



ISSUE:

Premature chain wear

GOAL:

Improve service life and manufacturing up-time

SOLUTION:

Replace current chain with Diamond's matching chain sets

COST SAVINGS:

\$3,500 per year

The Challenge

A styrofoam thermoforming tray manufacturer was looking for an upgraded sticker lug attachment chain in order to improve service life and manufacturing up-time.

In this application, strands of chain transport styrofoam sheets into the thermoforming machine where they are formed into trays used in meat packaging for grocery stores. It is important that the chains travel and wear evenly; otherwise, the styrofoam sheets will become misaligned during the thermoforming process, causing both high rates of scrap and defective production output.

When it was noticed that the chains were beginning to travel out of alignment, the production lines had to be taken down so the flights could be manually adjusted and realigned at the drive source.

The roller chain being used was a standard thermoforming attachment chain, supplied in unmatched pairs, with a service life of four to six months.

The Choices

The key to maintaining parallel flights is the use of matched chain sets.

Diamond Chain Company offers two degrees of precision matching for chains used in parallel operation. Class I matching ensures the chains, within a given set, will not vary in overall length by more than .006"/ft. Class II matching is much more stringent and ensures that the longest and the shortest chain, in a given set, will not vary in overall length by more than .002"/ft. The class of matching must be specified when placing an order.

Critical to maintaining the parallel flights is the correct installation of the chain sets. Matched chain sets are tagged with an identifying number to ensure they are installed in the correct sequence.

The Solution

The thermoforming manufacturer ultimately selected Diamond series sticker lug attachment chain with Class I length matching.

Designed specifically for thermoforming conveyance applications, these chains feature precise, pointed tips on the link plates and are available in sharpened and unsharpened versions.

The Results

With a switch to the Diamond series chain, this company realized a two-fold increase in service life. In addition, because they were now using matched sets of chains, they no longer had to take the production lines down to manually realign the chains.

The savings in replacement chain cost totaled \$3,500 per application, per year.

