



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT  
DALMIAPURAM  
CIVIL DEPARTMENT**



Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/CIVIL/02
Issued By: S & P		Approved By: HOD (CIVIL)	
SOP FOR LAYING REINFORCED CEMENT CONCRETE			

**Scope/Purpose** : This SOP is applicable to Safe working for doing shuttering.

**Responsibility** : Engineer – civil

**Accountability** : Deputy General Manager – civil

**PPE:**

1. Safety helmet,
2. Safety shoe,
3. Rubber Gloves.

**Tools:**

1. Spanner
2. Hammer
3. Chisel
4. Saw

**Hazard Analysis:**

**Risks associated**

Cut injury, fall

**Mitigating Measures**

Use of proper tool

**Training needs:**

1. Usage of tools
2. Tightening the joints

**Procedure:**

1. Use Proper PPE & tools
2. Take proper work permit from safety dept as per the work condition.
3. Before starting of work, civil department personnel should ensure that proper scaffolding is being done if height is more than 1.5m
4. The shuttering materials should be conveyed either by winches or manually through rope.
5. The timber used for shuttering should be of half seasoned other than roof shuttering.



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6. The props spacing and number of poles should be sufficient to take the slab load.
7. The planks used for shuttering purpose should be of good quality. The planks should be free from bends, holes and have regular edges.
8. The deck platforms used for lifting the wet concrete by human chain of head loads should be properly tied using coir ropes.
9. In case of roof shuttering, only steel or strong wood should be used with pacca water tight joints.
10. In case of roof shuttering the props should be preferred by jack.
11. If mechanical vibrator is used, the joints should be made with bolts.
12. Deshuttering should be done either as per IS standards or as referred by engineer- civil

**Emergency / Emergency Shut OFF:**

1. If cut or fall injury is there, First aid will be given and inform to the Safety department or Call Emergency number 523/9865177444/9865195111.
2. If any hose pipe got punctured or busted, then stop conveying the concrete immediately when pumping concrete is done.

**Records/Annexure:**

1. Refer drawing in civil department.
2. JSA is enclosed below.



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**JOB SAFETY ANALYSIS:(JSA)**

<b>Job Safety Analysis</b>	Job: Shuttering	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Contract labour	Supervisor: Section Engineer	Department: Civil	Section: Plant	Approved by:
Req'd/recommended PPE: Safety helmet, Safety shoe, & Rubber Gloves.				
<b>Sequence of Basic Job Steps</b>	<b>Potential Hazards</b>	<b>Recommended Safe Job Procedure</b>	<b>What Could Go Wrong</b>	<b>Corrective Action</b>
Inspecting the site	Fall injury	Barrication should be done	Sliding may occur	Not to stand near the pit.
Choice of materials	Cut or body Injury	Use of good materials which satisfy the load requirements	Use of unwanted materials may lead to failure and accident	Proper selection should be made after checking the quality
Joints	Cut or body injury	Check the joints for its rigidity	The shutters may fall down	Use of bolts for tightening the joints
Deshuttering	Body injury	Drying time should be given	The structure may gets collapsed	By following the IS standards

HEAD CIVIL

HEAD TECHNICAL