Introduction to Splicing Heavy Duty Belting

HDF 100

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Safety on the Job

Safety

42% of conveyor-related accidents happen while performing maintenance, lubrication or checking the conveyor

Source: US MSHA Office of Injury and Employment Information

Safety on the Job

Safety

39% of reported injuries occurred while cleaning or shoveling was being done around the conveyor

Source: US MSHA Office of Injury and Employment Information

What's Important?

YOUR SAFETY

What's Covered

- Heavy Duty Conveyor Applications
- Key Conveyor Components and Terms
- Heavy Duty Conveyor Belting Basics
- Types of Splicing Methods
- S.L.A.M.
- Lock Out/Tag Out/Try Out
- Proper Belt Squaring
- Introduction to Splicing

Conveyor System Basics

What is a Conveyor System?

- Common piece of mechanical equipment
- Conveys materials from one location to another
- Often safer & more cost-effective than alternative methods

Heavy Duty Applications

Defining Heavy Duty

- Utilize conveyor belting greater than ½” in nominal thickness
- Generally have PIW (Pounds per Inch of Width) ratings above 200

Heavy Duty Applications

Heavy Duty Conveyors

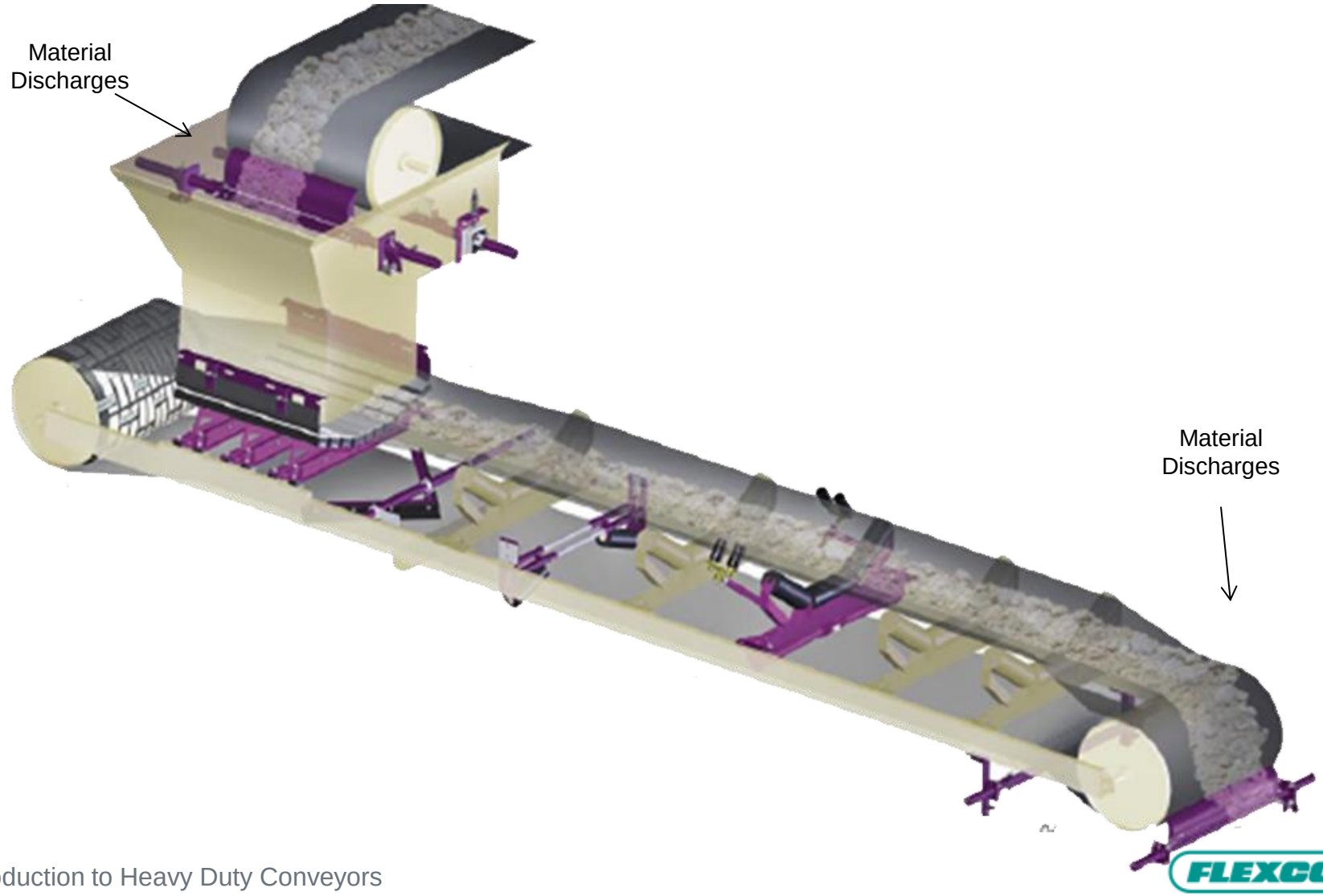
- Have applications in a wide variety of industries
- Primarily used for bulk materials
- Can carry industrial and food grade materials
- Both indoor and outdoor applications
- Above ground and underground installations

