ASTM F1533   Standard specification for deformed polyethylene (PE) liner.

ASTM F1606   Standard practice for rehabilitation of existing sewers and conduits with deformed polyethylene (PE) liner reinstated.

ASTM F1697   Standard specification for poly (vinyl chloride) (PVC) profile strip for machine spiral-wound liner pipe rehabilitation of existing sewers and conduits.

ASTM F1741   Standard practice for installation of machine spiral wound poly (vinyl chloride) (PVC) liner pipe for rehabilitation of existing sewers and conduits.

BS EN 1852-1   Plastics piping systems for non-pressure underground drainage and sewerage -Polypropylene (PP).

ISO 9000   Quality management systems.

29.1.3.1 Alternative Standards

For deformed and reformed HDPE liner the following alternative standards may be adopted by the Contractor.

BS EN 13566-1   Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks. Part 1General.

BS EN 13566-3   Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks. Part 3 Lining with close fit pipes.

BS EN 13689   Guidance on the classification and design of plastics piping systems used for renovation.

A.   However the Contractor must demonstrate that the materials, general characteristics, material characteristics, geometric characteristics, mechanical characteristics, physical characteristics, jointing, marking, sampling and installation of the liner supplied to the above alternative standards, amended as necessary, meet or exceed all of the requirements of this section of the specification. Any amendments required to the above alternative standards to satisfy the requirements of this specification shall be clearly identified by the Contractor, for example longitudinal tensile stress at yield point shall be 20N/mm² and minimum stiffness shall be 2500N/m². The amendments shall not necessarily be limited to these examples.

B.   GRP pipe rehabilitation installations are to be completed as per International Standards and subject to DMAT approval.