Conveyor Belt Terminology

#

45-Degree Splice

Solid plate pattern wherein belt ends are cut at a 45-degree angle to the belt edges and fasteners are installed crosswise to the cut. The pattern permits operating of the splice over smaller diameter pulleys.

90-Degree Splice

Generally, a mechanical belt splice made at a right angle to the belt edges.

A

Abrasion

Wearing away by friction.

Angle of Repose

The angle to the horizontal that a material will naturally assume when dropped in a pile.

Application

Type of conveyor or conveyed material, or environmental conditions for which a belt or fastener joint is to be specified.

Application Tool

Generally, an installation device, fixture, or machine for installing certain belt fasteners, hooks, or lacing.

B

Back Edge

Pertaining to a mechanical belt splice and in the direction of belt travel, the points of the splice furthest from the length-wise center or (in the case of a hinged joint) the hinge point. The points at which the rigid end of the splice meet the more flexible unspliced belt. See also: Reach-back.

Back Pulley

A pulley whose face surface is not covered or lagged.

Bareback Surface

A belt surface where the textile carcass is without any coating. Also referred to as Brush Back or Friction Back.

Basket Weave

A fabric with ends of yarn side-by-side in both the warp and filling in a plain weave construction.

Belt Clamp

Beams or metal plates secured transversely on both sides of belt or belt ends to hold the ends in a desired position (e.g. for splicing).

Conveyor Belt Terminology

Belt Covers

The rubber or plastic compound used on the top and/or bottom of the belting to protect the carcass from abrasion and impact.

Belt Fasteners

A mechanical device for holding the two ends of a conveyor belt together.

Belt Grinder

An abrasive wheel used in conjunction with an electric or air-driven device drill, used to remove a portion of the belt cover.

Belt Grips

Devices used to grip the belt edges to facilitate manually lifting the belt intoits final position.

Belt Groover

Hand tool for removing a portion of the top or bottom cover of belting to recess all or a portion (e.g. the back edge) of a mechanical joint. Also reffered to as Belt Grooving.

Belt Guides

V-belt shaped device affixed to the underside of a conveyor belt (along the length) to keep the belt training properly. Can be alternately applied across the width as a belt cleat. Also called V Guides.

Belt Hooks

Finger-shaped attachments for the carrying side of the conveyor belting, to act as cleats or positioning points. Also referred to as Belt Pegs.

Belt Lugs

A mechanical fastener consisting of wires capable of being pressed through the belt end and bent back into the belt by a special installation machine. Also called Wire Hooks.

Belt Punch

A tool used to punch a hole through the belt for bolted fasteners or for bucket elevator bolts.

Belt Rating

The normal working tension recommended for a belt. Sometimes this rating is variable based on method of splicing, vulcanized or mechanical.

Belt Ripple

A lateral waviness of a belt splice caused by compression swell in the fastener area, most common with rubber belting.

Belt Skiver

A tool designed to remove top cover material, generally for countersinking mechanical belt fasteners flush with or below the top surface. Also reffered to as a Skiver.

Conveyor Belt Terminology

Belt Stop

An internal tab in some belt fasteners which properly aligns and positions the belt end in the fastener.

Belt Tension

In a belt drive, the pulling force acting on the belt, either at rest or during operation.

Belt Thickness

The gauge or measure of belting, from top to bottom, especially in the area which is to be spliced.

Belt Training

The process of adjusting idlers, pulleys, and loading conditions to ensure that the belt runs straight. Sometimes referred to as Belt Tracking.

Belt Width

The measure of a belt at a (horizontal) right angle to the direction of travel.

Bend Pulley

A pulley used to change the direction of the belt run (usually by less than 180 degrees).

Bolt Breaker

A hand tool for breaking off the surplus ends of fastener bolts after tightening. Bolt breakers are usually sold and utilized in pairs.

Bolt Horn

A hand tool for facilitating the assembly of fastener plates (in a Bolt Solid Plate fastener splice) onto bolts. Works like a shoe horn.

Bolted Plate Hinged Fasteners

Steel plated on both sides and both ends of two belt ends to be fastened together (secured to the belt with bolts) with the end of the plates constructed into a circular hole (loop) for accepting a hinge pin to secure the two ends of the belts together. See Also: (Bolted) Solid Plate.

Boot

Enclosure for the loading end of a bucket elevator belt, located at the bottom of the system.