Heavy Duty Applications

Common Industry Applications

- Coal and Hard Rock
- Wood Processing
- Sand and Gravel
- Foundries
- Steel Mills
- Asphalt Plants
- Construction and Road Equipment
- Construction Machinery
- Grain Elevators

Conveyor Components



Heavy Duty Belting

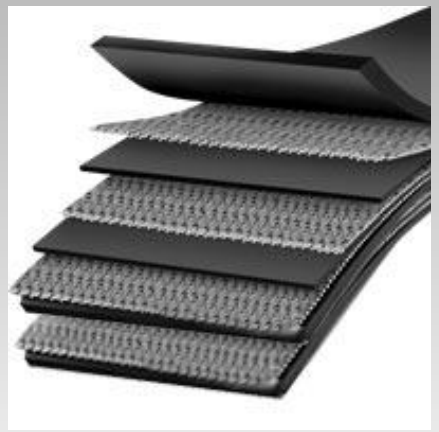
Heavy Duty Belting

- Belt consists of one or more layers
- Most expensive wear component of the conveyor

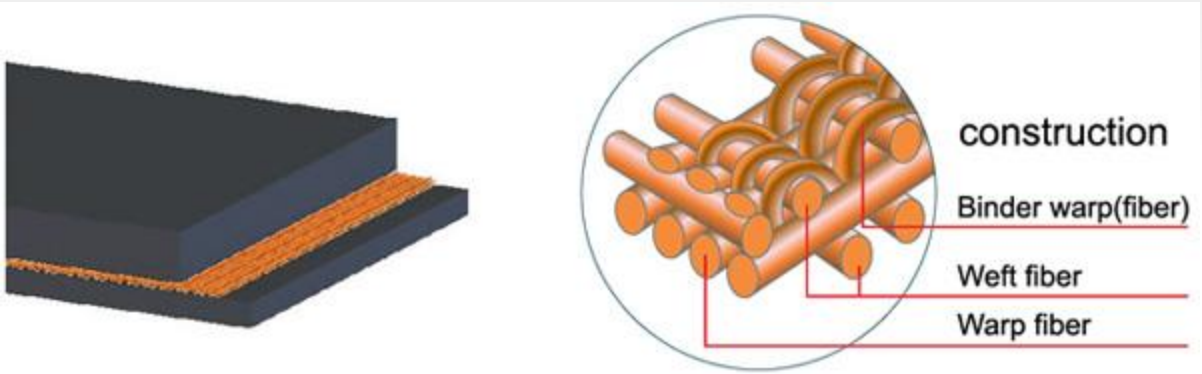
Heavy Duty Belting

Two Types of Heavy Duty Conveyor Belting

- Plied Belting



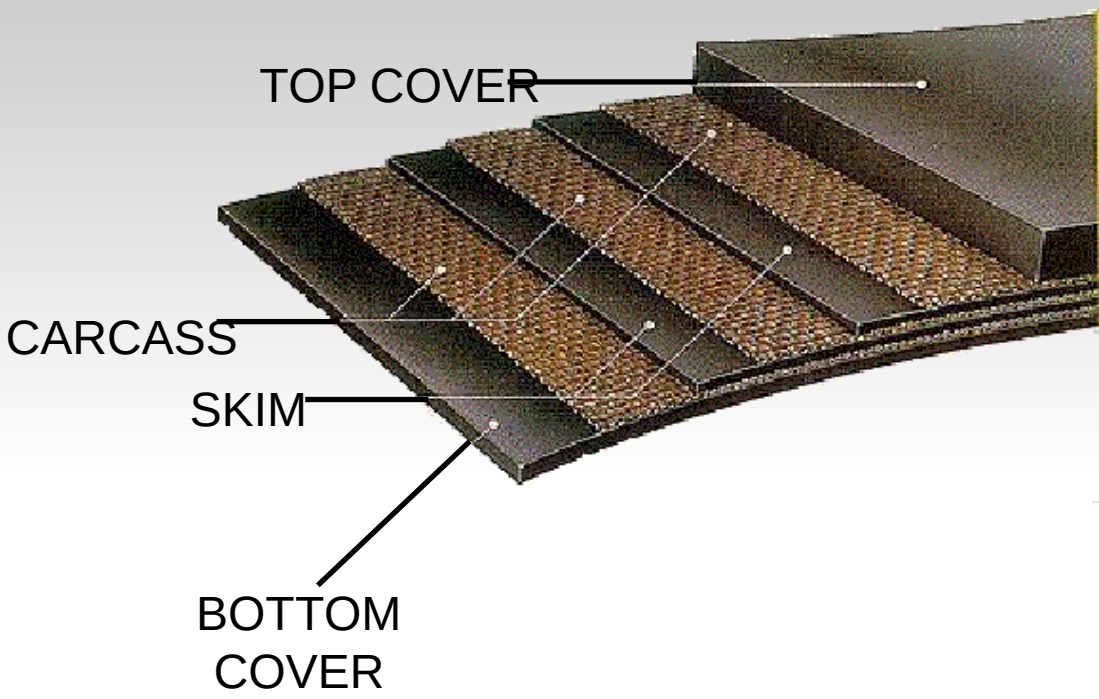
- Straight Warp



Heavy Duty Belting

Components of a Heavy Duty Belt

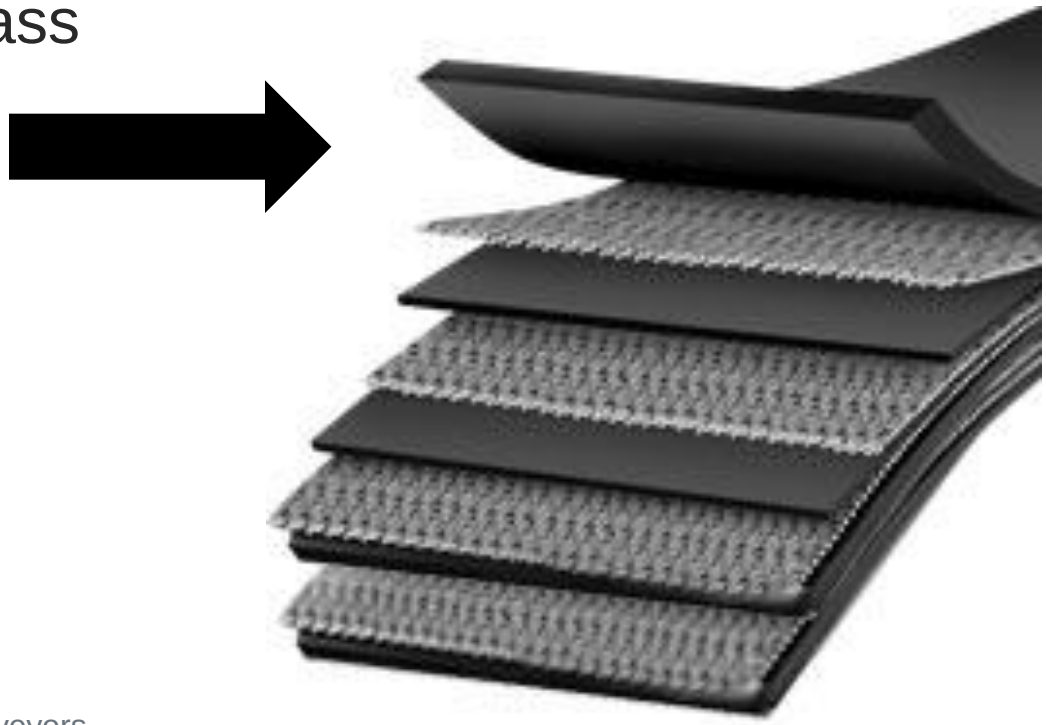
- Carcass, strength member
- Skims, the rubber between the fabric plies
- Belt covers



