Conversion from Batch to Continuous Production

Converting hard candy and chews to continuous production will have a positive impact on product quality and costs.

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Conversion of your candy production to higher output and continuous manufacturing will have a large impact on your entire production process. There are many factors to consider, like investment in new machines, floor space requirements, the new production process and changed product characteristics, but also the level of knowledge and training of management, operators and maintenance personnel who will manage the new production process. Conversion to continuous will have a positive impact on product quality and costs. This paper will also discuss the major criteria, targets and advantages of the conversion project for hard candy and chews, briefly describing each process and highlighting the points that need special attention when converting to the continuous process.

Basic Considerations

The reasons for conversion from batch production to continuous production may vary, but will always have the element of lower production costs. The lower costs are a result of needing fewer operators to run the machines, negligible amounts of waste and scrap, savings on some raw materials, increased production efficiency and improvement of downstream processes like forming and packaging. It does not always imply higher output, since a large multiple-batch production could be replaced by one continuous line with the same total output. Additional reasons for switching to continuous production are limited availability of floor space for expansion, elimination of human error, savings on addition of volatile actives, tight tolerances on OTC-type active ingredients and a high level of automation.

Conversion Criteria

It is the final candy product that defines the basic criteria for a successful project. When changing production from batch to continuous, you would like to maintain the exact same product recipe and raw materials. Furthermore, you would aim for the same product quality, consistency and characteristics.

Nevertheless, the physical differences between the applied machines and valid process parameters do not always allow you to apply these criteria. In practice this means that for some products you should allow for (minor) changes in the raw materials and recipe, some process parameters and final characteristics of the product. This is especially the case with chewy candies.