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Problem: Sealing Slip-Lined Sewer Pipe at Terminal Ends

Solution: AV-333 Injecta-Flex and/or AV-202 Multigrout Urethane Foam Grout to Form a Watertight Compression Seal

Methodology: Under standard conditions, the annulus* between the host pipe and the new slip-liner will be small, normally about 1 to 2 inches. This application places alternating rings of AV-333 Injectaflex or AV-202 Multigrout and bentonite into the annular area, providing anchoring while creating a watertight compression seal to eliminate the flow of extraneous water from the annulus into the manhole.

Results: A compressive anchor is created, resisting horizontal movement of the slip-lined pipe and an effective water seal at each end of the liner.

Application:

1. First, the slip liner must be centered within the host pipe to effectively seal the full circle of the annulus.
 - Note: If required, drive a wooden wedge between the liner pipe and the invert† of the host pipe to lift the slip lining off the base of the pipe.
2. Pack a ring of powdered bentonite/oakum‡ beginning 3 to 5 feet (down the pipe lengthwise)§ into the annular area of the slip lining and host pipe. When moisture in the annulus contacts the bentonite/oakum, it will expand to maintain a very tight fit.
 - The length of this seal is longer than normally specified, but will add a considerable factor of safety to the work.
3. After a 12 to 15 inch ring of annular space is initially filled with bentonite/oakum, install a seal made of oil-free dry oakum (AV-219) saturated with AV-333 Injecta-Flex and/or AV-202 Multigrout urethane foam grout. The grout/oakum ring should be 6 to 12 inches in length. Refer to Avanti International's EGP Technique brochure for more information.
4. Continue with alternating rings of bentonite/oakum and AV-333 Injecta-Flex or AV-202 Multigrout foam soaked oakum, to a point approximately 6 inches from the inner face of the manhole.
5. Fill the final 6-inch ring of the annulus with a fast setting hydraulic cement**

* Annulus - void area between host pipe and liner

† Invert of pipe area – Bottom of host pipe

‡ Bentonite/Oakum is available from plumbing supply houses

§ As measured from the inner face of the manhole

** Quadex Hydra-Plus or approved equal

Links:

Tech Data Sheet – AV-202 Multigrout Foam
Tech Data Sheet – AV-219 Oakum
Tech Data Sheet – AV-333 Injectaflex
MSDS Sheet for AV-202
MSDS Sheet for AV-219
MSDS Sheet for AV-333
Avanti International's EGP Technique Brochure