Heavy Duty Belting

Top Cover

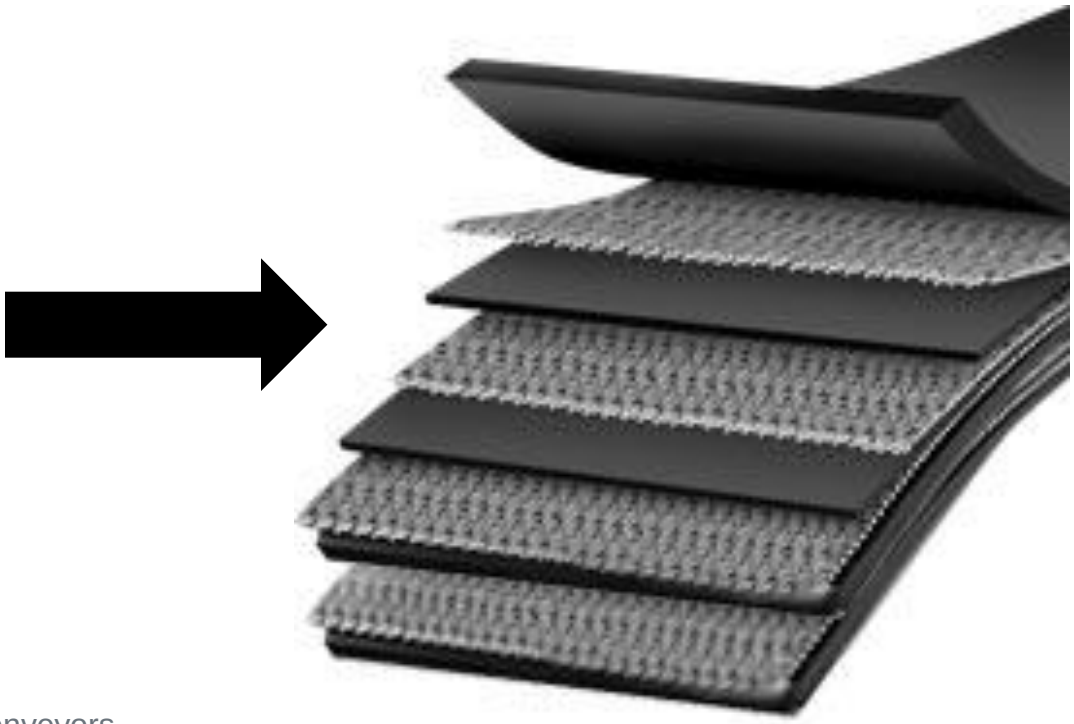
- Where material is carried
- A variety of materials used
- Protects carcass



Heavy Duty Belting

Carcass

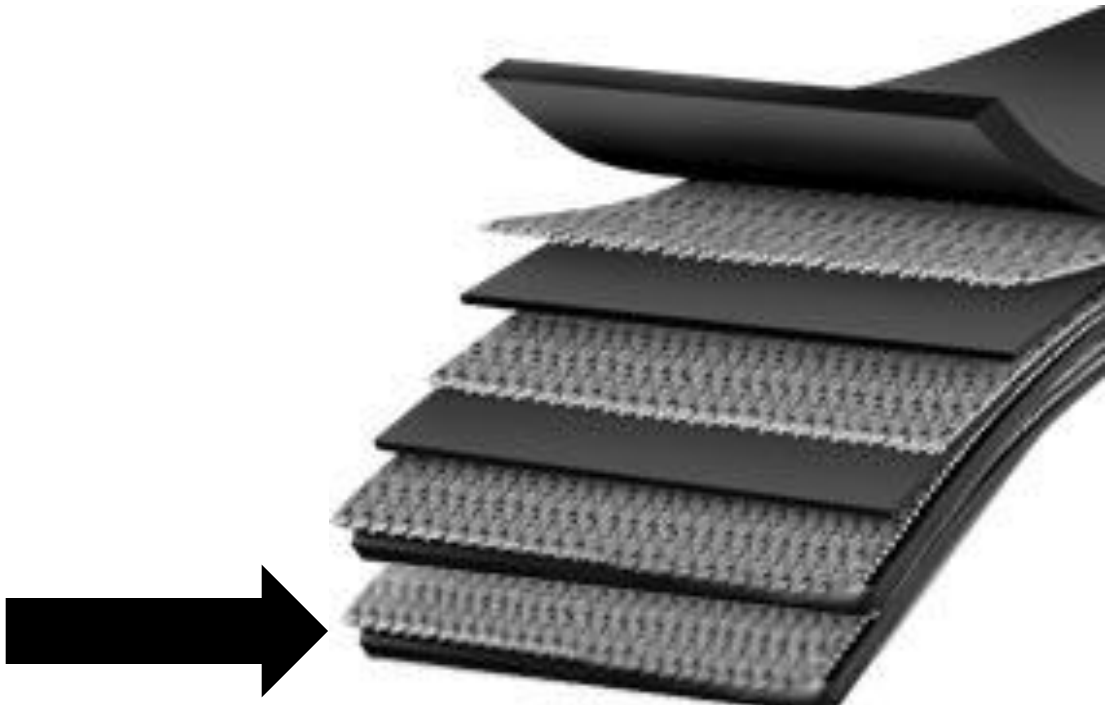
- Gives belt its strength
- Can be one or more layers (plies) of fabric



