

SPECIFICATIONS

SPECIFICATIONS

- It specifies or describes the nature, quality and the class of work, materials to be used in the various parts of work, quality of the material, their proportions, method of preparation, workmanship, etc.,
- It is very important for the execution of the work.
- Cost of the work depends on the specifications.
- It should be clear, and there should not be any ambiguity anywhere.

SPECIFICATIONS

- Attempts should be made to express all the requirements of the work clearly and in a concise form avoiding repetition.
- As far as possible, the clauses of the specification should be arranged in the same order in which the work will be carried out.
- Specifications depend on the nature of the work, the purpose for which the work is required, strength of the materials, availability of materials, quality of materials etc.,

OBJECTS/ NECESSITY OF SPECIFICATIONS

- The cost of a unit quantity of work is governed by its specification.
- It serves as a guide to the supervising staff of the contractor as well as to the owner to execute the work to their entire satisfaction.
- It defines the quality of material and workmanship.
- It is an essential document and is required for arbitration of court cases.

TYPES

- General specification or Brief specification
- Detailed specification

GENERAL SPECIFICATION OR BRIEF SPECIFICATION

- It gives the nature and class of the work and materials in general terms, to be used in the various parts of the work, from foundation to superstructure.
- It is a short description of different parts of the work specifying materials, proportions, qualities etc.,
- It gives general idea of the whole work or structure and are useful for preparing the estimate.

GENERAL SPECIFICATION OR BRIEF SPECIFICATION

- **Foundation and plinth** – It shall be of size stone masonry in 1:6 cement mortar over 1:4:8 cement concrete.
- **Superstructure** – It shall be of first class brickwork with 1:6 cement mortar. Lintels over doors and windows shall be of RCC.
- **Roofing** – It shall be of RCC slab with an insulation layer and lime/cement concrete terracing above, supported over RCC beams as required.

DETAILED SPECIFICATION

- It includes:
 - **General provisions**
 - These are known as the conditions of contract and they apply to the work as a whole.
 - **Technical provisions**
 - The specifications describe the technical requirement of each type of constructions.
 - It contains detailed instruction regarding the desired quality of the final product and tests to be performed during construction.

DETAILED SPECIFICATION

- It includes:
 - **Standard specification**
 - Specifications are written completely for all items of work.
 - It is possible to prepare standard specifications for most of items occurring in works of similar nature.

DETAILED SPECIFICATIONS OF COMMON ITEMS OF WORKS - BUILDINGS

- Earth work in excavation in foundation
- Coarsed rubble stone masonry
- Damp proof courses (D.P.C)
- Ashlar stone masonry in CM (1:6)
- Brick work i class in CM (1:6)
- Cement concrete flooring
- R.C.C work proportion

DETAILED SPECIFICATIONS OF COMMON ITEMS OF WORKS - BUILDINGS

- Cement plastering in cement mortar (1:6)
- Cement pointing
- 25mm thick cement concrete floor (1:2:4)
- Terrazzo or mosaic flooring laid in situ
- Mosaic tile flooring
- Asbestos cement corrugated roofing sheets on steel purlins
- White washing

DETAILED SPECIFICATIONS OF COMMON ITEMS OF WORKS - BUILDINGS

- Painting to wood works
- Painting to iron and steel surface
- Timber doors and windows
- Distemper
- Snowcem washing

DETAILED SPECIFICATION

EARTH WORK IN EXCAVATION IN FOUNDATION

- **Excavation**

- The excavation for the foundation trenches shall be carried out in all sorts of soils as per plan approved at site.
- For that necessary marking of centre line shall be done.

- **Finish of Trench**

- The sides of foundation trenches shall be truly vertical and bottom shall be uniformly leveled.
- The bed of the trench shall be lightly watered and well rammed.

DETAILED SPECIFICATION

EARTH WORK IN EXCAVATION IN FOUNDATION

- **Finds**

- The material of valuable things found during excavation shall be property of the government or in case private work the property of the owner.

- **Trench Filling**

- The excavated material shall be stocked away from the sides of trench of the excavation by at least 2 mtrs.
- The excavated material shall be filled in the plinth in layers of 30cms.
- The excess (surplus) material shall be spread out uniformly up to a lead of 100mtrs.

DETAILED SPECIFICATION

EARTH WORK IN EXCAVATION IN FOUNDATION

- **Water in Foundation**

- Water, if any accumulates in the trench, should be pumped out without any extra payment and necessary precautions shall be taken to prevent surface water to enter into the trench.

- **Measurement**

- The excavation shall be measured as per exact length and width of lowest footing according to drawing; the depth of the trench shall be measured vertically.
- The rates of excavation include all timbering and other supports which are necessary for securing the sides of the trenches.

