

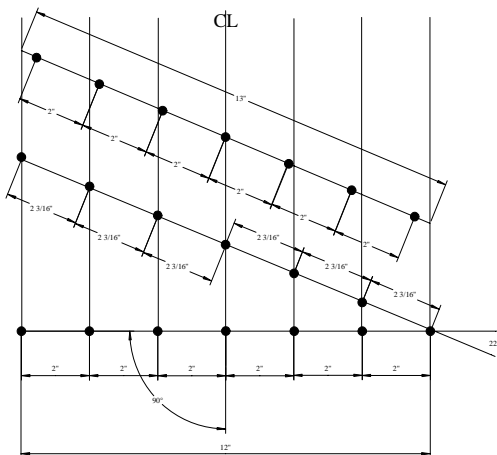
## Finger Splicing Conveyor Belts Bias vs. Square Layout

The question is often asked which is better? We have a long history of using bias angle splices with the step splice and because this process has proven to give the best results on the step splice many of the vulcanizing press's found in North America have been made on a 22 deg bias angle.

We have also tested the square finger splice and found it also works well on most conveyor systems. But, with many conveyor systems today using several high-tension belt cleaning systems (wipers) on one system it must be noted a bias angle splice would greatly reduce the chance of these cleaners opening up the leading edge of the splice.

Since the finger splice **MUST** be made in cure (no multi-cooking allowed) and most press's used in the field are 22 deg bias press's, one can not overlook these type will be the press of choice for both the splicer and the end-user. Keep in mind the following information if bias angle finger splices are what you chose.

When laying out a finger splice one must be aware of the effect the bias angle has on the pattern. The 2" finger pitch can greatly be affected by not measuring from the square center line and thus allowing the fingers to take on pitch less than 2".



This is most noticeable on belt widths 42" and greater as the larger number of fingers in the splice width the more likely they will not fit properly out near the belt edges.

In the past finger splices were looked on as easy to crack open about where the idler junction was in the belt. This was due in part from not understanding the effects of the finger pitch change along the splice bias angle.

It was common for splicers to measure their 2" pitch along this angle, the same way they would if the square splice was being used. It was this mistake along with using improper splice materials that allowed the finger splice to show signs of early failure (common with un-trained splicers).

As you look at the above drawing you can see how fingers with a 2" pitch when laid out properly along the bias angle have base width of 2 3/16" along the angle. In general it is important to understand the splice is seeing tension across the belt width (i.e. – square to the center line) so any change to the finger base / finger pitch can effect the splice.

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