



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT
ARIYALUR
CIVIL DEPARTMENT MANUAL**



Issue No. 02	Rev. No: 00	Effective Date: 01.11.2019	SOP/CIVIL/05
Issued By: M.R		Approved By: HOD (Civil)	
SOP FOR CONCRETING WORK			

Scope : This SOP is applicable to Safe working for Concreting work for various heights.

Responsibility : Concern contractor & Workers.

Accountability : Civil-Section In charges.

PPE:

1. Safety helmet
2. Safety shoe
3. Nose mask
4. Safety full body harness
5. Hand gloves
6. Safety goggles
7. Gum boot

Tools:

1. Mason tools
2. Mixer machine
3. Concrete vibrators
4. Electrical equipments

Hazards:

Risks associated

Fall from heights
Form work collapse
Electrical hazards

Mitigating Measures

Ensure DCBL height work & scaffolding standard with PPEs
Proper inspection & follow the standards
Ensure Fitness certificate for all electrical equipments

Training needs:

1. Emergency preparedness
2. Work at height
3. Scaffolding



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Procedure:

1. Necessary work permits have to be obtained
2. All workmen shall wear safety PPEs & its awareness
3. Ensure proper supervision be made available
4. Adequate staging and platforms to provide
5. No nail should protrude from shuttering support
6. Ensure form work fitness checked by section incharge
7. Necessary stair case /certified ladder arrangement should be made to reach the work place both at height & at excavation pit
8. The approach area shall be clear from all encumbrances and platforms if any shall have proper handrails as per the standards
9. Sufficient place available for mason to stand and vibrate the poured concrete
10. Mixer machine and vibrators are placed as close to as possible
11. Check for adequacy of raw materials like sand, aggregate and cement
12. Check for availability of adequate labour for leading the mixed concrete
13. The design mix to be as per the specification. Ensure that the concrete is made accordingly
14. After pouring, ensure proper spreading, compacting with vibrator & required finishing to be done under technical supervision
15. Ensure the availability of carpenters during concreting for any formwork rectification
16. After concreting, all the empty cement bags have to be tied as a bundle and hand it over to the packing plant scrap bag area for disposal.
17. Finally, good housekeeping to be ensured

Emergency / Emergency Shut OFF:

1. If anybody fall from height, inform to the Safety department or Call Emergency number 3108/9865152222/9750963761.
2. If any shaking in the form work /scaffolding, then stop the work and inform to the section in charge.
3. If any injury is there, give First aid and inform to the Safety department or Call Emergency number 3108/9865152222/9750963761



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Records/Annexure:

1. JSA as enclosed below.

JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job: This SOP is applicable to Safe working for Concreting work	Date: 26.06.2019	Analysis by: M.I. Shameem Sufiyan	Reviewed by: S. Chandra Bose
Title of employee doing job: Concern contractor & Workers	Supervisor: Section Engineer	Department: Civil	Section: General	Approved by: S. Chandra Bose
Req'd/recommended PPE: Safety helmet, Safety shoes, Safety full body harness, Nose mask, Safety goggles, Hand gloves, Gumboot.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Procedure	What Could Go Wrong	Corrective Action
1) Loading of materials in mixer machine manually	Head loaded materials may fall down during lead	Proper head load helmet shall be used	May lead to injury	Proper PPEs to be ensured
	Head loading workers may slip & fall	Lead area shall be kept clean	May lead to injury	Good housekeeping to be ensured
	Workers will be exposed to dust particles while loading materials at mixer machine	Proper nose mask & safety goggles shall be used	May affect eye sight / inhaling dust particle	Proper PPEs to be ensured
2) Mixer machine operation	Injury to Operating person	Dedicated operator shall be deployed	May lead to injury	Trained operator to be ensured
	Injury to person when trapped on the rotating shaft of the mixer machine	Rotating shaft portion of the mixer machine shall be covered	May lead to injury	Safety cover to be ensured
3) Raft concrete pouring inside excavation pit	Sliding & falling of earth / materials inside the pit	On all side top edges of the pit shall be kept clean at least 600mm from the edge & no material shall be stacked in that area. Chutes shall be placed with proper care & support in a well-dressed / compacted surface	Person inside the pit may injured / fatal	Proper housekeeping & PPEs to be ensured
	Person may fall while accessing pit bottom from top ground	Certified aluminium ladder / standard staging ladder arrangement shall be used to access pit bottom	May lead to injury / fatal	Certified aluminium ladder / standard staging ladder arrangement & Proper PPEs shall be ensured
	Splashing of concrete mix	Proper safety goggles, nose mask, hand gloves & gumboot shall be used	May affect eye sight / skin problems	Proper PPEs to be ensured



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4) Pedestal concrete pouring at the center of pit	Person may fall	Proper staging, platform & its access shall be provided for standing, pouring & vibrating as per DCBL standard. Pedestal column shuttering support shall not be taken from staging support & vice versa	May lead to injury	Proper staging, platform & its access & PPEs shall be ensured
5) Concreting at 1.5m above the ground level	Free fall of person	DCBL Height work & scaffolding standard shall be followed strictly	May lead to injury / fatal	DCBL Height work & scaffolding standard along with proper PPEs to be ensured
6) Electrical equipment's safety	Electrical hazard	Ensuring the fitness of electrical equipment like vibrator, mixer machine, light fittings & tools. Damaged wires shall not be used	Electric shock / fatality	Ensure the operating condition of all equipments along with fitness certificate before startup of work. Trained operators to be deployed with proper PPEs