Heavy Duty Belting

Bottom Cover

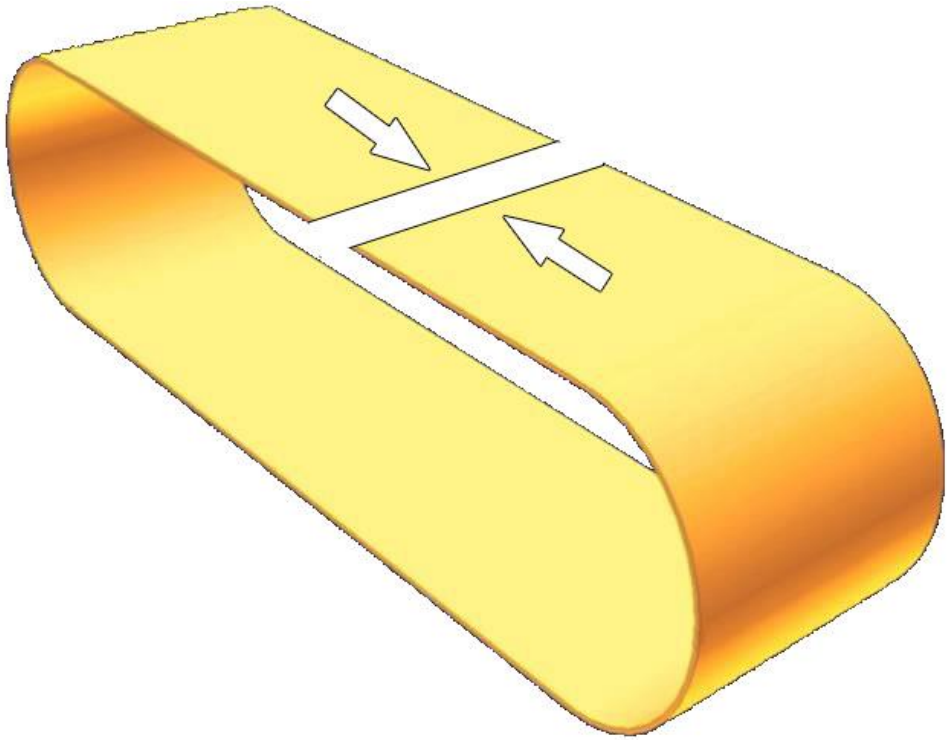
- Contacts pulleys and idlers and protects bottom of belt



Introduction to Splicing

Splicing A Belt

- The process of joining two belt ends together to create a continuous band



Introduction to Splicing

Two Splicing Methods

1. Mechanically fastening belt ends together

2. Vulcanize - large press uses heat, chemicals and pressure to bond belt into a continuous band

Preparing to Splice

Getting tools ready and knowing proper splice

- **Pick correct splice for the belt**
- **Make sure that splice is spotted in safe place to work**
- **Get tools ready, and make sure they are safe to use**

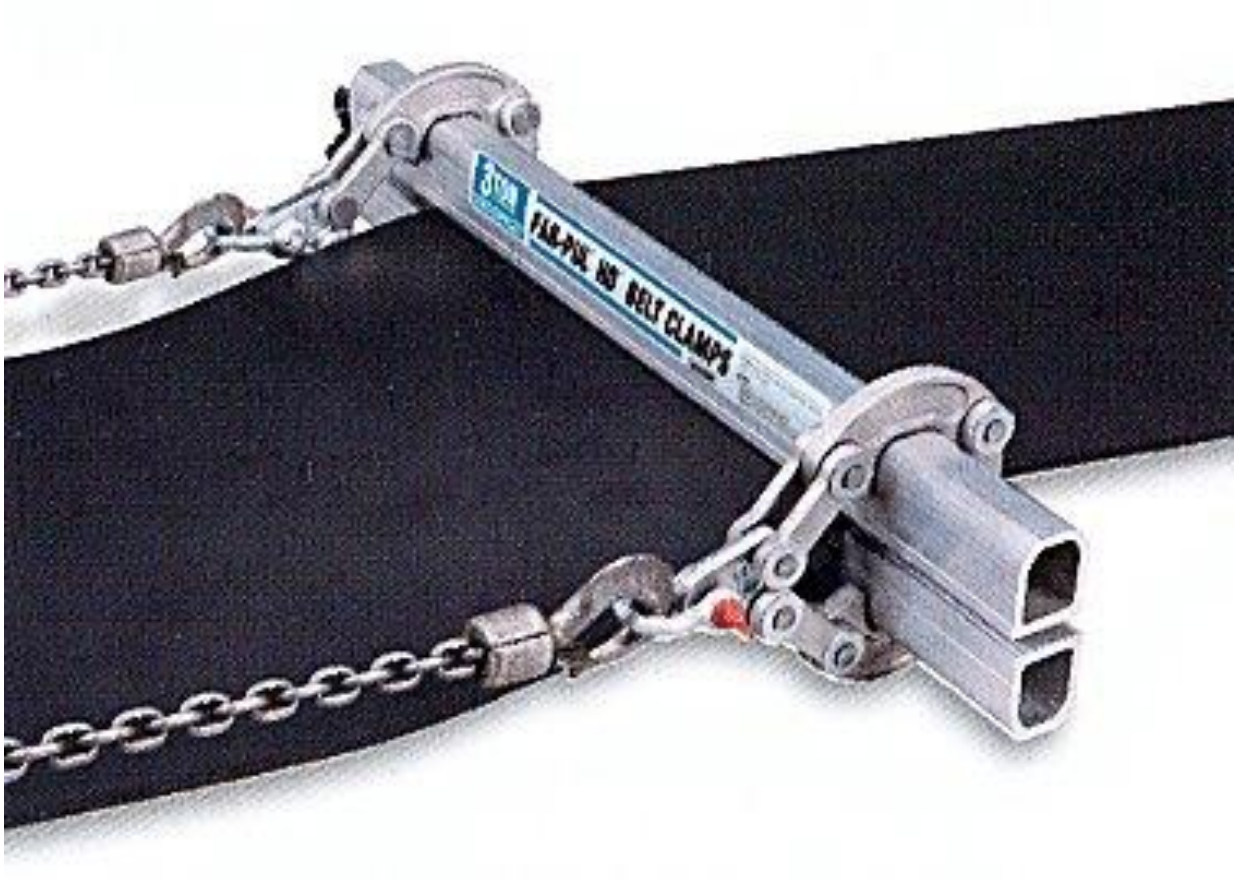
S.L.A.M.

