

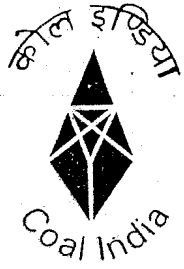
ମହାନଦୀ କୋଲଫିଲ୍ଡସ ଲିମିଟେଡ
महानदी कोलफील्ड्स लिमिटेड
MAHANADI COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)

P.O.- Jagruti Vihar, Dist-Sambalpur-768020 (Orissa)

Tel./ Fax: 0663 - 2542798, Fax: 0663-2542770

Phone: PBX: 0663 - 2542461 to 2542469



13/000235



Ref. No. MCL/HQ/.....

0708/527

Date.. 28/06/2007

C I R C U L A R

Sub.: **SYSTEM IMPROVEMENT IN RESPECT OF TESTING OF MATERIALS FOR CIVIL ENGG. WORKS.**

The following guidelines are to be implemented in respect of **TESTING OF MATERIALS FOR CIVIL ENGG. WORKS :-**

1. Testing of different building materials is to be done as per the enclosed list of mandatory tests & frequency of testing.
2. Laboratory / Field test of other materials should be done as per norms and as decided by EIC.
3. The testing charges should be deposited to the concerned Engineering Schools / Colleges or Govt. Laboratories, directly through the department and this amount should be deducted from the contractor's R/A bills.

The above clauses along with the enclosed list of mandatory tests and frequency of testing of different building materials are to be incorporated in continuation to clause no.8.4 of the general terms and conditions of the tender document.

This issues with the approval of the competent authority

This will come into force with immediate effect

Encl.: As above.

B. N. M. S. 27/6/07
General Manager(Civil)
MCL, Sambalpur

Distribution:

1. UMD, MCL - for kind information
2. D(P), MCL - for kind information
3. D(T), MCL - for kind information
4. D(F), MCL - for kind information
5. CVO, MCL - for kind information
6. CGM(F), MCL
7. GM(F), MCL
8. CGMs/GMs, All Areas
9. GM(C)Infra., MCL
10. SO(C), All Areas
11. AFM, All Areas
12. Dy. CE(C)-I&H, MCL, HQ.
13. SEC, D/o, JVAV, HQ., / MCL, BBSR.
14. Sr. EECT/C, HQ.
15. O/e

Circular 97

B. N. M. S. 28/6

Sr. EECT(C)

LIST OF MANDATORY TESTS & FREQUENCY OF TESTING

SN	Materials	Nature of Test	Frequency of testing	Remarks
1	Sand	Bulking of sand	Every 20 cum or part thereof as decided by EIC.	
		Silt content	Every 20 cum or part thereof as decided by EIC.	
		Particle size distribution	i. Every 40 cum of sand required in RCC work only	
			ii. Every 80 cum of sand required for other items.	
2	Stone aggt.	Particle size distribution	For every 45 cum or part thereof as decided by EIC.	
		10% fine value	Initial test for 45 cum and subsequent test as and when required by EIC	
3	Cement concrete or RCC(not leaner than 1:3:6)	Slump test	15 cum or part thereof or more frequently as decided by EIC.	For all other small items and where RCC done in a day is less than 5 cum, test may be carried out as required by EIC.
		Cube test/compressive strength (7 th day & 28 th day)	i. Every 20 cum of a day's concreting in slab and beams & connected columns. ii. every 5 cum of a day's concreting in columns.	
4	Water for construction	Chemical & physical properties	Before commencement of work and thereafter every 3 months till completion of work.	If more than one source, Water from each source is to be tested.

B. N. M. S.

SN	Materials	Nature of Test	Frequency of testing	Remarks	
5	Bricks	Water absorption	Minimum 1 test for each lot.		
		Efflorescence			
		Compressive strength	Lot size		No. of bricks to be tested
			2001-10000		5
		10001-35000	10		
		35001-50000	15		
6	Steel	Tensile strength (ultimate/yield stress)	Every 20 tonne or part thereof as decided by EIC.		
		Bend test	Every 20 tonne or part thereof as decided by EIC.		
7	Terrazo tiles	Transverse strength	One test for every 10,000 nos. or part thereof for each type and size from a single manufacturer (one test to be done even if the number of terrazo tiles of any type and size from a single manufacturer is less than 50000 nos. provided the total number of terrazo tiles of all types and sizes from all manufacturers used in a work exceed 5000 nos.)		
		Water absorption			
8	Cement	i) Initial and final setting time	One test per lot of each manufacturer.		
		ii) Comp. strength			
9	Flush door	End immersion test	Upto 50 - 1 sample	Minimum qty. Of work for carrying out the test - 26 shutters	
		Knife test	50 to 150 - 2 "		
		Glue adhesion test	151 to 300 - 3 "		
			301 to 500 - 4 "		
10	White glazed tiles (for floor and wall)	Water absorption	3000 nos. or part thereof		
		Impact strength test			

Laboratory/Field Test of other materials should be done as per norms and as decided by EIC.

The testing charges should be deposited to the concerned Engineering Schools/Colleges or Govt. Laboratories, directly through the department and this amount should be deducted from the contractor's R/A bills.

B. N. M. S.
27/6/07