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TESTING AND DISINFECTION

TS 3.10.07

GENERIC TECHNICAL SPECIFICATION
FOR CIVIL, STRUCTURAL AND BUILDING ENGINEERING

SECTION NO : 07

TITLE : TESTING AND DISINFECTION

GENERIC TECHNICAL SPECIFICATION FOR CIVIL, STRUCTURAL AND BUILDING ENGINEERING

This document shall be read in conjunction with Generic Technical Specification Civil, Structural and Building Engineering – Introduction, ref: TS 3.10.00.

The clause numbering system relates to the numbering system in CESWI6 Specification.

TABLE OF CONTENTS

TESTING AND DISINFECTION.....	5
7.3 Testing Method Programme and Notification.....	5
7.4 Testing Non-Pressure Pipelines	5
7.5 Water Test for Non-Pressure Pipelines	6
7.9 Testing of Ductile Iron, PVC, GRP and Steel Pressure Pipelines	6
7.10 Testing of Polyethylene Pressure Pipelines.....	6
7.11 Swabbing of Water Mains	7
7.12 Disinfection of Water Mains	7
7.20 Testing - General	8
7.21 Water Test for Manholes and Other Chambers	8
7.22 Testing of Pipelines - Line and Level	9
7.23 Testing of Pressure Pipework	9
7.24 Water Testing of Linear Drainage Channels.....	9
7.25 Testing of Bunded Areas.....	10
7.26 Plumbing	10
7.27 Cable Ducts.....	10
7.28 Testing of Conduits	10
7.29 Testing of Oil Separators	10
7.30 Testing of Profiled Steel Cladding Systems.....	11
7.31 Testing and Inspection of Steelwork	11
7.32 Testing and Inspection of Runway Beams and Trolley Rails.....	11
7.33 Installation of Industrial Flooring, Walkways and Stair Treads	11
7.34 Inspection and Checking of Protective Treatments to Steelwork	12
7.35 Inspection and Testing of Fire Protection Systems	13
7.36 Quality Control of Masonry.....	13
7.37 Checking of Timber Elements	14
7.38 Checking of Roofs	15
7.39 Testing of Built-up Roofing Systems	15
7.40 Testing of Asphalt Roofing	15
7.41 Testing of Mastic Asphalt.....	15
7.42 Inspection of Flashings	16
7.43 Testing of Floor Finishes.....	16
7.44 Testing of Raised Access Floor Systems	16
7.45 Testing of Doors and Windows	17
7.46 Sprayed Concrete	17
7.47 Testing of Proprietary Anchor Systems	17
7.48 Testing of Transformer Noise Enclosures for Water Ingress.....	18
7.49 Testing of Painted Coatings to Transformer Noise Enclosures	18
7.50 Piling and Embedded Retaining Walls.....	18
7.51 Testing of Topsoil.....	18

7.52	Testing of Fill Material	18
7.53	Permitted Deviations for Earthworks	19
7.54	Tolerances for Horizontal Alignments, Surface Levels and Surface Regularity of Pavement Courses	20
7.55	Inspection and Testing of Roadworks	20
7.56	Accuracy of Levels and Reference Points	20
7.57	Testing of Electrical Systems	21
AMENDMENTS RECORD		22

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TESTING AND DISINFECTION

7.3 Testing Method Programme and Notification

7.3.3 Testing in Clause 7.3 shall include pressure testing, infiltration testing, cleaning, swabbing, disinfection, line, level and obstruction testing.

7.3.4 Prior to any connections, all testing shall have been completed successfully and the results documented. This is a **Hold Point**.

7.3.5 Following final surface reinstatement, the *Contractor* shall undertake one of the following testing regimes as determined by himself:

- (i) Water test of manholes/chambers and pipelines as single system, or,
- (ii) Air test pipelines between manholes/chambers and water test manholes/chambers

This is a **Notification Point**.

7.4 Testing Non-Pressure Pipelines

7.4.4 The testing described in Clause 7.4.2 shall be either an air or water test as determined by the *Contractor*. The testing in Clause 7.4.3 shall be a water test.

7.4.5 Notwithstanding the requirements of Clause 7.4.3, this shall mean that testing shall be carried out prior to commencement of the pavement construction, where applicable, and after the completion of the pavement construction.

7.4.6 Wherever possible, testing of drains shall be carried out from manhole to manhole. Short branches up to 3m to the main pipelines shall be tested as one system with the pipeline. Longer branches shall be tested separately.

7.4.7 On completion of air or water testing of pipelines, the stopper at the end away from the test gauge shall be removed to demonstrate the loss of pressure in the pipeline.

7.4.8 Inspection and testing including performance testing of pipework for soil, waste, ventilation and rainwater shall be undertaken as applicable in accordance with the National annex in BS EN 12056: Part 2 and BS 8490 Annex B. Inspections and testing shall include:

- (i) General inspection
- (ii) Final inspection
- (iii) Air test (including water test below the lowest sanitary appliance)
- (iv) General performance test
- (v) Tests for self siphonage and induced siphonage in branch discharge pipes
- (vi) Tests for induced siphonage and back pressure in discharge stacks

This is a **Notification Point**.

7.5 Water Test for Non-Pressure Pipelines

- 7.5.3 For pipelines of diameter in excess of 750mm, the *Contractor* shall submit a statement approved by the pipe manufacturer stating the method of testing, the test head and the permissible loss of water for the approval of the *Contract Administrator*. This is a **Hold Point**.

7.9 Testing of Ductile Iron, PVC, GRP and Steel Pressure Pipelines

- 7.9.6 Testing in sections shall be undertaken with maximum lengths as are practicable.
- 7.9.7 The *Contractor* shall submit to the *Contract Administrator* for approval a test plan, stating:
- (i) Details of division of pipeline into sections
 - (ii) Test pressures
 - (iii) Points of test
 - (iv) Planned date of testing

This is a **Hold Point**.

- 7.9.8 After satisfactory completion of pressure testing, each valve on, and adjacent to, the pipeline shall be examined to witness that the opening/closing mechanisms function satisfactorily and are capable of functioning for their designated purpose. Isolating valves shall be examined by opening and closing the isolating gate three times. This is a **Notification Point**. All tests and examinations shall be documented by the *Contractor* with the results issued to the *Contract Administrator*.
- 7.9.9 Wherever possible joints shall be left uncovered until after testing but sufficient material shall be backfilled over each pipe to prevent any movement under test pressure.
- 7.9.10 A final system test shall be carried out in accordance with BS EN 805.
- 7.9.11 The testing shall be undertaken by a 'water loss' method with measurement of the volume pumped in.
- 7.9.12 The test pressure shall be the greater of 1.5 times working pressure or working pressure plus 5 bar.

7.10 Testing of Polyethylene Pressure Pipelines

- 7.10.3 Refer to Clauses 7.9.6 to 7.9.9.
- 7.10.4 The test pressures for polyethylene pipelines shall be as follows:

PIPE RATING	TEST PRESSURE
≤ 10 bar	1.5 x pipe rated pressure
≥ 12 bar	1.5 x mean working pressure of system