Bottom Cover

The protective rubber cover on the bottom surface of a conveyor belt which contacts the driving mechanism. Sometimes referred to as Pulley Cover.

Breaking Strength

The tensile that a textile yarn or cable, a steel cord, or a belt is at rupture.

Conveyor Belt Terminology

Bridge

The portion of a mechanical belt splice which connects fastener segments or plates, along the top or bottom of the belt. See Also: Cross-Wire, Tie-Bar, and Connecting Bar.

Bucket

One of the cups or containers bolted to an elevator belt.

Bucket Elevator

A type of conveyor (most often a belt conveyor) which vertically transports material in cups or buckets attached to the belting. Also referred to as a Leg Belt (in grain handling).

Bucket Projection

The distance the bucket protrudes beyond an elevator belt.

Butt Splice

A solid plate type mechanical splice in which the ends of a belt to be joined are brought end to end.

Butt Strap Joint

A butt splice with an additional piece of belting material, called a Splice Pad, which covers the joint (on the side of the belting away from the pulleys). Sometimes used to splice bucket elevator belting. See Also: “Saddle.”

C

Capped Edge

A rubber protective edge placed around a belting product, internally reinforced with textile or other material.

Carcass

The fabric, cord, and/or metal reinforcing section of any rubber product such as a belt, as distinguished from the rubber cover.

Carding Paper

The paper holder for packaging and installing wire hook fasteners. Also called a Card. Alternatively, hooks may be collated using a welded cross wire -; see Connecting Bar.

Center Distance

(1) The distance from the center of the shaft of the “head” pulley of a conveyor to the center of the shaft of the “tail” pulley; the effective length of the conveyor, (2) the distance between two conveyor idlers. Also called Center-to-Center distance.

Center Line

A line that connects the (width-wise) mid-points of the belt. A line down the center of the belt along its length. When the belt end is cut at a right angle (90 degrees) to the center line, it is said to be cut “squarely.”

Conveyor Belt Terminology

Check

A groove in the bridge or connecting bar or hinged fasteners to facilitate separation of fastener segments. This groove may be of a "radius" type (for use with conveyor belt lacing) or of a deep "V" design (for use with transmission belt lacing).

Cleats

Transverse raised elements attached to the conveyor belt surface (made of material compatible to the belt cover) to stabilize items carried up an incline. Also called Flights.

Clinch

To bend or "set" the open-end portion of hooks or staples to secure them in belt.

Clip

A disposable assembly element for the installation of belt fasteners or lacing.

Coining

A beveling of the back edge (longitudinally) of belt fasteners to prevent hang-up on conveyor structure or belt scrapers. In metal stamping, coining refers to metal flow as contrasted to physical displacement as in bending.

Cold Bonding

Non-mechanical, endless splicing of belting in ambient temperatures using adhesives, between steps in the belt plies, and manual compression. Bonding takes place as a result of chemical interaction rather than the heat and pressure of hot vulcanization. Sometimes referred to as Chemical Vulcanizing or Cold Vulcanization.

Comb

That portion of a lacing instrument tool which aligns the fastener during installation. Specifically, the portion which aligns the fastener loops for one belt end.

Comb-Out

Failure at the mechanical belt fastener or splice where fill and/or cross fabric of belt has fatigued sufficiently such that fastener attaching elements, without proper support, pull through the belt end. See also Pull-Out and Transverse Break.

Come Alongs

Chain winch for use with belt clamps to position belt ends for splicing.

Common Bar

Generally refers to the connection between the teeth in drive-on belt lacing (also see Connecting Bar).

Compression

The squeezing effect on a belt where fasteners are installed that spreads the splice tension evenly over the width of a fastener segment.

Conveyor Belt Terminology

Connecting Bar

In belt lacing or hooks, that portion which connects the hooks or teeth along the top or bottom of the belt. Also known as cross-wire, Tie Bar™, or Common-Bar.

Conveyor Belt

A device comprised of carcass material and/or covers (elastomer) in sheet form for transporting bulk or packaged materials over distances.

Corrugated Hinge Pin

The connecting pin which engages the opposing loops of a hinged type of belt fasteners; such pin is characterized by spaced, embossed sections to prevent lateral migration in use.

COS

Refers to a conveyor belt with cover only on one side.

Countersunk

A splice recessed into the belt cover to provide for a stronger, quieter running joint, and a smoother surface on the belt.

