

ADDITIONAL SPECIAL CONDITIONS:-

1. For M20/M25/M30/M35 grade concrete, contractor should use mix design with maximum Water cement ratio of 0.40 only. To maintain workability of concrete, super plasticizer of reputed brand like Fosroc or equivalent only should be used. The super plasticizer shall be as per IS specification. To ensure this, super plasticizer should be got tested by contractor as per the IS: 9103 specifications from IITs/NITs/ Reputed Govt laboratories only.
2. Contractor should arrange suitable lighting arrangement at site either taking connection from state electricity board or keeping generator at site.
3. No extra payment will be made for dewatering/incidental de-watering work for completion and execution of work.
4. No blasting will be permitted for excavation in rocks. The existing rocks will be excavated by providing of breaker attached in suitable Machinery.
5. For all concrete works (M15 to M40) both precast or cast – in – situ may be used as directed by Engineering in charge of the work. In case of precast drain , wing wall and retaining wall, Sump No extra payment shall be paid for` transportation & placement.
6. For (M15 to M40) grade concrete Mix design should be done from any Govt laboratories/Govt Engineering college by contractor own his cost duly approved by railway.

Special Condition for reinforcement steel (TMT steel)

- 1 Steel will conform to material as per Railway's specifications (and relevant IS codes) and work is to be carried out as per relevant IS codes and in conformity to approved drawing. Welding shall generally be done by electric arc process as per IS-816 unless otherwise specified.
- 2 Weight of member will be reckoned by measuring linear length/area/volume and multiplying this by standard unit weight or actual unit weight whichever is less. If the actual unit weight is beyond tolerance limit material will be rejected. Weight will be calculated in Tonne and upto three place of decimal.
- 3 The contractor shall purchase good quality and defect free TMT steel of SAIL, TISCO, ESSAR , JINDAL PANTHER or JSPL

CONSUMPTION & ACCOUNTAL:

The steel should be used in the work as shown in the approved drawings. Overlaps if necessary should be provided as required by Design and Specification but no payment shall be made for extra steel used for providing overlaps.

Proper account will be maintained in the registers regarding consumption, balance etc. duly signed by the contractor and Railway's representative.

For the purpose of payment, linear measurement of reinforcement used for the work will be converted into mass units by multiplying the former by the standard unit weight. No overlaps will be accounted for the payment and no rolling margin will be considered. The cut pieces, wastage and the left out material will be disposed off by the contractor. Railways will not pay any compensation for such cut pieces, wastage or balance left out material. Spacer bars are payable on actual use wherever required. For the basis of calculation of the binding wire/welding weights, the cover blocks or templates and cost thereof shall not be considered and the contractor has to supply the same and use in the work and the cost of the same has to be added in the labour component of rate in the item considered at the time of quoting tender. The payment of TMT steel will be done as per actual used in RCC work, no payment will be done at the time of supply. The steel brought at site by the contractor for a particular work should not be shifted to other works/site without the written approval/permission of the Railway's Site Engineer.

BENDING & BINDING REINFORCEMENT: Reinforcement bars shall be carefully and accurately bent by approved means, producing a gradual and even motion as per the Railway's approved drawing bars incorrectly bent shall only be used if the means adopted for straightening and re-bending be such as shall not injure the material. interpretation and the decision of bent bars shall be final. Overall dimension of bent bars shall be within tolerance of 6mm. The contractor should be prepared the bar bending schedule from the approved structural drawings supplied to him and get it approved from the Engineer-in-charge.

Bends shall comply with the dimensions described in the drawings. Any discrepancies or omissions in the drawings shall be immediately reported to the Engineer.

The bars crossing one another shall be tied together at every inter-section with two strands of annealed steel wire 1.25 mm to 1.6 mm dia, twisted tight to make the skeleton of steel work rigid so that reinforcement does not get displaced during depositing of concrete. Tack welding shall be permitted, binders, strips, links shall tightly embrace the bars with which they are intended to be in contact and shall be securely wired or if approved tack welded thereto.

Reinforcement shall be lapped, jointed or spliced only at the positions described, overlaps and the like found to be necessary elsewhere shall be formed only if and as instructed. Not more than 33% of the bars or as specified in the drawing shall be lapped at one section. Means shall be taken to ensure that reinforcement remains correctly in position during the placing and consolidating the concrete reinforcement left projecting for binding with future extensions shall be thoroughly coated with cement grout wash or otherwise protected from corrosion as instructed.

Special Condition for structural steel works under NS/USSOR items for Foot over bridge, Shed and other work

- 1 Steel will conform to material as per Railway's specifications (and relevant IS codes) and work is to be carried out as per relevant IS codes and in conformity to approved drawing. Welding shall generally be done by electric arc process as per IS-816 unless otherwise specified.**
- 2 Weight of member will be reckoned by measuring linear length/area/volume and multiplying this by standard unit weight or actual unit weight whichever is less. If the actual unit weight is beyond tolerance limit material will be rejected. Weight will be calculated in Tonne and up to three place of decimal.
- 3 Holding down bolts for fixing of trusses and columns will be paid separately under suitable item.
- 4 No deduction will be made for holes of nut and bolts, Gussets plate will be measured as smallest enveloping rectangle of plates from which this has been cut.
- 5 Rate of fabrication include cost of materials, nuts, bolts, rivets, cutting, drilling, straightening, cost of welding, wood blocks, jigs, labour, machineries, plant, electricity and one coat of primer with approved steel primer Red Oxide / Zinc Chromate IS 2074.
- 6 Rate of erection item includes cost of crane, temporary bracing, service bolts and all accessories required including safety arrangements
- 7 In the case of Pipe & Junction by plate, Plate will be paid in plate items & Pipe will be paid on Pipe item.
- 8 Structural steels should be procured from Integrated Steel Plants both in public and private private sector i. e. Steel Authority of India Limited, Rashtriya Ispat Nigam Limited, Tata Steel Limited, Essar steel Limited, JSW Steel Limited, Jindal steel & Power Limited, ISPAT Industries Limited , Bhushan Power & Steel Limited, Bhushan steel Limited**
- 9 Tubular steel pipe should be procured from APL Apollo steel pipe, Jindal Quality Tubular Limited, Tata MS pipe, SAIL MS pipe, Essars MS pipe**