DETAILED SPECIFICATION

EARTH WORK IN EXCAVATION IN FOUNDATION

2.3 KSRB 2-2 : Earthwork excavation by **manual means** for foundation of buildings, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications.

2.3 KSRB 2-2.1: – do – in **ordinary soil**. No. KBS 2.1(a) / 2.3.5 **Cum** **299.00**

DETAILED SPECIFICATION

BRICK WORK I CLASS IN CM (1:6)

• **Materials**

- Bricks used should confirm to I. S. Specification.
- Bricks shall be table moulded, well burnt, copper red coloured.
- Free from cracks and with sharp and square edges.
- They should be uniform and standard in its size shall give clear ringing sound.
- Bricks shall be well soaked at least 12 hours before their use.

• **Proportion**

- The proportion of mortar shall be one part of cement to six parts of sand by volume.
- Cement shall be standard quality, sand shall be clean.

DETAILED SPECIFICATION

BRICK WORK I CLASS IN CM (1:6)

- **Mixing of Mortar**

- Cement mortar shall not be prepared more than 1 bag at a time and the quantity shall be consumed within half an hour.
- Mixing shall be done on water tight platform.

- **Bond and Laying**

- Broken bricks shall not be used except as closers.
- Bricks shall be laid in English bond with frogs (indentation) upwards.

DETAILED SPECIFICATION

BRICK WORK I CLASS IN CM (1:6)

- **Joints**

- Each brick shall be set with bed and vertical joints completely filled with mortar and bricks bedded in by tapping with the handle of the trowel.
- All horizontal joints shall be parallel and truly level.
- All corners shall be truly in plumb sides shall be in level.

- **Fixtures**

- All iron fixtures such as pipes, outlets of waters, hold fasts etc., shall be embedded in brick work in rich cement mortar or cement concrete during the progress of work.

DETAILED SPECIFICATION

BRICK WORK I CLASS IN CM (1:6)

- **Progress of work**

- Walls shall be carried up regularly not leaving any part more than 1m lower than another.
- The joints shall be raked to a minimum depth of 12mm during the progress of work so as to provide proper key for the plaster or pointing to be done.

- **Scaffolding**

- Single or double scaffolding shall be provided if required.

DETAILED SPECIFICATION

BRICK WORK I CLASS IN CM (1:6)

- **Curing**

- Brick work shall be watered for at least 15 days.

- **Measurement**

- Brick work quantities taken as m^3 and no deduction shall be made for the volume of steel.
- For partition walls and half brick wall in m^2 .

DETAILED SPECIFICATION

BRICK WORK I CLASS IN CM (1:6)

6.7	<p>KSRB 6-2.4 : Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0 Newton per sqmm with cement mortar 1:4 for basement and superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications.</p> <p>Specification No. KBS 6.2</p>	Cum	6,899.00
-----	--	------------	-----------------

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

- **Preparation of surface**

- The work of the cement plaster shall be carried out after masonry joints are raked out to a depth of 20mm and well watered.
- Extra projection of masonry more than 13mm to the general level surface should be cut-off.

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

- **Materials and proportioning**

- The proportion of mortar shall be maintained by one part of cement and six parts by sand.
- The cement shall comply with the standard requirement.
- Sand used shall be fine screened and free from all impurities.
- The dry ingredients shall be mixed thoroughly and required amount of water shall be added.

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

- **Mixing**

- Mixing shall be done on a water light platform.
- Mortar for one bag of cement shall be prepared and consumed within half an hour.
- And at a time one bag of cement is mixed.
- Water is added upto the required consistency of cement plaster attains.

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

- **Application of plaster**

- The first coat of plaster shall be uniformly applied in the best workmanship after applying the water.
- The thickness of first coat shall be not less than 12mm and should be cured for 7 days.
- Thickness of plaster will be arrived by providing screed at regular interval.
- Zig Zag lines should be provided to create rough surface for the second coat.

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

- **Finish**

- The second coat shall be started atleast after 7 days and should be 8mm thickness.
- It should give uniform grey colour.
- Sponge finish should be given to have a grain finish.

- **Checking Verticality**

- With the help of plumb bob the cement plaster should be true plumb.

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

- **Measurement**

- It is taken in Sqm.

- **Curing**

- The curing should be done for atleast 15 days.

DETAILED SPECIFICATION

CEMENT PLASTERING IN CEMENT MORTAR (1:6)

KSRB 15.3 : Providing 12mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.

KSRB15-3.1 : – do – cement mortar 1:3	Sqm	211.00
KSRB15-3.2 : – do – cement mortar 1:4	Sqm	204.00
KSRB15-3.3 : – do – cement mortar 1:6	Sqm	193.00