Cracking Chisel

A two-pronged tool used with a hammer to break the nuts on a bolt-style fastener (for repair).

Crowned Pulley

A pulley with a greater diameter at the center, or other points, than at the edges.

D

Deep Troughing Idlers

Angled supporting pulleys for the belt in the carrying portion of the conveyor; “deep” meaning usually over 35 degrees in angle.

Delamination

The separation of plies in a vulcanized splice or cold-bonded splice, or the separation of the cover materials from the carcass of a belt, or separation of belt plies.

Diameter

The length of a straight line passing through the geometric center to the periphery of an object.

Diverters

Panels mounted over a conveyor belt at strategic points to discharge material being conveyed. Also referred to as Shears.

Conveyor Belt Terminology

Down-Time

Period of time when machinery (e.g. a conveyor) is out of service for repairs. Usually refers to lost production time.

Drive Pulley

A pulley mounted on a drive shaft which transmits power to the belt.

Drive-on Plate Fastener

Two ends of belting joined together with a single plate, across the top cover joint, with rivets or sharp teeth driven through the belt and clinched over on the bottom cover side.

Durometer

An arbitrary scaled numerical value system which measures the resistance to penetration (hardness) of the indenter point of a testing device. For example, the measure of hardness of rubber conveyor belting.

Dutchman

A short section of belt, usually less than 2-3 times the belt width in length, which is patched into a conveyor belt using fasteners to accommodate minor variations in belt length. Sometimes referred to as a Saddle.

E

Edge Flange

Raised edging material longitudinally attached to the sides of conveyor belting to prevent spillage. Usually employed on flat, bulk material conveyors.

Elastomer

An elastic rubber-like substance, such as natural or synthetic rubber.

Elevator Belt

A belt that raises material vertically in buckets attached to the belt. In grain handling, commonly called a Leg Belt. For vertical transportation of personnel, commonly called a Man-Lift Belt.

Elevator Bolt

Flat-top, squared shoulder bolt for attaching accessories such as elevator buckets and cleats to belting (See Norway style elevator bolt).

Elongation

Increase in length expressed numerically as a fraction or percentage of initial length.

Endless Belt

A belt made to operate in a continuous loop without employing mechanical fasteners.

Conveyor Belt Terminology

EPDM

Abrasion, ozone and acid resistant rubber compound used for conveyor belt Elastomer (cover) and for mechanically-attached belt cleats.

Everdur®

Spark-free (compared to steel) alloy of copper and silicon used in belt fasteners for potentially explosive environments. Everdur®; is a regitered trademark of American Brass.

Extendable Belts

An adjustable conveyor system with a loop of belting between the carrying idlers and the return idlers for changing the center distance. Also called Extensible Belts, Extensible Conveyors, or Telescoping Conveyors.

Extruded

Material forced through die of tubing machine in either solid or hollow cross section.

F

F/S

Friction surface. See Bareback Surface.

Fabrication Shop

Conveyor belt facility which provides services ancillary to the manufacture of the belt, e.g. slitting belt to width (and cutting to length), installing mechanical belt fasteners, installing cleats, etc.

Fastener

A mechanical device for connecting the ends of a conveyor, transmission, or elevator belt. A Belt Fastener.

Fastener Plate

One belt fastener segment. In a hinged joint, it is called an “end-plate.” In a solid plate splice, it is either a top or bottom plate.

Fastener Strip

A series of belt connecting elements joined together with a cross-bar to accommodate the width of one belt end.

Fatigue

The weakening or deterioration, over time, of a material (e.g. a belt carcass) caused by a repetition of stress, strain, or flexing (over pulleys) or by continuous impact damage.

Finger Splice

Belt ends cut into mating fingers and bonded endlessly (continuous “W” shape with points in a longitudinal direction).

Conveyor Belt Terminology

Flange

See Edge Flange.

Flat Belt Conveyor

As opposed to a troughing conveyor, this type runs on a surface which is level across the width. The belt is often supported by running in a pan or “slider bed.”

Flight

See Cleats.

FPM

Abbreviation for “Feet per Minute” in calculating belt speed. Also, Meters per Minute.

G

Gauge

(1) The measure of thickness of the individual elements making up a rubber product. (2) To measure the thickness of a rubber product (e.g. a conveyor belt). Also spelled “Gage.”

