

## 13 R.C. CONCRETE ROOFING AND WATERPROOFING

### 13.1 General

- 13.1.1 Material shall be of the best quality and to the approval of the Consultant all in accordance with the relevant British Standards and Agreement Board Certificates.
- 13.1.2 Workmanship shall be to the highest standards and codes of practice.

### 13.2 Testing

- 13.2.1 The Contractor is to test, to the satisfaction of the Consultant, all areas of roofing, waterproofing, terraces, bathrooms, and the like for water penetration. These tests are to be carried out after the membrane has been laid.
- 13.2.2 The Contractor is to allow in his rates for such areas to be flooded with water, and left for a minimum of 48 hours.
- 13.2.3 On completion of roofing works the Contractor is to leave the roof in a sound and watertight condition, to the approval of the Consultant, and in a satisfactory state for handing over.

### 13.3 Guarantee

- 13.3.1 The Contractor is to provide the Employer with a written guarantee to cover improper materials or faulty workmanship for a period of 10 (ten) years from the date of issue of the Final Certificate at the completion of the maintenance period. The Contractor shall bear the cost of any of the consequential damage as is provided for in same guarantee. The text of the guarantee shall be to the Consultant's approval.

### 13.4 Preparation of Surfaces

- 13.4.1 All surfaces shall be clear of all deleterious matter and dry all in accordance with the manufacturer's written instructions. Prior to the application of any waterproofing/roofing material or primer the Contractor shall grind the concrete surface using a mechanical grinder to ensure all surface irregularities are removed and gain the Consultant's written approval that he may commence the said works, without same all works shall be rejected and replaced at the Contractor's expense.

### 13.5 Protection

- 13.5.1 Finished and part finished surfaces shall be suitably protected to ensure no damage by other trades. Any roofing or waterproofing so damaged due to non-protection shall be removed and replaced at the Contractor's expense. The Contractor shall submit to the Consultant his proposed methods of protecting the various surfaces and locations prior to their completion or application of finishing layers, i.e. tiling and the like.

### 13.6 Roofing

- 13.6.1 The roofing shall comprise the following layers: -
  - 13.6.1.1 Concrete screed, density 650-800 kg/m<sup>3</sup>, minimum thickness 30mm laid to falls and cross falls to drainage outlets. The screed shall be laid in bays not exceeding ten square meters and 300 mm wide from the edge with joints between bays in 10mm thick compressible fibre material.
  - 13.6.1.2 Supply and apply one coat of approved priming/bonding course as per manufactures' instruction.
  - 13.6.1.3 4 mm electrometric special polyester tropical grade modified bituminous felt, torch applied - black finish.
  - 13.6.1.4 20 mm thick finished natural sand stone tile laid over sand cement screed of thickness min 50 mm in slopes and cross slopes. Joints at 10 m<sup>2</sup> to be filled with approved polysulphide sealants (two part polysulphide) in accordance with the manufacturer's instructions.

- 13.6.1.5 Skirting comprising waterproof membrane turned up and over fillet at roof perimeter up wall as per detail drawings. Allow for all two part polysulphide sealant and aluminum flashing.

### 13.7 Waterproofing

- 13.7.1 Prepare and apply two coats bitumen paint to all surfaces below ground level.
- 13.7.2 Apply primer and one layer self adhesive membrane, to Consultant's approval with end and side laps, applied as per the manufacturer's instructions to the concrete floors of all wet areas, including bathrooms, toilets, kitchens and the like including dressing into drainage outlets and the like, and turning membrane as skirting up all perimeter walls 300mm high and tucking into preformed groove.
- 13.7.3 As item 2) above to horizontal concrete surfaces and top of blinding as shown on drawings with 20mm thick screed protection layer over.