

Job-Task Analysis (JTA) for ACI Certification of Adhesive Anchor Installer

Assessment Methods:

W = Assessed on written examination

P = Assessed on performance examination

RESOURCES:

ACI-CRSI Adhesive Anchor Installer Workbook, CP-80

Preparing for Installation – Chapter 2

- W Verify that adhesive is suitable for the intended application (dry, water-filled, submerged, overhead)
- W Review manufacturer's printed installation instructions (MPII)
- W Review material safety data sheet (MSDS)
- W Select appropriate personal protective equipment (PPE)
- W Verify concrete temperature falls within range for selected product
- W Evaluate concrete condition, age, cracks, expansion joints, thickness, etc. (Chapter 4)
- W Verify and layout anchor locations according to specifications

Drilling Anchor Holes – Chapter 3

- W Adjust equipment components according to specifications
- W Take appropriate action if drilling hits reinforcing steel or other obstructions
- P Drill hole perpendicular to concrete
- W & P Determine proper depth, diameter, and rod size for hole according to specifications
- W & P Select appropriate drilling machine and bits as per manufacturer specifications
- W & P Verify appropriate dust extraction system and accessories are available and working
- W & P Verify that hole depth and diameter meet pre-determined specifications

Cleaning Anchor Holes – Chapter 4

- W Determine appropriate cleaning method per manufacturer instructions
- W Remove water-concrete particle slurries
- P Visually inspect debris coming from hole during drilling
- W & P Select appropriate equipment to clean holes
- W & P Remove debris from drill hole using appropriate cleaning method
- W & P Engage dust extraction system with accessory to capture dust during blow-out of drilled hole

Injecting Adhesive Using Cartridge Systems – Chapter 5

- W Determine appropriate adhesive working (gel) time
- W & P Verify adhesive expiration date
- W & P Identify cartridge storage temperature requirements
- W & P Verify that proper nozzle is selected with complete mixing element
- W & P Assemble adhesive cartridge and nozzle per MPII
- W & P Confirm that hole is clean prior to injecting adhesive
- W & P Insert adhesive assembly into dispenser
- W & P Select equipment suitable for installation location (horizontal to overhead)
- W & P Discard initial adhesive and confirm proper mixing
- W & P Inject adhesive per MPII (rate, application, method, avoid air entrapment)
- W & P Determine minimum depth of adhesive fill

Job-Task Analysis (JTA) for ACI Certification of Adhesive Anchor Installer (Continued)

Installing Anchors - Chapter 6

- W** Identify most appropriate installation technique per MPII
- W** Select the anchor appropriate for the adhesive system in use
- W & P** Inspect anchor element for contaminants and clean if needed
- W & P** Inspect anchor element for damage and replace if needed
- W & P** Insert anchor element into borehole per MPII
- W** Take corrective action if air pockets are noted during installation
- W & P** Verify accurate final embedment depth based on length of protruding anchor element
- W & P** Verify that adhesive fills hole uniformly around the anchor, approximately flush with surface
- W** Ensure that anchor remains undisturbed until adhesive is fully cured

Installing Adhesive Capsule Systems - Chapter 7

- W** Verify adhesive expiration date
- W** Identify capsule storage temperature requirements
- W** Confirm that material has not solidified inside capsule
- W** Confirm that hole is clean prior to capsule insertion
- W** Insert capsule into hole per the MPII