



DALMIA CEMENT (B) LIMITED – DALMIAPURAM



PRODUCTION DEPARTMENT

Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/PROD/12
Issued By: S & P		Approved By: Head – Production	
SOP FOR storage and feeding of Clinker, Gypsum & Additive			

SCOPE : STORAGE AND FEEDING OF CLINKER, GYPSUM & ADDITIVE

RESPONSIBILITY : CCR executive.

Accountability : Section Head – Cement mill.

PPE:

1. Safety goggles,
2. Safety helmet,
3. Safety shoe,
4. Mask,
5. Cotton Gloves.

TOOLS:

1. Poking bar,
2. Hammer.
3. Showel

Hazard:

Risks associated:

Mitigating Measures

Fall of tools;	Carry the tools in tool bags
Hit of Hammer in hand;	Trained to be engaged
Hit injury while poking	Hand gloves and no one near by while poking

Procedure:

- If the KHD clinker is to be fed to ball mill hoppers, start respective belt conveyors
- If the KHD clinker is to be fed to clinker silo get the clearance from KHD cooler M/A as per the Work Instruction –DW22.
- Start the clinker silo in feed group and ensure that all drives are running.
- As the Aumund Conveyor discharge end M/A (three way divertor) to divert the clinker to clinker silo.

1.1 Get the instruction from tester for type of cement to be ground, gypsum and additive feeding.



DALMIA CEMENT (B) LIMITED – DALMIAPURAM



PRODUCTION DEPARTMENT

Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/PROD/12
Issued By: S & P		Approved By: Head – Production	
SOP FOR storage and feeding of Clinker, Gypsum & Additive			

- Ensure Clinker, Gypsum and Additives are stored / available in their respective storage yard as per Annexure-5.

1.2 CM- II & CM –III:

a) FOR OPC GRADE 43

- If KHD Kiln is producing OPC clinker then divert the clinker to mills hopper directly thro' B.C.19 Feed the clinker from KHD extension yard to cement mills hopper whenever required thro' belt conveyors respectively.
- Fill CM-2, CM-3 Clinker hoppers.
- Divert the KHD clinker to clinker silo if all ball mill hoppers are filled or as per the requirement.
- When the clinker is diverted to yard or cement mill hoppers, stop the clinker silo infeed group after getting clearance from the Aumund conveyor discharge and M/A.
- Ensure adequate stock of Gypsum is maintained by Internal Material Transport.
- Feed the Gypsum to the Mill Gypsum Hopper by Crane handling after getting the written / oral instruction from tester.

b) FOR OPC 53S / OPC GRADE 53 :

- Get the requirement of OPC 53S / OPC Grade 53 cement from Sales dept. and plan for Special cement grinding according to that.
- If KHD kiln is producing OPC 53S / OPC Grade 53 clinker, then divert the clinker to mills producing OPC 53S / OPC Grade cement or divert the clinker to BC-20 to store in the yard meant for OPC/53S / OPC Grade 53 clinker storage if the mill hoppers are full.
- When KHD kiln is not producing OPC 53S / OPC Grade 53 Clinker, Feed clinker from BC 20 storage yard to cement mills by cranes handling after getting written instruction from Tester.
- Ensure proper stock of Gypsum is maintained either by direct receipt or through internal handling.
- Arrange to feed Gypsum after getting written instruction from Tester.

1.3 TO FEED CLINKER FROM CLINKER SILO TO CVRM CLINKER HOPPERS .



DALMIA CEMENT (B) LIMITED – DALMIAPURAM



PRODUCTION DEPARTMENT

Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/PROD/12
Issued By: S & P		Approved By: Head – Production	
SOP FOR storage and feeding of Clinker, Gypsum & Additive			

- Get clearance from W/F M/A for transporting clinker from clinker silo to CVRM clinker Hopper.
- Ensure that Comp. Air pr. For transport line B/F is OK.
- Ensure that clinker hopper level high alarm is not persisting.
- Switch on the hopper level sensor and ensure that the hopper is not filled over 90%.
- Select PA1 or PA 2 or PA1 & PA 2 for extracting clinker from clinker silo as per the requirement.
- Start the clinker silo extraction group 511.
- Ensure that all drives are running.
- If PA1 is running, check and ensure that silo gate DG1 or DG2 or DG3 gets opened automatically as per the logic and the clinker starvation alarm is not persisting.
- If PA2 is running, check and ensure that silo gate DG4 or DG5 or DG6 gets opened automatically as per the logic and the clinker starvation alarm is not persisting.
- If PA1 & PA2 both are running check and ensure that clinker starvation alarm is not persisting for both the conveyors.
- Ensure that the TIMERS for the transport line B/Fs are OK.
- Fill the hopper till the “Hopper level high” alarm appears on the screen.

STOPPING THE CLINKER SILO EXTRACTION GROUP:

- Group stop the clinker silo extraction group once the “Hopper level high” alarm appears on the screen.
- If PA1 alone is running check and ensure that the silo gates DG1, DG2 and DG3 are closed as per the logic.
- Ensure that the conveyors are emptied and stopped as per the logic.

