

- C. The finished lining shall be continuous over the entire length of a run from manhole to manhole and be impervious and free of any leakage from the pipe to the surrounding ground and from the ground to inside the lined pipe.
- D. The beginning and end of the liner pipe shall be sealed to the rehabilitated pipeline and to the manhole liner using a material that is compatible with the liner.
- E. Immediately after installation the liner shall be tested to the requirements of relevant section of the specification.
- F. After the drainage pipeline is completely rehabilitated but before the sewage flow is returned the liner shall be inspected using CCTV in accordance with the requirements of Section 02830 of the specification and the Contractor shall provide the Engineer with a recording showing the completed work including the restored conditions.
- G. Any defects which will or could affect the integrity of the liner shall be repaired at the Contractor's expense in a manner approved by the Engineer.

#### **29.3.10 Sliplining Installation**

- A. The Contractor shall retain the services of a licensed installer of the manufacturer of the slip liner gravity pipe rehabilitation system to assist the Contractor during preparation and installation of the system to certify that the work has been performed in accordance with the manufacturer's recommendations.
- B. The following procedures shall serve as a general installation guide only. The Contractor shall obtain detailed installation instructions and procedures from the manufacturer for the actual slip lining / swage lining installation. The requirements of ASTM F585 shall also be satisfied.
  - i. The section of pipeline to be lined shall have been cleaned, surveyed and repaired to the requirements of this section of the standard specification prior to liner installation.
  - ii. Sections of slip liner shall be field jointed in the manhole or insertion pit using low profile spigot and socket joints, butt fusion joints or other type as recommended by the slip liner manufacturer.
  - iii. The slip liner shall be pushed/pulled into the gravity pipeline as appropriate. The length of the liner pipe to be inserted at any one time shall be governed by the capacity of the installation equipment and the consideration of the size and condition of the pipeline. Precautions shall be taken to protect the slip liner from scouring of its external surface as it is being installed into the pipeline.
  - iv. The slip liner shall be allowed to recover to its original length. The