Visko Teepak

solutions

CASINGS & PACKAGING MATERIALS / ViskoTeepak.com

2 of 4 featured articles

ViskoTeepak's Wienie-Pak Production

This new series delves into the critical steps in Wienie-Pak applications, particularly focusing on hot dog production issues beyond casing.

What does ViskoTeepak do when a situation like this arises?

Read more

Functionality and Optimization.

This article is the second in our series on the production of hot dogs. The request was to highlight the hot-dog process related to our Wienie-Pak casing. However, because the casing is just one part of the whole process, the focus in these articles is broader than that.

The first article discussed processing issues related to hot dogs.

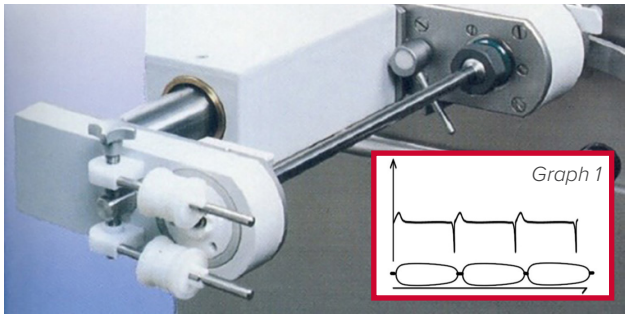
This article addresses the functionality and optimization of Wienie-Pak during the stuffing process. It highlights three areas where the Wienie-Pak casing can make a difference in a customer's process. The differences mentioned are not only focused on efficiency and technology but also include marketing-related issues.

The third article, to be published at the end of this year, will address the pitfalls during shirring in relation to the filling process. The final article will focus on the Wienie-Pak process at the Lommel facility, also considering end users' requirements.

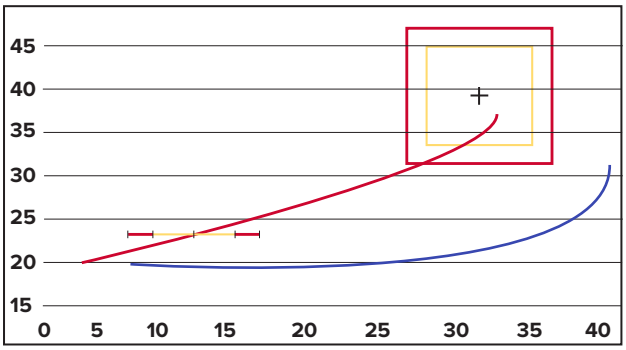
This series of articles is not intended for advertising but aims to shed light on issues that occasionally arise.

Pear-shaped sausages

People who are familiar with Wienie-Pak casing should know that there are 4 different constructions with difference practical performances. The reason for choosing one or another constructions is mostly not so clear. However, on a so-called 'twist linkers', the proper choice of the right casing makes a day and night difference. This type of stuffing machines has a stop-and-go function between each link. The machine starts up with an impulse, makes the sausage smoothly, then stops and twists (see Graph 1).



For this reason, an irregular stuffing pressure (pressure at the point where the meat touches the casing at the end of the tube) is unavoidable. Having in mind the XY of a Wienie-Pak (the relation between pressure and caliber: see Graph 2), one must conclude that the so-called pear-shaped sausage is inevitable. The orange line shows a significant dependency between pressure and the link diameter.



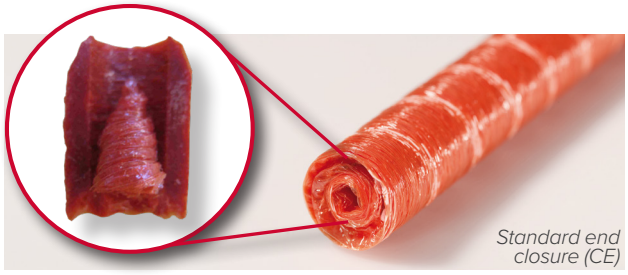
Graph 2

The Wienie-Pak J-type (the blue line in Graph 2) shows a remarkable independence between pressure and caliber, thus resulting in a much more uniform product on twist linkers.