Gauge Pin

An assembly element, usually a tempered steel rod, used in installing lacing, fasteners, or hooks, either to space the lacing on the belt end or to secure the lacing in an installation tool.

Gravity Take-up

A mechanical system that adjusts for the stretch or shrinking of a conveyor belt automatically by a weighed pulley in the system.

H

Hand Skiver

A hand tool for removing a “rough-top” covering or other top cover profiles from lightweight belting.

Hang-Up

Accidental collision of a conveyor belt with part of the conveyor structure, often causing damage to the belt or splice. Damage may also be caused by tramp metal penetrating the belt and colliding with the conveyor structure. See Tramp Metal.

Harness

A device temporarily affixed to the end of a belt to provide a connection to cables used to “string” the belt on the conveyor.

Conveyor Belt Terminology

Head Pulley

The belt pulley at the delivery or discharging end of the conveyor system. This pulley is referred to as the Drive Pulley if the drive motor is located at this point in the system.

Heat Welder

Machine that uses hot air and motorized setting wheels to “weld” plastic belt cleats, edge flange, or V-guides to conveyor belt covers. Usually found in Fabrication Shops. Also referred to as Heat Welding.

Hidden Splice

A mechanical belt joint envelope in the covers of the belt.

Hidden Splice

A mechanical belt joint envelope in the covers of the belt.

Hinge Pin

A flexible cable or ridge rod used to join together hinged fasteners. Common types are nylon-covered, steel cable, or spring wire pins. Also known as a Spindle.

Hinged Fastener

A type of belt fastener, connected by a hinged pin, which allows the “joined” belt to articulate over relatively small diameter pulleys. A fastener attached independently to each of the belt ends designed with an opening in the end of the fastener to accept a pin to complete the joint.

Holding Power

The capability of a conveyor belt to retain mechanical fasteners when operating under tension, or the resistance of a mechanical fastener to pulling out of a belt under operating conditions.

Hook Angle

The angle of penetration as a wire belt hook enters a belt (measured between the hook leg and point). This angle is predetermined at the time of manufacture for optimal installation and performance. Other features of the wire hook fastener include the Leg, the Point, and the Loop.

Hooks

A mechanical belt fastener used for joining two belt ends (See Belt Hooks or Wire Hook Fastener).

I

Impact

The single instantaneous stroke or contact of a moving body with another body, either moving or at rest, such as a piece of material dropping on a conveyor belt.

Conveyor Belt Terminology

Impact Idler

A belt idler having a resilient roll covering, resilient molded Elastomer rings, pneumatic tires, springs, or other means of absorbing impact energy at or close to the place where material contacts (loads onto) the belt.

J

Joint

(1) A fastener connection of two belt ends, usually employing a hinged fastening device, (2) the location where two belt ends are fastened together by mechanical means, cold bonding, or a vulcanized splice.

K

kN/m

Kilonewtons per minute. A metric measure of conveyor belt tension, often used to express operating capacity. Equal to approximately .175 PIW.

Knuckle

A 90 twist in the tooth of belt lacing to orient the penetration in the longitudinal direction and to increase resistance to unfastening under tension.

L

Lacing

A term for lightweight, stamped, hinged belt fasteners, commonly supplied in strips (for the belt width), which are hammer installed. Also referred to as Lace or Common-Bar Lacing or Drive-On Lacing.

Lacing Machine

A tool or device for installing light- and medium-duty belt fasteners, specifically lacing or hooks.

Lagging

See Pulley Lagging.

Lap Splice

(1) Generally, an elevator joint where one end of the belt laps over the other end with the leading belt end on the bucket side and fastened together using elevator bucket bolts or solid plate fasteners; also called a Lap Joint, (2) a splice made by placing the edge of one piece of material extending flat over the edge of a second piece of material.

Leading End

Joined belt end which is first in the direction of belt travel.

Longitudinal

(1) In the lengthwise direction of a conveyor belt, (2) the direction of the warp yarns in a belt carcass.

Conveyor Belt Terminology

Loop

The part of one side (for one belt end) of a hinged belt joint which engages the other side, to be coupled with a hinge pin.

M

Magnetic Separator

A device for the removal of “tramp” iron and other metal debris from material being conveyed, usually located near the head pulley.

Man-Lift Conveyor

An elevator belt that runs continuously for the transporting of personnel between floors of a building.

