology and Cutting Plans

- Gang Saw Blade Tension, Stroke and Steel Shot Abrasive Control
- Diamond Multi-Wire Saw Tension, Bead Wear and Coolant Settings
- Block Cutter and Bridge Saw Use for Strips and Tiles
- Vein-Cut Versus Cross-Cut Orientation Decision for Marble Blocks
- Slab Thickness Tolerance Checks After Primary Sawing

Day 3: Slab Reinforcement, Calibrating and Surface Finishing Lines

- Epoxy and Polyester Resin Line Curing and Void Control
- Fibreglass Mesh Backing and Vacuum Impregnation Practice
- Calibrating Machine Head Setup for Uniform Slab Thickness
- Honing and Polishing Abrasive Grit Sequence and Gloss Readings
- Flamed, Bush-Hammered and Sandblasted Texture Finishing Methods

Day 4: Quality Grading, Testing, Waste Sludge and Safety Controls

- ASTM C503, C615 and C568 Product Requirement Checks
- EN 12057 and EN 12058 Tile and Floor Slab Requirements
- EN 13755 Water Absorption and EN 12372 Flexural Strength Tests
- Sawing Sludge Filter Press, Water Recycling and Calcium Carbonate Reuse
- Respirable Silica Dust and Diamond Wire Breakage Hazard Controls

Day 5: Inspection Walkthrough and Slab Yield and Finish Quality Plan

- Case Factory Sawing Hall Walkthrough Against Cutting Plan Records
- Case Slab Line Defect Log for Resin Voids and Gloss
- Case Grading Bench Audit of Slab Classification and Bundle Labels
- Yield, Sludge and Offcut Gap Analysis Against Day 1 Baseline
- Slab Yield and Finish Quality Plan Completion and Defence

Skills You Will Gain:

- Block Evaluation
- Cutting Plan Design
- Multi-Wire Saw Setup
- Resin Line Control
- Abrasive Sequence Planning
- Slab Grading
- Natural Stone Testing
- Sawing Sludge Management

Why Attend This Course:

- Deliver a Slab Yield and Finish Quality Plan for a case stone factory to the factory manager and the quality lead
- Decide whether a gloss, thickness or breakage problem calls for a sawing, resin, calibrating or polishing correction using line evidence
- Avoid rejected slab bundles, customer claims and wasted block volume caused by poor cutting plans and inconsistent grading
- Share cutting plan templates, abrasive sequence sheets and grading checklists with shift supervisors and inspectors

Conclusion:

Back at work, the participant gives the factory manager, the production engineer and the quality lead a Slab Yield and Finish Quality Plan that ranks yield losses by stage, links each slab defect to a sawing, resin, calibrating or polishing cause and sets grading rules for dispatch. Management uses it to approve block purchasing criteria, saw and line setting changes and sludge handling investments, while inspectors use its grading checklists at the bench. After the first month under the plan, the unit should review block yield, rejected bundles, sludge volumes and customer claims against the baseline.

Frequently Asked Questions FAQ:

What should participants know before the dimension stone and marble processing course?

Participants should already work in production, engineering or quality roles in a stone factory that saws or finishes marble, granite or limestone. Bringing anonymised block records, slab defect logs or grading sheets helps them apply the walkthrough and the plan to their own factory.

How does a dimension stone and marble processing course differ from a quarry and aggregate course?

It starts where the quarry ends: with a sound block at the factory gate, turned into slabs and tiles sold by the square metre. Quarry and aggregate courses cover face planning, crushing and screening of rock sold by the tonne, which appear here only as context.

Why do resin lines matter in dimension stone and marble processing?

Many marbles and some granites carry natural fissures and voids. Resin and mesh backing hold the slab together through calibrating and polishing, so poorly cured resin causes breakage, dull patches and claims, while correct curing lets fragile stone reach premium grades.

What do participants take back from the dimension stone and marble processing course?

Participants take back a Slab Yield and Finish Quality Plan for a case stone factory, with a block evaluation sheet, cutting plan template, abrasive sequence sheet, grading checklist and sludge handling actions they can adapt to their own lines.