

Plastic Pipe and Pipeline Assessment Services



Advanced Engineering Solutions Limited (AESL) have specialised skills in polymer pipe technology. These include design, construction and operation of low & medium pressure pipe systems, materials & construction assessment, and failure investigation. Asset management and replacement strategies are undertaken for a range of pipe materials including plastic.



AESL can provide an innovative approach to diagnosing problems in plastic pipe systems, assessing material parameters, construction qualities, pressure testing and commissioning, operational service life, etc. For many Utility companies, plastic pipe systems are now their major tangible asset. The operational life and fiscal value of plastic pipelines are important business factors for most Utilities.

Technical consultancy activities for PE80, PE100 and PVC materials include:

Material Selection

Optimisation of materials based on economic considerations for the pipeline systems, resistance to leakage, fracture, interference and other site factors.

Inspection and Quality Assurance

Assessment of material standards, jointing codes and engineering standards for system design. Construction inspection, statistical analysis, testing and commissioning.

Asset Management and Auditing

Asset management during routine and non-routine operations, condition assessment, in service inspection, testing and assessment of structural condition and service life.

Jointing Quality

Solvent welding, thermal welding including Butt fusion and Electrofusion techniques, and tools for pipe preparation and assembly.



Material testing

Pipe testing - creep rupture strength, stress crack resistance, rapid crack propagation, brittle fracture, etc. Joint testing - peel and crushing decohesion, etc.

A wide range of other material testing can be provided by specialist laboratories under AESL contract.



Failure Investigations

Recovery and examination of pipe samples, joints and tooling, and pipeline equipment failures on-site and laboratory testing.

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