Mechanical Attachment

(1) A mechanical belt fastening system other than splicing through vulcanization or cold bonding, (2) the attachment of material/components (e.g. cleats, guides, buckets) to a conveyor belt by screws, bolts, or other like devices.

Mechanical Fastener

A mechanical device used to join the ends of belting.

Mechanical Fastener Rating

The maximum operating tension recommended for a given belt when joined with mechanical fasteners, with consideration to the allowable safety factor of the mechanical splice. Usually expressed in PIW or kN/m.

MegAlloy™

Wear-resistant alloy used in belt fasteners for very abrasive environments. Not recommended where corrosion is a problem. MegAlloy™ is a trademark of Flexco.

Metal Detector

A device for detecting the presence of metal in any non-metallic being conveyed.

Migration

Relating to hinge pins, the condition of the pins gradually moving (or spiraling) out of the ends of a hinged belt joint during operation. Also called Pin Migration or Hinge Pin Migration.

Minimum Pulley Diameter

(1) For fastener selection, the smallest (diameter) pulley over which the belt operates, (2) for belt selection, the smallest pulley diameter around which a belt is recommended to operate.

Molded

Temperature- and compression-formed rubber or plastic product, for example a mechanical belt cleat or guide.

Conveyor Belt Terminology

Monel®

Alloy used in the manufacture of belt fasteners which is highly resistant to rusting, corrosion and acids. Monel®is a trademark of Huntington Alloys, Inc.

Monofilament Belting

Thin, lightweight belting made with fabric having transverse elements made from single extruded strands of material. This design provides longitudinal flexibility for small pulleys and nosebars, yet is transversely rigid for load support.

N

Nitrile

Common name for nitrile-butadiene polymer, an oil-resistant rubber compound.

Norway Type Elevator Bolt

Flat-top, squared shoulder bolt for attaching buckets to elevator belts.

Nosebar

A small diameter, non-rotating rod used in lieu of a tail or head pulley in lightweight conveyor systems.

Notch

The process of making an angular cut to the trailing (or leading) belt end corners when these are joined with hinged type fasteners, to minimize catching on the conveyor structure. Also referred to as Notching, Leading End, and Trailing End.

O

Oil Well Splice

Two ends of a belt each bent 90 degrees around a steel form and bolted together through the belt and steel form.

Open-End V-Belting

Fastener type v-belting with cross woven fabric carcass.

Operating Tension

The longitudinal tension on a conveyor belt when moving material under normal operating loads, as distinguished from tension when the belt is running empty or starting up under load.

P

Penetration

The point of attachment in a belt fastener; where a rivet, bolt, staple or lacing tooth pierces through the belt.

Conveyor Belt Terminology

Pin Insertion

The step in completing a belt joint where the hinge pin is installed to couple the opposing loops of a hinged fastener. Removal of the hinge pin is commonly referred to as Pin Extraction.

Pin Migration

See Migration.

PIP

Pounds per inch of width per ply (in reference to belt tension). See PIW.

PIW

Pounds per inch of width. An imperial measure of conveyor belt tension, often used to express operating capacity. Equal to approximately 5.75 kN/m.

Plates

See Solid Fasteners.

Plows

Plates or bars positioned across a belt to remove material lying on or sticking to the belt.

Ply

One layer of fabric material (possibly rubberized).

Ply Separation

Delamination of a belt due to a breakdown of the bond between plies.

Profile

The longitudinal cross-section of a belt at the point of a splice. The protrusion of a splice above and below the belt surfaces which might expose the splice to wear and abrasion.

Promal®

Malleable castings used as belt fastener top plates for severe abrasion resistance in corrosive environments such as coke and sinter operations. Promal®is a registered trademark of FMC Corporation.

Pulley

A cylindrically shaped component of a conveyor over which the belt travels, often at a point where the belt changes direction. Pulleys are mounted on a central axis shaft.

Pulley Cover

See Bottom Cover.

Conveyor Belt Terminology

Pulley Diameter

The dimension, in a cylinder-shaped pulley, from (belt-contracting) face-to-face through the central axis.

Pulley Lagging

Material which is added to the surface of a conveyor pulley to increase the coefficient of friction with the belt.

Pull-Out

Release of mechanical belt fastener where the attaching elements of the fastener "back out" or "undo" as a result of operating tensions that exceed the fastener's retention capabilities. Alternately, "pull out" of fasteners may result from improper selection or installation or because of operation over undersized pulleys. See also Comb-Out and Transverse Break.

