

## Special Condition

### (Supply of Cement)

1	Ordinary Portland Cement grade 43 confirming to IS-8112-1989 will be arranged by the contractor at his own cost. Payment shall be made under relevant NS item.
2	Supply for cement by contractor at the rate of relevant item will be governed by the following conditions.
2.1	Cement for use in works, shall be procured by the contractor from the main producers or their authorized dealers only .
2.2	Cement older than 3 months from the date of manufacture as marked on the bags shall not be accepted. Cement bags should bear the following marking :-
2.2.1	Manufacturers name
2.2.2	Regd. trade mark of manufacturer if any.
2.2.3	Type of cement
2.2.4	Weight of each bag in kg or no. of bags/tones.
2.2.5	Date of manufacture generally marked as week of the year/year of manufacture.
2.3	Quality test certificate for cement as per IS 4031 shall be furnished by the contractor/s at his own cost from the mfg. Before used of cement.
2.4	Railway may also take sample during the course of execution of work and get the cement tested to ascertain its conformity to the relevant IS specifications at contractors cost before a particular lot is put to use. Frequency of testing shall be as prescribed by the relevant IS code. Following test interlaid shall be carried out
2.4.1	Fineness.
2.4.2	Compressive strength
2.4.3	Initial and final setting time
2.4.4	Consistency
2.4.5	Soundness.
2.5	In case samples tested do not pass quality tests conducted, the entire batch of cement supplied shall be rejected and returned to the contractor/s no payment will be made on this account
2.6	For storage of cement, the contractor shall have to construct temporary Godown at his own cost. The contractor shall bring the cement to the site of work on ly on written instructions from Gazetted officer/ in-charge of work it will be obligatory on the part of the contractor to get every consignment/ truck of cement weighted in the presence of inspector in-charge or his representative and supply the original copy of weight slip along with consignment. The inspector in-charge will verify the weight of cement brought to the site of work and return one verified weight slip to the contractor after the same is stacked inside the cement Godown under his supervision.
2.7	The record of cement brought to the site of work, daily consumption, daily opening balance and closing balance shall be maintained at the site jointly by the inspector in-charge of work and contractor/s or his/their authorized representative./ For this purpose , 2 sets of registers duly reconciled and signed by the contractor/s and the inspector in-charge of work certifying the opening balance,. Consumption, closing balance should be maintained. One register each shall be kept in the custody of inspector in-charge of work and contractor or his authorized representative.
2.8	The contractor shall be the custodian of cement Godown and shall keep the Godown under his lock and key to ensure safe custody of cement. The contractor shall ensure that the cement once brought to the site and accounted shall be used at the site only and shall not be taken from site for any purpose.
2.9	The contractor shall make the cement Godown available for inspection any time along with connected record to the site Engineer or his representative as and when required.
2.10	Land for constructing the temporary cement Godown shall be handed over by the Railway on the written request of the contractor free of any rent, for construction period only.
2.11	The contractor shall ensure that after completion of the work and /or termination of the cement for any reason whatsoever, the temporary cement Godown shall be dismantled and all dismantled material/debris shall be removed and the clear site shall be handed over back to Railways. All the released material shall be the property of the contractor/s and no payment shall be made b y the Railway's for dismantling leading the material etc. The final bill and earnest money shall not be released unless the Godown is dismantled and the site is cleared in all respects.

3.0	Tolerance requirements for the mass of cement.
3.1	Cement supplied one time will be taken as forming one batch. The number of bags taken for sample from each batch shall be as under:- [(S.No.)(Batch Size)(Sample size)]-[(a)-(100-150)-(20)]-[(b)-(151-280)-(32)]-[(c)-(281-500)-(50)]-[(d)-(501-1200)-(80)]-[(e)-(1201-3200)-(125)]-[(f)-(3201 and above)-(200)]
3.2	The number of bags in sample showing a minus error greater than 2 percent of the specified net mass ( 50kg) shall be not more than 5 percent of bags in the sample .Also the minus error in one of such bags in the sample shall exceed 4 percent of the specified net mass of cement in the bags. In case, the minus error exceeds the percentages herein, the entire batch of cement samples shall be rejected
3.3	The consumption of cement on works shall be assessed on the basis of cement contents per unit quantity for various items of works as per N.S/SOR- 1996 of cement contents per unit quantity as per design in case of designed mix of cement concrete of specified strength . In case of designed mix of concrete of specified strength where the cement is to be used by weight where specifically ordered in the NS item rate or tender conditions, a variation of +1% ( max) will be allowed in the consumption of cement of works.
3.4	Stacking of cement in the Godown shall be done on a layer of wooden sleepers so as to avoid contact of cement bags with the floor, or alternatively scrap of sheets may be used in place of sleepers but these must be placed at least 20cm above the floor .The bags shall be stacked at least 50cm clear of the walls to prevent deterioration. The wooden sleepers/scrap GI sheet shall be arranged by the contractor/s at his /their own cost.
3.5	Cement shall be stored in such a manner as to permit easy access for proper inspection . Cement should be stacked not more than ten layers high to prevent bursting of bags in the bottom layers and formation of clods. The stacks of cement bags shall be covered with tarpaulin during monsoons so as to obviate the possibility of deterioration of cement by moisture in the atmosphere. Cement that is set or partially set is on no account to be used.
3.6	The cement brought to the site/Godown in excess of the requirement calculated based on the cement factors shall be taken back by the contractor/s on completion of the work after written approval from ADEN/SEN on proper documents.
3.7	Payment as per relevant NS items will be made on the basis of quantity of cement actually consumed and the quantity calculated as per cement factor for various items, whichever is less subject to recovery as per clause 3.8 below.
3.8	Cement actually consumed on works shall normally match the quantity calculated as per cement factors for various items. If, it is discovered that the cement actually consumed at site is less than the quantity ascertained taking into consideration of the cement factors for various items by more 1%, the cost of the cement not so used (i.e. difference between the quantity of cement calculated as per cement factors and cement actually consumed ) shall be recovered at double the quoted rate from the contractor.
3.9	Empty cement bags will be the property of contractor.
4.0	When Portland pozolana cement is used in plain & reinforcement concrete, it is to be ensured that proper curing of concrete at least for 14 days and supporting form work shall be removed till concrete attains at least 75% of the design strength
5.0	Supply of steel: The reinforcement steel for Railway projects/open line contracts is to be procured from approved primary producers having integrated steel plants namely SAIL, TISCO, RINL, JINDAL and other firms as per approved list of RDSO on the date of supply of steel or their authorized dealers/authorized stock yard which should conform to latest relevant BIS specification. In case of RDSO approved firms, contractor has to submit proof of approved firm.(HQ letter No. DOE/PRODUCT APPROVAL CIVIL ENGG. (L)/2016-17 DATED 21.11.2016