

## CONVEYOR GUARDING – Lack of Guarding can kill or seriously injure!!

### Nip Points:

Guards that physically prevent access to conveyor nip points are required to be provided. A nip point is a point of convergence between two moving parts that can pinch or crush fingers or other body parts or draw the person into the machinery. Nip points are highlighted by red arrows in the diagram.

Tail Drum Guard



Head Drum Guard



Return Roller Guard (Mesh)



Return Roller Guard (Plate)



### Removal of guards

Before the removal of guards for the purpose of carrying out cleaning, maintenance or adjustment on any machinery, the power source should be isolated and locked off. Isolation and lock off should be considered from ALL forms of energy in static and mobile plant, i.e. electrical, pneumatic, hydraulic, mechanical.

### Guarding

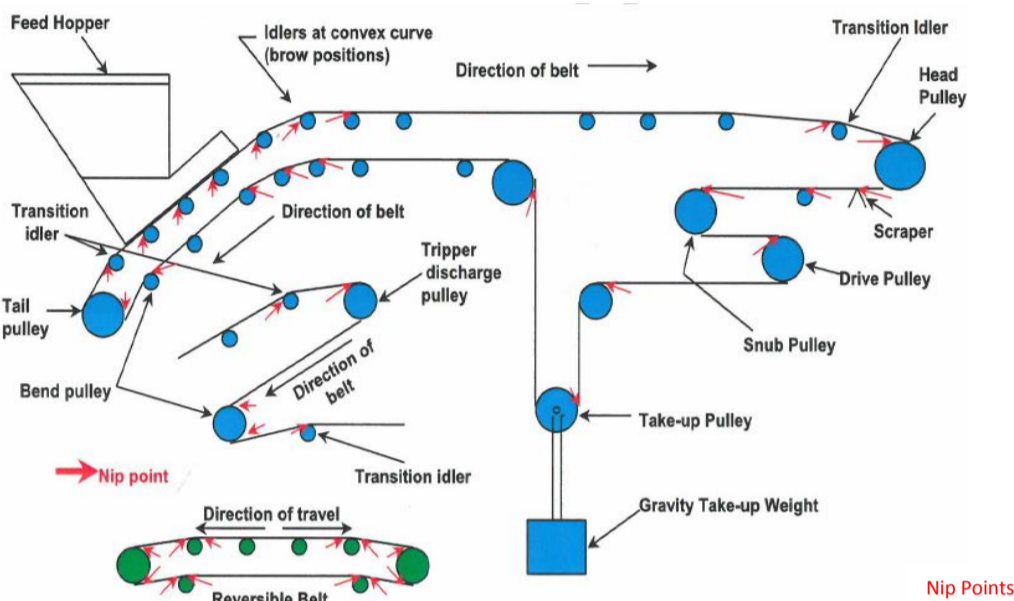
To be effective all guarding must:

- physically prevent access to the nip point;
- not impede the operation of the plant;
- where possible, allow routine adjustment and maintenance of the guarded machinery without the need to remove the guard;
- secured in place such that they require a tool or a padlock key for removal.

### Pullcords and Emergency Stops

All conveyors should be fitted with emergency stop controls; these include Pullcords and/or Emergency Stop Buttons.

- **Pullcords** must be mounted using a position switch at either end or a position switch at one end and a tension spring at the other end.
- **Pullcords** must not be firmly anchored at either end as this will limit the effectiveness of the pullcord to work in both directions.
- **Emergency Stop Buttons** must be red, prominently marked and easily identified with a mushroom head latch in type or lock in type with manual reset;
- Both should be tested on a regular basis. A written record of the test and any repairs or adjustments required must be carried out immediately.



### Types of guarding:

- **Close Fitting Guards:** physically encloses the nip point; these must be held in place by fastenings which are padlocked in place or require the use of a tool to release them. The guard should be of robust construction with a mesh of sufficient size to prevent the accumulation of spillage within the guard and yet prevent finger or hand contact with the nip points within. Guards must not be secured in place using cable ties or wire.
- **Distance Guards:** are a fence type construction which prevents access to the nip point/danger zone. These should be secured to a solid foundation or adjacent structure and equipped with a suitable interlocking device or padlock to prevent access.
- **Skirting Guards:** In situations where fixed skirts are fitted above conveyor rollers, a nip point exists between the idler and the belt. Guards must extend a safe distance beyond the outrunning nip point so as to prevent access.

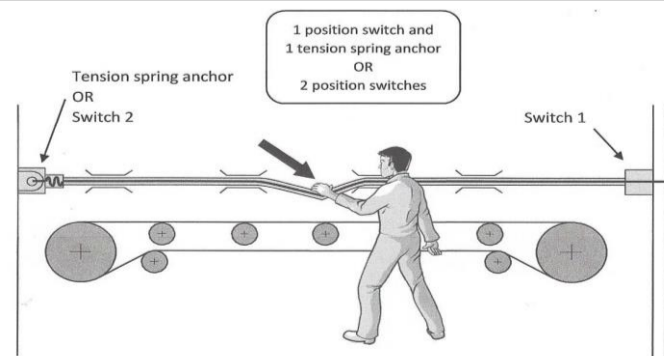
### Return Rollers:

There are varying types of guards available to guard return roller nip points, these include:

- A suitable open mesh guard can be provided to totally enclose the roller.
- Plate type guards can be fitted along the full length of the roller nip point. Measures should also be taken to prevent access to the nip point from each side of the roller.

### Conveyor gravity take-up units:

- Should be enclosed with mesh panels which prevent access to moving parts within the tower and protect against the risk of the gravity take-up weight falling to ground level in the event of the conveyor belt breaking.
- Guarding must also be provided along the conveyor walkway; Guards must extend a safe distance beyond the outrunning nip point so as to prevent access to the bend pulleys.



**Disclaimer:** This bulletin has been prepared for the Irish Concrete Federation in consultation with the Federation's Health & Safety Committee and is issued for guidance only. Members are reminded of the requirement to have Safe Operating Procedures as per the relevant Health & Safety Regulations. Every care has been taken to ensure that the information contained herein is correct and accurate at the date of publication. However the Irish Concrete Federation cannot accept any responsibility or liability for any errors, inaccuracies or omissions which may have occurred inadvertently.