PVC

Abbreviation for polyvinyl-chloride, a plastic. May be used as a belt cover, as an elastomeric binder (impregnation), or as a cleat compound. See Solid Woven PVC.

R

Range

Refers to the span of sizes of a product, or as the span of belt thickness on which a belt fastener can be used.

Raw Edge

The uncovered square edge of a belt created by longitudinal cutting or slitting after manufacture. Also referred to as a Cut Edge.

Reach-Back

The distance, longitudinally on the belt, from the belt end to the furthest point of mechanical fastener attachment.

Recess

N. A pocket or groove in the belt cover to reduce belt thickness in area to be spliced. V. to recess: to skive or countersink a splice.

Reduced Ply Belting

Plied belting with plies made of stronger synthetic fabrics (but less bulky than natural fabrics). Typically nylon and/or polyester, and typically one to four plies in thickness.

Resistance

The property or ability of matter to withstand the effects of force, pressure, heat, or chemical action.

Retaining Washers

A device which is fastened over the exposed ends of an installed hinge pin to prevent lateral migration of the pin in operation.

Conveyor Belt Terminology

Return Idlers

Rolls that support the belt on its return run towards the tail.

Rip

A longitudinal rupture of the belt through the fabric/plies due to an accident, sometimes caused by tramp metal.

Riveted Plate Joint

A mechanical fastener secured by rivets that compress plates in both surfaces of the belt. Rivet-attached fasteners are used in hinged joints as well.

Rocker Hinge Pin

A two-piece hinge pin used to engage the opposing loops of hinged fasteners used in power transmission belting.

Rough Top Belting

A style of light duty belting characterized by a non-smooth pattern in the top cover for increasing the coefficient of friction with material being conveyed.

Rust Alloy™

Low chrome stainless steel alloy used in belt fasteners for applications involving corrosion (mine water) and acids. Rust Alloy™ is a trademark of Flexco.

S

Saddle

(1) An additional, short piece of belting material used to cover a butt splice (on the belt surface away from the pulleys), sometimes used in elevator belt splicing. See Butt Strap Joint, (2) Can refer to an additional short length of belting added to an existing belt. See Dutchman.

Safety Factor

The ratio of the maximum stress that a belt or a belt splice can withstand to the maximum stress recommended for it by the manufacturer. The ratio of breaking strength to rated working tension.

Scraper

A device for cleaning the surface of belting in operation, usually mounted under the head pulley. Also called Belt Scraper or Belt Cleaner.

Scraper Plates

Solid plate belt fasteners with special beveled top plates. Used for short center belts (under 500 feet) with tight plows or scrapers, as in foundries and for fertilizer handling.

Set

A complete assembly of belt fastener components, including a hinge pin, rivets, staples or bolts.

Conveyor Belt Terminology

Sifting

The dribble of fine, powdery, or granular material through the hinged area of a belt joint.

Skirt Board

In a conveyor system, the vertical or included plates located longitudinally and closely above the belt and near its edges (attached to a “hopper”) to confine the conveyed material, especially in a loading area.

Skive

(1) To remove a portion of a belt cover through cutting, usually with a special tool, (2) in a vulcanized splice, a cut made on an angle to the surface to produce a tapered or feathered cut.

Skiver

A device for removing a portion of a belt cover so that mechanical fasteners may be recessed.

Slab

A large roll of unslit conveyor belting. Also called Slab Belting.

Slider Bed

The portion of some belt conveyors in which the belt is supported by a stationary “bed” (as opposed to rollers) in carrying material between the pulleys.

Slitter

A piece of equipment used in a conveyor belt fabrication facility for cutting belting longitudinally.

Slope Belt

A primary conveyor belt used to carry material along an inclined flight.

Snub Pulley

A pulley adjacent to a drive pulley that increases the arc of contact on the drive pulley to increase the effectiveness of the drive.

Solid Plate

A type of belt fastener utilizing rectangular pieces of metal, compressing the belt from above and below, and attached with either bolts or rivets.

Solid Woven PVC

A type of conveyor belting with a single interwoven carcass element impregnated with a polyvinyl chloride Elastomer.

Splice

The connection of two ends of a belt. Typically refers to either mechanical fasteners of the solid plate type or to a vulcanized joining of belt ends.