Use of proper end closure

ViskoTeepak offers various types of end closures for Wienie-Pak strands. These options have been developed to ensure an optimum stuffing process, with the highest speed, fewest machine stops and therefore lowest waste and highest output.

CE is the standard, most traditional type of end closures designed in the 1980s for the Townsend linkers. It has a vent hole to release the air while the stuffing tube is entering the strand. Since the tab end (TE) of the strand is blocked by the follower, the air is trapped between the stuffing tube and inside casing wall. The volume of the trapped air can be significant, especially when the stuffing tube size is not optimized and is too small. Due to overpressure, the air will escape most of the time halfway of the strand filling and will show irregular link weights and air pockets in the final products. The vent hole will release the air when the stuffing tube enters the strand and will guarantee an optimal weight control.

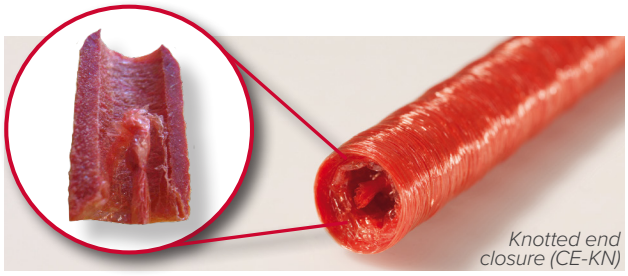


Standard end closure (CE)

CE-PP is an end closure that has a relatively short compressed wad, designed for Handtmann and Vemag machines. The way the strand is picked up and positioned in these machines is different from that in the Marel and HiTec machines. The original CE seemed to be too long and caused issues during the stuffing tube positioning. Therefore the CE-PP was developed. A determined casing length in the wad does guarantee the counter-pressure for catching the stuffing pressure of the first link. At the same time, an optional wad length will avoid spoiling casing out of the remaining wad.

Push-Pack end closure (CE-PP)

CE-KN is a knotted end closure for customers who want to get a first usable link and a safe reliable knotting on the machine. As the pressure resistance of the knot is limited, the CE-KN closure is designed for a limited range of machines and processes.



Knotted end closure (CE-KN)

Number of twists / optimum strand load

The twist setting between the links is most of the time a forgotten detail of the process. It is easy to set the number of twists at 2.25 to prevent double links or other twist issues. However, whenever the process allows, decreasing the number of twists, for example, to 1.75 could be considered. A simple calculation shows a safe decrease of 0.8% in casing usage and an output increase per time unit of approximately 1%. It's worth to study and check! Besides casing savings and a higher output, an economic twist level will simplify the peeling process, especially in a dry sausage application.

An optimal strand load (length per a strand) shows also a significant difference in output in the stuffing area. Whenever the process allows, introducing the maximum strand load possible can be considered. In the past, the allowable strand load could have been limited by shirring capabilities, but with the new technology, higher strand loads may be possible. The difference between a strand load of 125 ft and 175 ft is a 4% more production. There is simply less loading time needed for longer strands. (532 seconds for 125 ft strands versus 366 seconds for 170 ft strands) 156 seconds per hour to make more sausages instead of loading strands!

		Individual machines	J-Con line
Wienie-Pak code	US26 Euro24/ code 2350	125 ft	170 ft
Link length	65 mm		
Link weight	27 grams		
Casing length per strand		125 ft	170 ft
Stuffing speed		7.23 ft/sec	7.23 ft/sec
Total stuffing time per strand		20.3 sec	29.5 sec
Loading time per strand		3 sec (532 sec/hr)	3 sec (366 sec/hr)
Effective stuffing time		17.3 sec	26.5 sec
Weight per strand		10.89 kg	14.98 kg
Output per hour		1,866 kg	1,965 kg

The difference for a two-shift operation and 2 machines running is 3,172 kg.

Jos Rutten
Technical Support Manager

Visko Teepak

Always around