

157 – OTHER EQUIPMENT

SECTION 157

OTHER EQUIPMENT

157.1 REBAR INSERTION EQUIPMENT

a. Drilling Equipment. Use equipment that complies with the following requirements:

- Hydraulic driven
- Capable of operation in a clockwise direction;
- Truck or trailer mounted;
- Adjustment in transverse and longitudinal directions;
- Capable of operating at a pitch of 45°;
- A power system to raise and lower the bit; and
- Removal of loose material by drill shaft vacuum extraction during drilling.

b. Epoxy Pump. Use a pump system that the manufacturer has certified to deliver a proper mixture of specific material properties and a given resin to hardener ratio. The given ratio is supplied by the epoxy manufacturer.

The pump may be adaptable for variable mixture ratios. It shall maintain the ratio set for a temperature range of 40 to 120°F and a pressure range of 20 to 100 pounds per square inch. The pump shall include the separate A and B supply hoses along with their respective back-flow prevention valves.

c. Epoxy Mixer. Provide epoxy mixer with adequate elements to thoroughly mix the resin and hardener components and be capable of operating within the same temperature and pressure ranges as the pump system. Use an easy to clean mixer constructed of semi-transparent materials in order to observe the mixing operation.

d. Injection Nozzle Assembly. Provide an injection nozzle capable of temporarily locking into the 1 inch diameter hole in the concrete and holding a minimum sustained pressure of 100 pounds per square inch without significant surface leakage. A design for a suitable assembly is available from the Bureau of Construction and Materials.

157.2 UNDERSEALING EQUIPMENT

a. Grout Plant. Provide a grout plant consisting of a positive displacement cement injection pump and a high speed colloidal mixing machine. Provide a mixing machine that operates between 800 and 2000 RPM, creating a high-shearing action with a subsequent pressure release to make a homogeneous mixture. Provide a pressure measuring gauge in the grout supply hose.

b. Drill. Provide an air compressor and rock drills or other devices capable of drilling the injection holes through the PCCP.

157.3 JOINT AND CRACK SEALING PCCP AND HMA EQUIPMENT

a. Air Compressor. Use an air compressor with a minimum capacity of 100 cubic feet per minute at 90 psi with a 5/8 inch hose (minimum). Use oil-free compressed air.

b. Applicator. For concrete pavement, use a sealant applicator head that completely fills the joints and cracks.

For asphalt pavement, use a sealant applicator head that completely fills the cracks.

c. Heating Pot. Prepare the material in a heating pot (400 gallon minimum capacity) equipped with an agitator that shall provide a proper mixing pattern to keep a consistent percent of fiber and maintain the heat distribution throughout the pot. Use equipment recommended by the sealant manufacturer.

d. Heat Lance. Use a heat lance manufactured by SEAL-ALL, L.A. HEAT LANCE, or another brand approved by the Engineer.