Conveyor Belt Terminology

Splice Pad

An additional piece of belting material used to cover a butt splice and add additional strength to the connection. See also Butt Strap Joint and Saddle.

Square Cut

(1) Belt end cut at a right angle to the center line of the belt (See Center Line), (2) belt edge or belt end cut perpendicular at 90 degrees to the belt surface.

Squeeze-Out

Compression swell of belting, laterally and longitudinally, in the area of fastener attachment.

Staple

The quality and length of natural fiber used in making yarns for the manufacture of fabric, as in conveyor belt carcass. In textiles, yarns made by twisting together short individual segments or fibers, as contrasted to continuous filament yarns.

Steel Cord Belting

A conveyor belt having a tension bearing member of steel cords lying in the same plane with a definite spacing between the cords, Elastomer between the cords, and an Elastomer cover on both sides of the belt. Also referred to as Steel Cable Belting.

Straight Warp

(1) A type of conveyor belting characterized by a carcass made with uncrimped longitudinal tension yarns, (2) A two warp weave system whereby one pattern of warp yarns is essentially without crimp and is the tension bearing member, the other warp patterns is interlaced with the filling yarn and provides mechanical fastener holding capability.

String

A term used to describe the process of installing a belt on a conveyor.

Swaged

A treatment for the ends of belt fastener hinge pins, whereby an encapsulating tip is installed during manufacture using a rotary hammer.

T

Tail Pulley

The belt pulley near the loading end of the conveyor system.

Take Up

(1) The part of a conveyor system intended to accumulate the slack in a conveyor belt and maintain belt tension, commonly are of the Gravity, Screw, or Hydraulic type and utilize a pulley (or pulleys) positioned by these means, (2) the unused and available “travel” of a conveyor pulley device to accommodate slack in a conveyor belt.

Conveyor Belt Terminology

Teeth

That portion of a mechanical belt fastener which is driven into or through the belt from one side or the other, generally associated with belt lacing. Sometimes referred to as Prongs.

Templet/Template

A pattern to guide the punching or boring of holes in belt ends in preparation for making a bolted splice. Also may refer to the pattern for punching holes for bucket elevator bolts, or for the attachment of mechanically applied belt cleats and guides. More common spelling is “template.”

Tension

In a belt drive, the pulling force acting on the belt either at rest or during operation.

Tension Rating

The normal maximum working tension recommended for a belt. Also Belt Tension Rating and Mechanical Fastener Rating.

Tension, effective

In a belt drive, the difference between the two tensions in a belt as it approaches and leaves a driving or driven pulley. In a two-pulley drive, it is the difference between tight and slack side tensions. Being a measure of power requirement, it is sometimes referred to as horsepower pull.

Tension, maximum

(1) The highest tension occurring in any portion of a belt drive. In a two-pulley drive, it is the tight side tension, (2) in conveyors, the maximum tension may occur at a point other than the drive pulley.

Top Cover

The protective rubber cover on the material conveying surface of a conveyor belt.

Trailing End

Joined belt end which follows the Leading End in the direction of belt travel.

Tramp Metal

Metal objects or material being conveyed which may penetrate the belt and do damage.

Transition Idler

A troughed belt idler having a lesser degree of trough than previous or subsequent carrying idlers. These idlers are generally found just after the tail pulley (in the direction of belt travel) and just before the head or discharge pulley.

Transmission Belt

A belt used for transmitting power between a drive pulley and a driven pulley.

Conveyor Belt Terminology

Transverse Break

A failure of a belt/splice where longitudinal tension yarns are severed and the belt ruptures crosswise under or behind the fasteners. A common cause is flex fatigue of the belt fabric material. See Also: Comb-Out and Pull-Out.

Troughing Conveyor

A bulk materials transporting belt conveyor which utilizes angled carrying rollers for increasing load capacity and minimizing spillage.

V

Vice Lacer

Portable tool activated by a bench vice, for installing wire hook fasteners.

Vulcanization

Recomposition of rubber in a belt or belt splice through high temperature and pressure.

Vulcanized Splice

A joint in a belt made by means of vulcanization.

Vulcanizing Press

A machine, often portable, for the purpose of vulcanization.

W

Warp

The yarns that run lengthwise in a woven fabric.

Wedlok®

Patented conveyor belt splice for higher tensions.