- Stop Think through the task
- Look Identify the hazards for each job step
- Analyze Determine if you have the proper knowledge, training, and tools
- Manage Remove or control hazards and use proper equipment

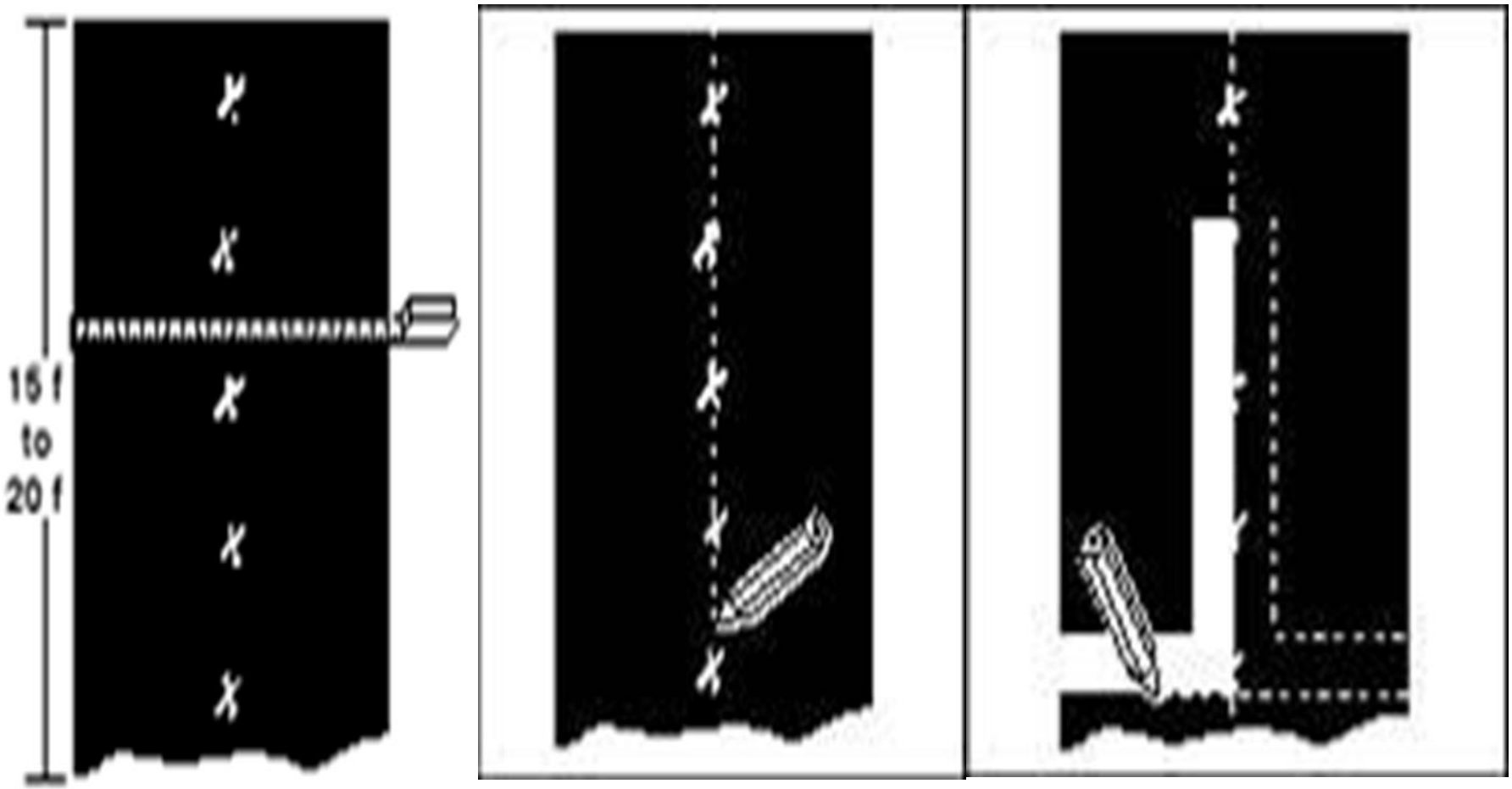
