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ARAB ENGINEERING BUREAU

## 4 FOUNTAINS AND AQUATIC FEATURES

### 4.1 GENERAL

#### 4.1.1 Scope

- 1 This Part specifies the requirements for specifications for water fountains, waterfalls and other aquatic features.
- 2 Related Sections and parts are as follows:

Section 9      Mechanical and Electrical Work  
Section 19      Plumbing Work  
Section 20      Drainage Works for Buildings

#### 4.1.2 References

- 1 The following standards are referred to in this Part:  
BS 7671.....Requirements for Electrical Installations. IET Wiring Regulations  
EN 60598 .....Luminaries

#### 4.1.3 General Requirements

- 1 All items in this Part require approval by the Engineer.
- 2 The Contractor shall submit manufacturer's literature, drawings, samples or mock-up units for items covered in this Part for approval by the Engineer.
- 3 If external work items related to this Part are not specified or otherwise detailed within the Project Documentation, the Contractor shall submit appropriate specifications for approval by the Engineer.

## 4.2 FOUNTAINS

### 4.2.1 General Requirements

- 1 Pumps for fountains shall comply with the relevant provisions of Section 9, Mechanical and Electrical Equipment, and Section 19, Plumbing Work.
- 2 Pipework associated with fountains shall comply with the relevant provisions of Section 19, Plumbing Work.
- 3 Electrical works related to fountains shall comply with the relevant provisions of BS 7671 and the requirements of QGEWC.
- 4 Luminaries for fountains shall comply with the relevant provisions of EN 60598-2-18.

## 4.3 DESIGN CONSIDERATIONS

### 4.3.1 Provision of Overflow Drain

- 1 All tanks, water holding structures and the like associated with fountains and aquatic features shall include provision for an overflow drain.
- 2 Overflow pipework shall be sized to accommodate flows in excess of the maximum incoming flow where appropriate.

- 3 Pipework associated with overflow drains shall comply with the relevant provisions of Section 20, Drainage for Buildings.

**4.3.2 Provision of Drain Down**

- 1 All tanks, water holding structures and the like associated with fountains and aquatic features shall include provision for a drain down.
- 2 Pipework associated with drain downs shall comply with the relevant provisions of Section 20, Drainage for Buildings.

**4.3.3 Testing of Features Designed to Retain an Aqueous Liquid**

- 1 Unless otherwise stated by the Engineer, all structures designed to retain an aqueous liquid shall be tested for watertightness.
- 2 After cleaning, structures designed to retain an aqueous liquid shall be filled with water at a uniform rate. A period of 21 days shall be allowed by the Contractor for stabilisation, after which the water level shall be recorded by approved means at 24 hour intervals for a test period of 7 days. During the test period, the total permissible drop, after allowing for evaporation and rainfall, shall not exceed 10 mm.
- 3 Notwithstanding the satisfactory completion of the above test, any leakage visible on the outside faces of the structure shall be stopped.
- 4 The Contractor is responsible for provision and disposal of water for testing purposes.

END OF PART