



# DALMIA CEMENT (B) LIMITED



## ARIYALUR

### MECHANICAL

Issue No: 01	Rev. No: 00	Effective Date: 25.11.2022	SOP/MECH/211
Issued By: M.R		Approved By: HOD (Mech)	
SOP-JSA FOR Chain belt conveyor maintenance			

**Scope** : This SOP is applicable to Safe working for Chain belt conveyor maintenance

**Responsibility** : **Section Engineer** – Mech.

**Accountability** : **Section Manager** – Mech.

#### PPE:

1. Helmet,
2. Safety shoe,
3. Ear plug,
4. Safety goggles.
5. Rubber hand Gloves.
6. Hand Gloves.
7. Nose mask.
8. Welding helmet

#### Tools:

1. Box Spanner set
2. Ring Spanner set
3. Lever block/Chain pulley block
4. Belt slings
5. Wire rope slings
6. Hammer
7. Welding machine with cables (Direct earth).

#### Hazards:



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### Risks associated

Body injury

### Mitigating Measures

1. Proper certified tools and tackles usage

### Training needs:

1. Fire fighting
2. Emergency preparedness

### Procedure:

1. Empty out the material and stop the chain belt conveyor.
2. Take Electrical Shutdown for the same and for all other Incoming & Out going Equipment.
3. Attain all the required permits (General / Hot / Height work, The Permit Papers should be with the person (fitter) working at site.
4. Trained Worker should be engaged for working with related PPE's.
5. Use Certified Tools & Tackles for the job.
6. Inspection to be done for guide channel dislocation, damage and for missing bolts.
7. Damaged guide channel to be replaced, dislocated guide channel and missing bolts to be refixed.
8. Head end and tail end sprockets and bolts to be inspected and bolt tightness to be ensured.
9. Chain links and rollers to be inspected and replaced if any damage or wear found.



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10. Rails and polymer sheet to be inspected and to be replaced if any damage found.
11. Side Guide rollers to be inspected and replaced if any damage found.
12. Chain lubrication to be done based on lubrication schedule.
13. Belt and joint condition to be inspected and temporary patch up to be done if required.
14. Skirt board and rubber to be checked and to be adjusted/replaced if required.
15. Drive Gear box oil level to be inspected and top up to be done if required.
16. Head, tail and side guarding to be refixed if removed.
17. Clear all the tools & Material from the spot.
18. Electrical isolations to be cleared and equipment to be taken in local mode.
19. Take trial run and give clearance to run in CCR mode.

### Emergency / Emergency Shut OFF:

1. If body injury is there, First aid will be given and inform to the Safety department or Call Emergency number 3108/ 9865152222

### Records/Annexure:

1. JSA is enclosed below.
2. Isolation Matrix.

### JOB SAFETY ANALYSIS :( JSA)

Job Safety Analysis	Job: Chain belt conveyor maintenance	Date: 04- 04 - 2021	Analysis by: Section Engineer	Reviewed by: Section Head
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Title of employee doing job: Section Engineer	Supervisor: Section Engineer	Department: Mech.	Section: AFR	Approved by: HOD Mechanical
Req'd/recommended PPE: Safety helmet, Safety shoe, Safety goggles, Ear plug, nose mask, Rubber hand Gloves & Welding shield.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Remove the safety guards	Leg injury	Use proper tools Lifting tools	Tools / Guard may slip	Ensure proper tools & tackles in usage
Guide channel replacement	Hand injury	Using correct spanner to remove and replace the guide channel Use proper PPE and spanner	Tools will slip Tools will slip	Ensure tools and tackles conditions Proper PPE usage
Head and tail sprockets bolts tightening	Hand injury	Using correct spanner for tightening the bolts	Tools will slip	Ensure tools and tackles conditions
Remove or refit the rail – rail gouging	Burn Injury	Keep the working area free from flammable	Sparks may ignite the cloths / flammable material	Ensure the work man is to keep away and ensure the work area free from flammables. Check the availability of fire extinguisher
Removal of old rails	Body injury	Use proper slings	Rail / tools may slip	Use web slings with proper tightness



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Fixing of new rails	Body injury	Hold with supporting rope	Rail / Rope may slip	Hold the rope by using proper rigid support. Ensure the tools condition
Fixing the safety guards	Leg injury	Use proper tools Lifting tools	Tools / Guard may slip	Ensure proper tools & tackles in usage
Belt patch up	Body injury	Use certified buffing machine	Buffing wheel may cut and hit hands	Check the condition of the buffing wheel and machine
	Dust & Eye injury	Use safety goggles, hand gloves and nose mask	PPE may be in damage condition	Check the condition of the PPE

#### Isolation Matrix:

SL No	Activity			Isolation Matrix for Utility & General Equipment.	
				Isolation Type	
				Electrical Energy	Other Energy



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1	Chain conveyor maintenance	Belt	Name and Tag for the Equipment	Isolate the Related other energy isolation					Isolate or closed the valves		

*Isolate the Related other energy isolation*

1. 485CBC1
2. 485SR1