L.O.T.O

Preparing to Splice

“Dogging” off the Belt



Squaring the Belt



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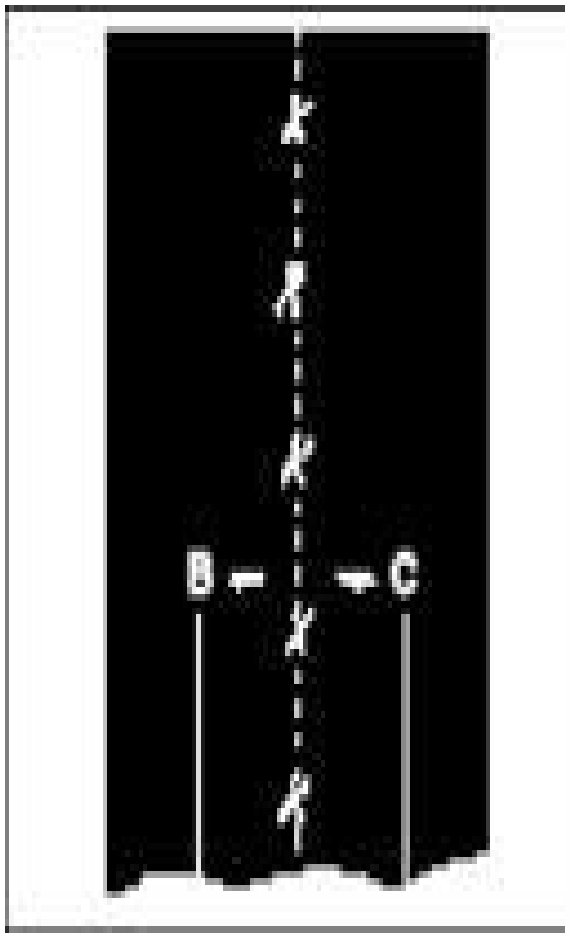
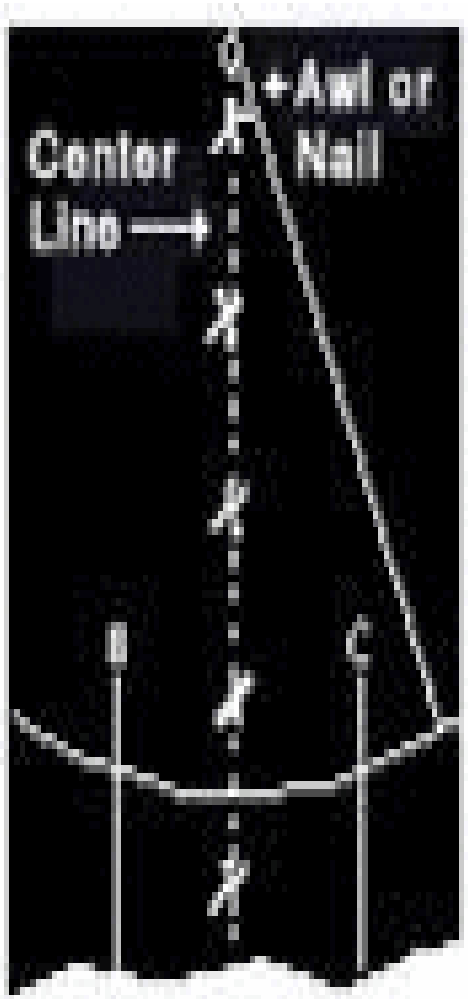
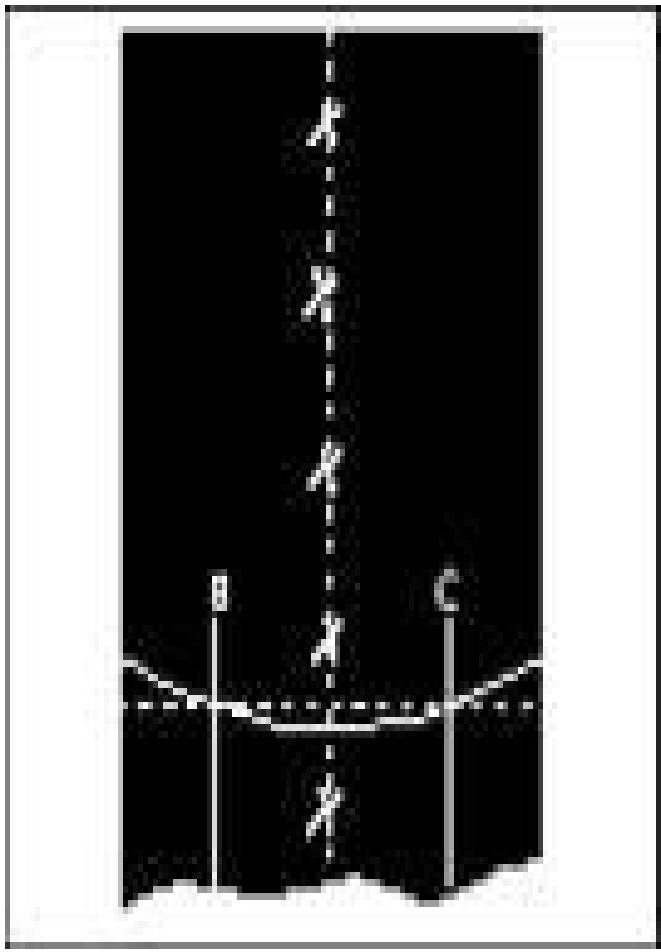






