F. Use a spark detector approved by the Engineer when spark testing the liner.

G. Test each transverse welding strip which extends to a lower edge of the liner. Extend the welding strips below the liner providing a tab. Apply a 4.5 kg pull normal to the face of the pipe by means of a spring balance. Ensure that the liner adjoining the welding strip is held against the concrete during application of the force. Maintain the 4.5 kg pull if the weld failure develops, until no further separation occurs. Retest defective welds after repairs have been made. Trim neatly tabs after the welding strip has passed inspection. Provide all test equipment required in the manner recommended by the manufacturer and as described above. The personnel provided to perform the testing shall be qualified.

24.3.4 Testing

A. Testing of the pipes and fittings prior to delivery shall be in accordance with BS EN 1916.

B. Competed section of pipeline shall be pressure tested in accordance with Section 02810.

C. Hydrostatic Testing of Pipelines

a) Submit for the Engineer's approval details of the proposed methods and program for testing, including details of test equipment. Arrange for all tests to be witnessed by the Engineer or other person appointed by the Engineer. Provide everything necessary for carrying out testing and cleaning including water, pumps, gauges, piped connections, stop ends and all other temporary works. Ensure that pipelines are properly completed and supported before being put under test.

b) Use potable water for hydrostatic testing and pipeline cleaning.

c) Test the pipeline in lengths between manholes or such shorter lengths as the Engineer may direct or permit.

d) Use properly designed fittings for the purpose of temporarily closing the openings in pipelines to be tested. Use fittings adequately strutted to withstand the pressure specified.

e) Ensure that the arrangement for testing a pipeline includes provision for the purging of air from the pipeline prior to a water test.