



HYDERABAD

STANDARD TECHNICAL SPECIFICATION FOR GROUTING

PEDC/STD.SPEC/11
REV 00

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GROUTING

REV. NO.	PRAPARED	APPROVED	DATE
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1.00.0 GROUTING OF BASE PLATES

1.01.0 GENERAL

Grouting under base plates constitute a special kind of work requiring judicious selection of materials and careful execution of work. Grouting should ensure complete filling of the space and perfect bond. The grouting shall be done under Expert supervision. Care must be taken to ensure that there is no locked air in the grouting.

1.02.0 MATERIALS

1.02.01 CEMENT : Only fresh Portland conforming to IS:8112

1.02.02 SAND : Fine aggregate shall comply in general with requirement of concrete aggregate (IS:383) and shall have a fineness modules of 2.5 to 3.0

1.02.03 ANTI-SHRINKAGE MATERIAL : Aluminium powder or anti-shrinkage admixture like Groutex CRS-NS grout (by Cement Research Institute of India) or conbextra GP2 its equivalent shall be of standard brand from reputed manufactures And shall be approved by the Engineer prior to use in work.

1.02.03 MORTAR

Water cement ratio should not exceed 0.5 Mortar shall be made up of cement and sand in the proportion 1:1 by weight and blended with Aluminium powder (about 0.005 by weight of cement or with anti –shrinkage admixture) in a suitable proportion to cement mortar in accordance with the recommendation of the manufacturer and subject to the approval of the Engineer.

1.04.0 SCOPE

The work covers all operation connected with grouting including all labour and materials. Any damage to the concrete foundation works caused during such operations due to the carelessness, or negligence shall be made good by the Contractor in a manner to be decided by the Engineer, whose decision shall be final and binding.

1.05.00 SURFACE PREPARATION: CONCRETE

Concrete surface receiving the grout shall be properly roughened removing latency and exposing good concrete. The preparation of the surface may be accomplished through the use of a chipping hammer or hand bush hammer and wire brush. The surface shall be thoroughly cleaned removing all the free water from the surface but keeping it wet before the grouting begins.



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1.06.0 SURFACE PREPARATION:STEEL

The steel surface coming in contact with the grout should be cleaned or rust, mill scales, paints, oil or grease and be wet before setting into place for grouting.

1.07.0 WORKMANSHIP

Grouting arrangements should ensure mortar to fill all the voids completely. Provisions of grout holes and rod ding arrangements should be checked before commencement of grouting. If necessary, pressure grouting with grout pump shall be restored to. Edges shall be finished properly.

1.08.0 METHODS OF GROUTING

1.08.01 USE OF DRY PACK CONCRETE

The widely used method of obtaining satisfactory grout is based on the principle of using lowest water cement ratio reducing the shrinkage to a minimum. Pozzolana cement having less shrinkage than ordinary Portland cement is preferred for this grouting. Only enough water shall be added to produce a grout. The proper amount of mixing water and proper consistency are those which will produce a grout which is at the point of becoming rubbery when the material is solidly packed. Any mortar which has been mixed for period longer than an hour shall not be used.

1.08.0 USE OF DRY PACK CONCRETE

To reduce the shrinkage anti-shrinkage materials as specified earlier to be added.

1.08.02 LEVELLING & PLUMBING

No grouting shall be carried out until the steel-works shall been finally levelled and plumbed and sufficient number of floor beams are tied in position. The stanchions, meanwhile, are to be supported by steel wedges, and immediately Before grouting, the space under steel base plate shall be thoroughly cleaned. The steel wedges must not be welded to the underside of base places.

2.00.0 DISMANTLING, ALTERATION AND RE-ERECTION OF STEEL WORK

In case it is found that alteration are to be done for certain portions of steel work already erected for any reasons what so ever, this shall be done only on the written orders of the Engineer. Complete scheme of alterations shall be detailed and got approved by Engineer before work is taken up at site.

The sections requiring modifications which cannot be done in the erected position shall be dismantled carefully without damaging other structure, lowered dismantling, cutting, re-welding or supporting, re-aligning of other adjacent connected member as well.

3.00.0 MEASUREMENT

3.00.01 Grouting under base plates of structures erected by the Contractor will not be



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measured. The rate for erection is expected to include cost of grouting. However, Volume of grout will be considered for the purpose of theoretical consumption of cement.

3.00.02 Grouting under base plates and machine bases erected by other will be measured for actual volume of grout. The volume of embedded base plate/machine basis will be deducted from the overall volume of grout.

3.00.03 Grouting in pocket for erection done by other will be measured for the volume of Of pockets. No deduction will be done for volume of bolts etc.