Cutting the Belt

Belt Cutters

- Razor Knives
- Enclosed Belt Cutters
- Electric Belt Cutters

Skiving the Belt

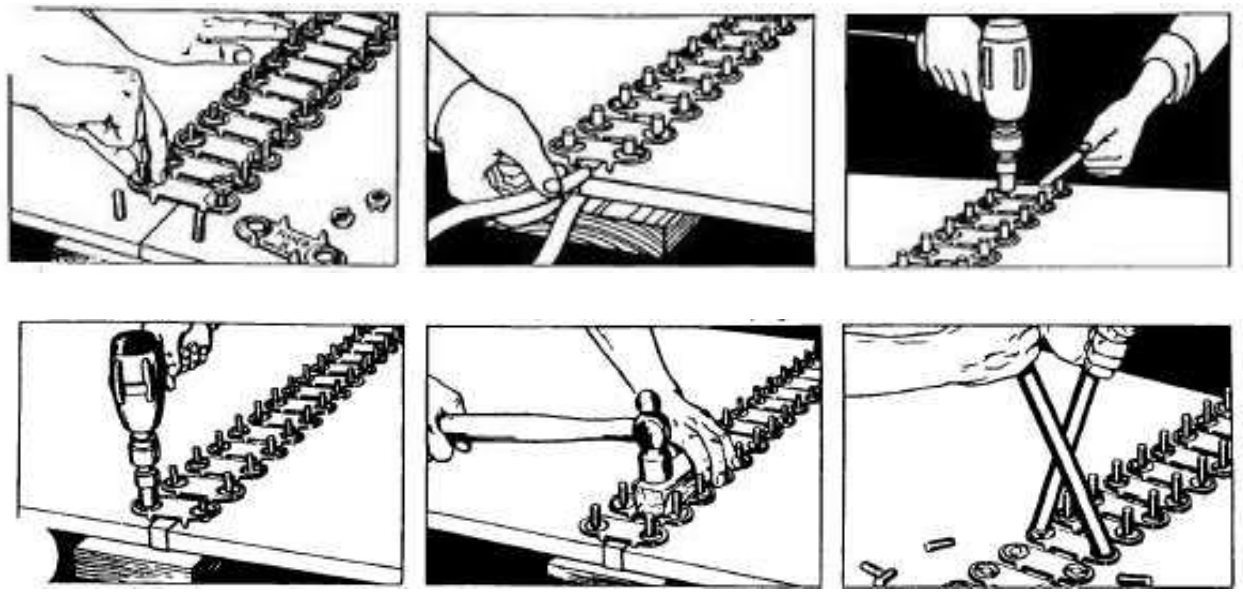
Skiving

- Process of preparing belt for mechanical fasteners
- Removes top cover on edges of belts to be fastened
- Creates a lower profile splice
- Can improve splice life
- Less wear on conveyor components such as cleaners

Installing the Fastners

Installing

- Punch Holes using Template
- Insert Fasteners from the bottom
- Put on Top Plates and Nuts
- Put in Tape
- Tighten Nuts
- Break off Bolts
- Mushroom



Bolt Solid Plate Installation Tips

- The use of Flexco-Lok tape will result in a smooth splice!

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Installing the Fastners

Safety Comes First

Summary

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