RESTARTING THE CLINKER SILO EXTRACTION GROUP:

- Get clearance from W/F M/A for transporting clinker from clinker silo to CVRM clinker hopper.
- Start the extraction group as per the procedure.



DALMIA CEMENT (B) LIMITED – DALMIAPURAM



PRODUCTION DEPARTMENT

Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/PROD/12
Issued By: S & P		Approved By: Head – Production	
SOP FOR storage and feeding of Clinker, Gypsum & Additive			

1.4 TO FEED CLINKER FROM CLINKER SILO TO CEMENT BALL MILL CLINKER HOPPERS ONLY.

- Get clearance from the B.C.19 belt M/A to transport clinker from CVRM clinker hoppers
- Get clearance from the W/F, M/A in the CVRM clinker hoppers for transporting clinker to BC-19 belt conveyor.
- Ensure that sufficient clinker level is there in the CVRM clinker hopper.
- Ensure that the pneumatic divertor 531NGI OP limit is available towards 531BC4 belt conveyor (feeding belt for BC-19).
- Check and ensure that the manual diverting gate 531PG5 below 531NGI is open towards 531BC4 belt conveyor.
- Select 531BC4 belt conveyor and de-select 531BC2 & 531BC3 (CVRM Mill feeding belt conveyors).
- Select 531AF1 clinker apron feeder only.
- Start mill feed group 531.
- Ensure that all drives are running.
- Give set point for clinker A/F feeder as per the requirement and ensure that the clinker is transported to BC -19 belt conveyor.

STOPPING THE CLINKER FEEDING TO BALL MILL

- Stop the clinker A/F when BC-19 Belt M/A says the hopper is full.
- Ensure that the belts are emptied.
- Group stop the mill feeding system.

RESTARTING THE CLINKER FEEDING FROM CLINKER SILO TO BALL MILL HOPPER.

- Get clearance from the W/F M/A and BC-19 belt M/A for transporting the clinker from CVRM clinker Hopper to Ball Mill Hopper.
- Start the Mill feeding group as per the procedure.



DALMIA CEMENT (B) LIMITED – DALMIAPURAM



PRODUCTION DEPARTMENT

Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/PROD/12
Issued By: S & P		Approved By: Head – Production	
SOP FOR storage and feeding of Clinker, Gypsum & Additive			

1.5 TO FEED GYPSUM / POZZOLANA FROM DUMP HOPPER TO CVRM HOPPERS ONLY.

- Get clearance from CVRM W/F M/A as per the Work Instruction for transporting Gypsum/Pozzolana to CVRM Hoppers.
- Switch on the pilot level sensors and ensure that the hoppers are not filled over 90%.
- Get clearance from the Dump Hopper M/A to feed Gypsum /Pozzolana materials to their respective hoppers in CVRM.
- Ensure that the gates below AF1 and AF2 are open towards the belt conveyor in sequence.
- For transporting Gypsum /Pozzolana material ensure that the diverting gate below K21BC4 belt is open towards K21BC5 belt and take the BC5 belt in sequence.
- Start the Gypsum feeding group.
- Check and ensure that all drives are running.
- Fill the hoppers as per the requirement.

STOPPING THE GYPSUM / POZZOLANA FEEDING GROUP:

- Group stop the Gypsum feeding group as and when told by the CVRM W/F M/A / dump hopper M/A.
- Ensure that the drives are stopped in empty condition.

RESTARTING THE GROUP.

- Get clearance from CVRM W/F M/A for transporting Gypsum / Pozzolana to their respective hoppers.
- Get clearance from the dump hopper M/A for transporting gypsum /Pozzolana to their respective hoppers.

Job Safety Analysis	Job: Storage of clinker, gypsum and additives	Date: 01 – 09 - 2013	Analysis by: Section Incharge	Reviewed by: Section Head
Title of employee doing job:	Supervisor: Sec.Incharge	Department: Production	Section: Cement mill	Approved by: Department Head
Req'd/recommended PPE:				



DALMIA CEMENT (B) LIMITED – DALMIAPURAM



PRODUCTION DEPARTMENT

Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/PROD/12
Issued By: S & P		Approved By: Head – Production	
SOP FOR storage and feeding of Clinker, Gypsum & Additive			

Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Cleaning of the Coating at feed chute	pipe hit to the person	Hold the Pipe properly, if there any possible tie it one end.	Pipe may hit the person while cleaning the chute.	Hazards to be explain to the people who are working in that area by safety PP talk, tool box talk.
Inspecting the chute	Fall of the person	While inspecting the chute use safety belt and make proper approach to view the chute.	Person may fall on to the chute due to slip.	Use Proper safety belt to inspect the chute.
Cleaning spillage in aumond conveyor bottom	Showel may entrapped into conveyor	Ensure showel should not touch the conveyor while cleaning	Person may entrapped into conveyor if he hold strongly	Stop the conveyor and start the conveyor after clean the spillage material

Emergency Shut- off:

1. In case of belt is moving, Emergency pull chord switch should be activated by the person.
2. If body injury is there, First aid will be given and inform to the Safety department or Call Emergency number 233/555/9865125176/9865177444.

Records/Annexure:

1. Refer Line clearance certificates.
2. JSA as enclosed below.

HOD PRODUCTION

HOD TECHNICAL