

Common Problem Areas

Which Impact Production Throughput... and how they can be prevented.



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As with any process you need to start at the beginning. Too often people attack where the problem manifests as opposed to trying to understand what upstream variables can create the problem. By taking such an approach the process typically only spins further out of control, and becomes less efficient.

On the washroom side the processing areas really start from the soil sort and flow out to the point where the goods depart the dryers or a bypass conveyor to be transferred in to the finishing area of the operation. There are a number of places where constraints can be generated within the washroom. Often the problems start in the soil room as like materials are not staged properly which causes machines to be run under loaded, or possibly with unpaired batches (in a tunnel), or with empty pockets. All of these negatively impact capacity and downstream processing areas. Under sized loads that go to a dryer do not equate to shorter dry times, and more efficient energy consumption. The reality is that smaller loads increase drying times and energy consumption. They also create an out of balance situation with the washroom where washing systems (conventional or tunnel) are now waiting for a dryer to accept washed items.

Another problem area has to do with formula management. On the conventional wash front

the current generation of machines available on the market have a great deal of flexibility with the configuration of their formulas to optimize not only the wash process, but the extraction process. By leveraging this capability you can optimize the efficiency of the dryers, or optimize the extraction process so that linens can go straight to the ironer without conditioning. On the tunnel side operators are often

fixated on speed. Many think that if they run a 90 second cycle that this will result in more volume processing through the system. Nine times out of ten this is not the case. **Why?** A press reaches its optimal extraction based on its ability to remove water from the basket, and its ability to rapidly build to its desired pressure. The best presses on the market typically will achieve 40–45 seconds under high pressure in



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a 90 second formula. However, optimal extraction typically takes place between 60 – 75 seconds under high pressure (the best presses can achieve this utilizing 2 minute formula time). It should be noted that there is another misconception with respect to “bar” ratings. A press must be evaluated based on its system pressure and the ability to build pressure at the membrane. Higher numbers don’t always equate to higher actual membrane or system pressures. Also, there is a point in the pressing process where the materials are compressed creating a barrier layer, and no matter how hard you press you will not remove more water. It is recommended that you let your OEM educate you on your specific machine, and its capabilities.

Many operators say “I am running 90 seconds and I can’t understand why I am not getting 40 transfers an hour?” When you look at the system you typically find that the volume of dryers was not sized to condition all products, or to support a 40 transfer an hour capacity. The conditioning situation is driven by running too short of a press cycle. When you show these same accounts that they can save energy improve capacity, and eliminate conditioning by running a more optimal formula they are hesitant, but appreciate the approach once it is shown to perform as advertised.

A third problem area in the washroom is tied to material handling. Many plants simply don’t keep up with unloading either their dryers, or their unload conveyors. This is usually tied to a lack of operational discipline within the facility, and in some cases this can improve capacities by as much as 10%.... **This Costs Zero!!**

On the finishing side there are three common problem areas. The first has to deal with ironer line speeds. This can be a result of not having a large enough ironer, or enough surface contact under pressure to dry the product. This may be the result of insufficient boiler capacity, or the bypass items reaching the ironing line with too high of a moisture content. The latter ties right back to the above discussion on formulas and cycle times.

The second finishing area to be addressed has to do with material handling. As we all know, there is a great deal of touch labor on the finishing end of most plants. Automation and the elimination of processing or handling nodes in this area can greatly improve overall efficiency. As noted, automation can provide a real benefit, but it must be designed into the system, if it is not, it can create a bottleneck.

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Finally there is another limitation that many plants face with respect to how their mix of products aligns with the capabilities of the equipment they have at their disposal for processing. Often there are specific machines that

are what can be called “one dimensional”. Once these machines or processing systems have exhausted the products that they are designed to process they often will sit idle as they can’t handle the other product types that are waiting processing. A way to optimize capacity, energy, and labor utilization on the finishing end of the business is to make certain that you employ dynamic solutions that provide a great deal of processing flexibility as volume and mix changes throughout the course of the year.

There are other areas that can be focused on as you dissect your specific laundry operation. In this article are the most common problem areas within the various markets that our industry serves.

