

Item No 35 'Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc. consisting of following operations.

(a) Applying and grouting a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with proprietary water proofing compound conforming to IS:2645 over the R.C.C. slab including cleaning the surface before treatment.

(b) Laying cement concrete using broken bricks/brick bats 25 mm to 100 mm size with 50% of cement mortar 1:5 (1 Cement : 5 Coarse sand) admixed with proprietary water proofing compound conforming to IS:2645

,brick bats is finally covered by jointless cement plaster 20mm th. in C.M. 1:4 added with special water proofing compound conforming to IS:2645 & top smooth finished with trowel with false chequered marking of 300 mm.size.The treatment is carried along the vertical surface of the parapet & other adjoining wall up to height of about 300 mm in a shape of quarter round vata Incl. curing etc. Comp. With average thickness of 120 mm and minimum thickness at khurra as 65 mm.'(c) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be down in order and as directed and specified by the engineer-in-charge. With average thickness of 120 mm and minimum thickness at khurra as 65 mm. (Cement consumption 0.511 Bags / S.M.) NOTE :- (1) The whole work is to be executed through specialized agency with a guarantee of 10 (Ten) years given on a prescribed proforma duly stamped (2) The rate shall include for work at all floors & conducting water proof test as directed. Unit Rate of 1 Sq.Mt.

C.M. (1:3) (By adding "Pidi proof LW" 200 ml. per 50 kg of cement bag) using approved quality glazed tiles pieces of required sizes laid in line and level in necessary gradient for easy flow of rain water from roof of any height of quarters or any type of building with finishing (Flush pointing) the top surface of china mosaic with approved quality of white cement by adding waterproof compound. The treatment is carried along the vertical surface of the parapet and other joining wall up to height of about 150 to 300mm in a shape of quarter round vatah and finishing the adjoin surface between china mosaic and vertical surface of the parapet. Contractor should give guarantee for water proofing for 5 years with depositing 20% of item value by F.D.R. All the material including cement should be brought by the contractor at his own cost etc complete as directed.

1. Material:

1.1. The glazed tiles pieces shall be of best quality as approved by authority.

The glazing shall be uniform shade. The thickness of tile shall be 6 mm.

2. Preparation of surface:

2.1. Well defined cracks other than hair cracks in the roof structure shall be cut to 'V' section cleaned and filled up flush with cement-sand slurry by adding water proof compound "Pidiproof LW".

- 2.2. The surface of floor, part of parapet and gutters, drain mouths etc; over which the water proofing treatment is to be applied, shall be cleaned of all foreign matter such as fungus, moss and dust by wire brushing and dusting.
- 2.3. The existing Shalimar water proofing layers shall be remove completely. Then the top of RCC / IPS surface after removing the tarfelt will be made rough by chipping and clean the same for proper bond with new water proofing.

3. Workmanship:

- 3.1. Item includes china mosaic flooring for water proofing treatment of slab. Before laying the bedding of C:M contractor shall be applying cement slurry on prepared surface at the rate of 2 kg/smt by adding waterproof compound "Pidiproof LW" 200ml per 50 kg of cement bag.
- 3.2. First of all cement mortar in CM (1:3) (1 cement 3 sand) shall be laid on floor 20 to 25 mm thick average bedding by adding waterproof compound "Pidiproof LW" 200ml per 50 kg of cement bag and laid in line & level in necessary gradient for easy flow of rain water from roof of any height of quarters or any type of building.
- 3.3. The grading shall be carried out prior to the application of waterproofing treatment by cement mortar as specified in description of item.
- 3.4. Before laying the pieces of glazed tiles on bedding contractor shall be spray dry cement and finishing (Flush pointing) the top surface of china mosaic with approved quality of white cement.
- 3.5. The treatment shall be carried out along the vertical surface of the parapet and other joining wall up to height of about 150 to 300mm in a shape of quarter round vatah and finishing the adjoin surface between china mosaic and vertical surface of the parapet.
- 3.6. Required chipping for outlet shall be done for proper drain of rainwater including refixing of existing drainpipe if required.
- 3.7. Drain outlet shall be suitably placed with respect to the roof gradient to ensure rapid drainage and prevent local accumulation of water on the roof, surface, masonry drain mouth shall be widen sufficiently and rounded with cement mortar.
- 3.8. From cast iron drain outlets a groove shall be cut all round to touch the treatment.
- 3.9. When a pipe passes through a roof on which water proofing treatment is to be laid, a cement, concrete angle fillet shall be built round it and the waterproofing treatment taken over the fillet.
- 3.10. Contractor shall be give waterproof test by filling water pond 150 mm deep for seven days.

