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Tunnel Tip #29

Start with accuracy, finish with quality

INCREASING GARMENT LIFE WITH TUNNEL FINISHING

Mechanical and chemical actions are the primary cause of reduced garment life. The mechanical and chemical problem can be caused by the customer wearing the garments or by the handling of the garments in the laundry.

In-plant chemical action occurs mainly in the washing process but spilled chemicals can contribute to the problem also. Since chemicals are used to remove soil from the fabric they cannot be eliminated. Longer garment life can be achieved by making sure the proper chemicals are used and not used excessively. To prevent chemical damage due to chemical carry-over, correct rinsing is important. Residual chemicals, when exposed to the heat of presses or tunnel finishers, have the potential of causing damage to the fibers.

Mechanical action in the laundering of garments generally happens in two places; the wash wheel and the dryer.

Good washing combines proper chemicals with proper mechanical action to remove and suspend soil. In the wash wheel, water acts as a lubricant and shock absorber helping to reduce friction between fibers as the garments are tumbled during the washing process. For this reason it is important drain times are kept to a minimum reducing the chance for mechanical wear to the garments being tumbled in a waterless wash wheel.

Dryers offer the greatest potential for mechanical wear on the fibers. There is no water to cushion the garments as they fall or to lubricate the fibers as they are tumbled. It is just fabric rubbing against fabric and garments pounding against metal. This causes abrasion and impact to wear on the fibers.

The abrasion of the fabric frees fibers from the yarn. These free fibers are called lint. The lint created in the washing process either goes down the drain with the soil or sticks to the surface of the fabric until the next step in processing causes it to leave.

In the dryer, the lint created by the heavy mechanical action either goes up the exhaust stack to the filter or lays on the surface of the garment until something causes it to release.

In tunnel finishing there is no mechanical action, only steam and heated air. Neither of these will cause lint. The lint caught in a tunnel finisher lint screen comes from the surface of garments that have gone through the washing and drying process. The high velocity air moving over the surface of the garments lifts the lint and transfers it to the lint screen.

This localization of lint offers a way to test the effects of changes in the washing and drying process.

If the lint from the tunnel finisher is collected and saved for a specified amount of time (for example, two weeks) and then weighed, a base weight is established to compare to with future measurements.

If any changes are made in the processing of the garments prior to the tunnel finisher (for example, stop tumbling the garments), collect the lint over the same amount of time and weigh it. The difference in the two weights will show if the tumbler is creating some of the lint, and if so, what percentage.