

equipment and the packer device shall be designed so that proportions and quantities of materials can be regulated in accordance with the type and size of the leak being sealed.

- D. Upon completing the sealing of each individual joint, the packer shall be deflated until the void pressure meter reads zero pressure, then reinflated and the joint retested. Should the void pressure meter not read zero, the Contractor shall clean his equipment of residual grout material or make the necessary equipment repairs/adjustments to produce accurate void pressure readings. Joints that fail to meet the specified test criteria shall be resealed and retested until satisfactory results are obtained.
- E. Residual sealing materials that extend into the pipe, reduce the pipe diameter, or restrict the flow shall be removed from the joint. The sealed joints shall be left reasonably "flush" with the existing pipe surface. If excessive residual sealing materials accumulate in the line the manhole section shall be cleaned to remove the residual materials.
- F. Complete records shall be kept of joint sealing performed in each manhole section. The records shall identify the manhole section in which the sealing was done, the location of each joint sealed, and the joint sealing verification results.

### **29.3.6 Preparation Prior to Liner Pipe Installation**

- A. Drainage network sections to be lined shall be kept free of flows by one of the methods identified in Clause 3.03 above.
- B. Prior to insertion of a drainage pipeline lining the Contractor shall ensure that the pipeline is clean and in a condition acceptable for the lining process to proceed. A CCTV inspection shall be used following such cleaning to ensure that pipe lengths are suitable for the lining process to be carried out. CCTV inspection shall be carried out in accordance with Section 02830 of the specification.
- C. Where infiltration of groundwater at pipe joints, cracks, collapsed pipe and other defects have been identified these shall be repaired by methods approved by the Engineer prior to the installation of any lining.
- D. No lining work shall be permitted until the prepared drainage network has been inspected and approved by the Engineer.
- E. Where it is necessary to carry out any modification to existing manholes to enable manhole and/or drainage pipeline cleansing, CCTV survey or drainage system rehabilitation, the Contractor shall carry out any such modification to the Engineer's approval. Following completion of the works in a manhole, the Contractor shall return the manhole to its original or better condition to the approval of the Engineer including reinstatement to surfaces disturbed as a result of manhole modification/drainage pipeline rehabilitation. Modification to manhole may include removal of manhole