

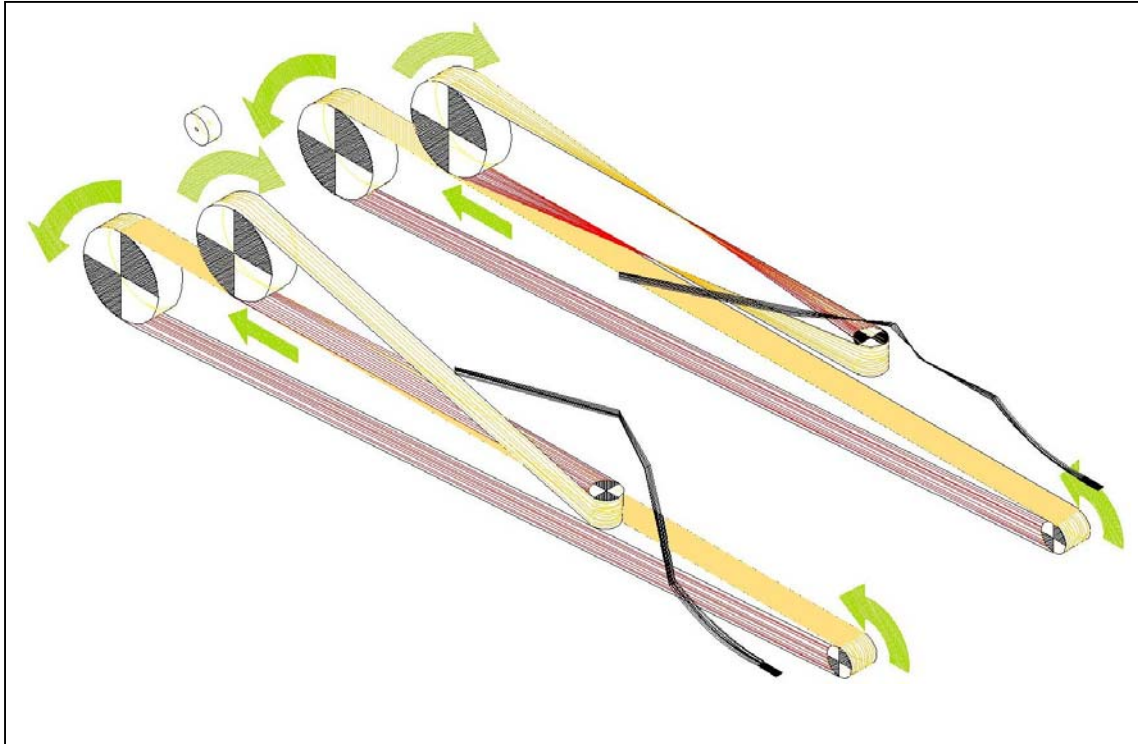
Application : Corrugated Container Plant: Folder-Gluer

Data

OEM: not available
Environment : Indoor, ambient temperature
Product on belt: Flat board with a slick surface. Different sizes, depending on the customer demand

Process description:

After exiting a dye cutter the flat board enters a folder gluer. In the folder-gluer the board is transported on two conveyor belts. The lower folding belts are next to each other with approximately a 25" (635mm) space in between. First glue is added on the board. The then parts of the board that have to be folded to the middle, hit folding rails. These rails, together with a second pair of conveyor belts (the upper folding belts) are running in conjunction to perform the folding process. At the end a wheel is rolling between the two conveyors, this wheel presses the glue to the board.



Belt requirements:

Coefficient of friction:

Since the surface board is very slick, the belt has to have a very high coefficient of friction to grip the cardboard.

Non marking:

The covers of the belts may not leave marks the board.

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Previous Belt Problem:

Blue Carboxilated Nitrile Roughtop belt

The coefficient of friction of this belt was too low which caused that the belt did not grip the product very well. Also the belt left blue marks on the boxes. The lifetime of the belt was approximately 9 months.

Solution:

Chemprene 2-ply Diamondtop belt

The cover of the Chemprene Diamondtop is very soft allowing consistent grip to the boxes. The lifetime is approximately 18 months*, twice as long as the previous belt. The Chemprene Diamondtop won't mark the board. An additional positive point is that the cost of this belt is less than the cost of the Roughtop.

* Cleaning the belts frequently, especially removing glue, also results in longer belt life.

Belt Replacement Cost Savings Analysis:			
<i>Chemprene 2-ply Diamondtop</i>		<i>Blue Carboxilated Nitrile Roughtop</i>	
Lifetime	: 18 months	Lifetime	: 9 months
Belt cost	: \$ 465	Belt cost	: \$ 656
<u>Total Cost (12 months)</u>	<u>: \$ 310</u>	<u>minus Total Cost (12 months)</u>	<u>: \$ 875</u>
= Yearly Savings using Chemprene Belt: \$ 565			

Details:

- Minimum pulley diameter : 4" (101.6mm)
- Center to center distance : 26' (11.89m) (upper belts) and 61' (18.59m) (lower belts)
- Belt width : 4" (101.6mm)
- Speed : 390'/min (118.87 m/min)
- Splice : Mechanical lacing
- Support : Slider bed
- Number of belts : 4 (2 times 2)
- Torsion bends of lower belts

Remark:

In this application there are no special standards required, the belts have no knife edges, no crowning, no reverse bends, no scrapers, and are not troughed.

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