

## **Special condition for Civil Works**

**Water Cement Ratio and Slump:** In proportioning a particular mix, the manufacturer/producer/contractor shall give due consideration to the moisture content in the aggregates, and the mix shall be so designed as to restrict the maximum free water cement ratio to less than 0.5.

Due consideration shall be given to the workability of the concrete thus produced. Slump shall be controlled on the basis of placement in different situations. For normal methods of placing concrete, maximum slump shall be restricted to 100mm when measured in accordance with IS:1199.

### **Form Work**

The work shall be done in general as per USSOR Specifications.

Only M.S. centring / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor to be approved by the Engineer-in-Charge.

Nothing extra shall be paid for the centring and shuttering, circular in shape whenever the formwork is having a mean radius exceeding 6m in plan.

Nothing extra shall be paid for grid beams and the corresponding slabs having clear span more than 1.20 metres.

In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C. shall be accordingly adjusted at the time of its centring, shuttering and casting for which nothing extra shall be paid to the Contractor except the places where different type of flooring is provided in the same room. As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept 12 to 20mm or as required, lower than general floors shuttering should be adjusted accordingly. Nothing extra is payable on this account.

Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces are required to complete the shuttering panels. Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work. The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement

### **WOOD WORK**

The wood work in general shall be carried out as per USSOR Specifications (updated), with up-to-date correction slips. For NS item specification will be provided by engineer incharge

The sample of timber to be used shall be deposited by the contractor with Engineer-in-charge before commencement of work

The shape and size of beading shall be as per drawings. The joints of beading shall be mitred.

Timber shall be of specified species, good quality and well seasoned. It shall have uniform colour, reasonably straight grains and shall be free from knots, cracks, shakes and sapwood. It shall be close grained. The contractor shall deposit the samples of species of timber to be used with the Engineer-in-Charge for testing before commencement of the work.

Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer-in-charge. All portion of timber including architrave abutting against masonry, concrete, stone

The contractor(s) shall produce cash voucher and certificates from approved Kiln Seasoning Plants about the timber used on the work having been kiln seasoned and chemically treated by them, falling which it would not be so accepted as kiln seasoned and/or chemically treated.

Factory made wooden flush door shutters shall be carried out as per USSOR specifications and for NS item if operated specifications will be provided by engineer incharge.

### **Submission of empty bag/container etc:**

All empty bag /containers/packaging covers etc will be deposited to field staff for verification of material consumed(like paint container, cement bags, tile cover etc). It will be released to contractor after passing of bill.

### **PROGRAM CHART**

The Contractor shall prepare an integrated program chart for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the program within the stipulated period or earlier and submit the same for approval of the Engineer-in-Charge within 15 days of the issue of letter of acceptance for the contract. This program chart should clearly indicate that work will simultaneously be started on all different locations.

The program chart should include the following: - a) Descriptive note explaining sequence of various activities. b) Network (PERT/ CPM/ BAR CHART) prepared on MS project which will indicate resources in financial terms, manpower and specialized equipments for every important stage. c) Program for procurement of materials by the contractor. d) Program of procurement of machinery/ equipments having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.

If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the

modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.

The submission of revised program or approval by the Engineer-in-Charge of such program or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement

## **Progress Report**

The contractor shall be required to submit monthly progress report of the work in a computerized form. The progress report shall contain the following, apart from whatever else may be required as specified:

(i) Construction schedule of the various components of the work showing the milestones, targeted tasks and up to date progress.

(ii) Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative up to the month, with reason for deviations, if any in a tabular format.

(iii) Plant and machinery statement, indicating those deployed in the work.

## **Other Conditions**

- i. For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, notwithstanding the fact that the Contractor may have to pay extra amounts for any reason, to the laborers and other staff engaged directly or indirectly on the work according to the provisions of the labor and other statutory bodies regulations and the agreement entered upon by the Contractor with them.
- ii. The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors is minimized. Wherever absolutely essential, the chase shall be cut using chase cutting machines. Chases will not be allowed to be cut using hammer / chisel. The electrical boxes (in case of composite contract) should be fixed in walls simultaneously while raising the brick work. The contractor shall ensure proper co-ordination of various disciplines viz. building works, sanitary & water supply & electrical installations etc.
- iii. The Contractor shall do proper sequencing of the various activities by suitably staggering the activities within various pockets in the plot and at different plots so as to achieve early completion. The agency may deploy adequate equipment, machinery and labour as required for the completion of the entire work within the stipulated period specified. Also ancillary facilities shall be provided commensurate with requirement to complete the entire work within the stipulated period. Nothing extra shall be payable on this account. Adequate number/sets of

equipment in working condition, along with adequate stand-by arrangements, shall be deployed during entire construction period. It shall be ensured by the Contractor that all the equipment, Tools & Plants, machineries etc. provided by him are maintained in proper working conditions at all times during the progress of the work and till the completion of the work. Further, all the constructional tools, plants, equipment and machineries provided by the Contractor, on site of work or his work shop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted / removed from site without the permission of the Engineer-in-Charge.

#### **ENGAGING SPECIALISED AGENCIES FOR WORKS:**

The Contractor shall preferably engage specialized agencies having adequate technical capability and experience of having executed work of similar items

- i) Anti Termite treatment work.
- ii) Factory made Wooden Shutters of all types except Flush Doors
- iii) Water proofing treatment work of all types.
- iv) Aluminium Work
- v) Fabrication and erection of structural steel. Aluminium semi unitized/Curtain wall four way structural glazing/Aluminium composite panel cladding
- vi) All type false ceilings.
- vii) Galvalume/ Aluminium roofing sheet Double skin insulated system & Plumbing works.
- viii) Fire rated doors.