- 3.11. Contractor shall be wash prepared waterproofing surface finally by mild acid as per instruction.
- 3.12. Contractor should give guarantee for water proofing for 5 years with depositing 20% of item value by F.D.R. up to guarantee period (i.e. 5 years). If any leakage observed, the agency will carry out repairing work time to time during 5 years of guarantee period and keep the terrace water proof. On failing of repairing by agency timely, GSECL will attend leakages time to time and recovery will be made as per GSECL rules.

4. Mode of measurements and payment.

- 4.1. Measurement shall be measured in square meter area covered in treatment with treatment done over the parapet walls.
- 4.2. In measurements, no deduction shall be made for either openings or recesses for chimney; stacks roof lights, columns etc. for areas up to .40 sq. mt. Nor anything-extra labour and materials in forming such openings. For similar area exceeding 40 sq.mt. deduction shall be made in measurements for full opening but nothing extra shall be paid for extra labour and materials in forming such opening.
- 4.3. Treating the cracks shall not be paid separately.
- 4.4. All necessary tools, tackles, labour, scaffolding etc; required shall be arranged by contractor and rate quoted shall be inclusive of all

Item No 56 'Providing erecting and fixing double coated PVC. (ISI) water tank of required capacity each with all necessary fittings and connection etc. complete on terrace.

General

This work shall consist of **Providing and fixing P V C water tank of specified capacity with necessary G I fittings including 25 mm dia G.I. over flow pipe, ball valve**, of the shape and dimensions shown on the drawings and conforming to these Specifications or as approved by the Engineer in charge.

PVC Water tank

PVC Water tank of specified capacity and of I.S.I. mark of approved in liters of approved make and quality equivalent to syntax product

Net capacity shall be net volume of water stored between the lowest level of overflow and lowest specified level.

Nipple

Galvanize pipe nipple shall be of approved make and of best quality. Relevant specification given in Booklet of Building specification shall be applied for the execution of this item.

Ball valve

Ball valve shall conform specification no 23.00.5 (A) on page 172 of specification booklet for building works.

Ball valve shall be of approved make and of best quality. Relevant specification given in Booklet of Building specification shall be applied for the execution of this item.

Connections

Connections shall be of approved make and of best quality. Relevant specification given in Booklet of Building specification shall be applied for the execution of this item.

WORKMAN SHIP

Tank shall be approved quality and as per IS standard make. Material used in manufacturing tank shall be confirmed to relevant IS code. The material of tank and lead and fittings which may come in contact of water should be such that it does not impart any taste, colour or odor. It does not have any toxic effect and it does not contaminate the water. Thereby making it unpotable.

The tank shall be fixed properly in a level position and making all required necessary correction like inlet outlet flushing overflow and air vent. Tank shall be satisfying the standards of public health.

Mode of Measurement & Payment:

The payment will be made on **capacity in litter's** basis of the finished work.

All necessary labour materials Equipment tools and plant, conveyance including loading and unloading etc shall be provided by the Contractor as directed by the Engineer in charge.

The item shall be measured for its **capacity in litters** limiting dimensions to those specified on plan or as directed.

The rate shall be for a unit of **one Litter**.