

Increased throughput in new automated packaging line

Appalachian Wood Pellets installs Lachenmeier stretch hooding equipment to improve efficiency and quality on its packaging line

The Appalachian Wood Pellets, Inc. in Kingwood, WV, USA produces and packages wood pellets into 40 pound plastic bags and distributes them around the US.

They came to Lachenmeier, because they wanted to automate their packaging line and improve upon their existing packaging methods. The previous method of securing and protecting their palletized products was by using stretch wrap, which was applied by semi-automatic stretch wrapper in conjunction with top sheets or pallet bag covers. The top sheets and bags were applied manually. Their maximum throughput was approximately 26 pallets per hour.

Don Wagner, the General Manager at AWP's Kingwood facility began searching for stretch hood equipment suppliers and his goal was to find an equipment supplier whose equipment improved his line efficiency, the load integrity, the appearance and reduced the cost per load and the cost of ownership of the end of line packaging. After screening various stretch hooding equipment manufacturers he narrowed his search to Lachenmeier – a market leader in producing stretch hood equipment. The new machine has been integrated in line with an upstream automated bagging line along with a robotic palletizing system.

One contributing factor to his selection was the very positive feedback he received from other companies using Lachenmeier equipment and services. He was also comfortable with knowing that support for the machine was done by Lachenmeier's US based service engineers as well as the fact that a US based spare part facility was located in Arlington Heights, IL. Lachenmeier's simplistic, yet durable equipment design, along with ease of operation were some other contributing factors for choosing Lachenmeier.

Don found numerous features with the Lachenmeier design that he felt separated it from other competitive equipment he considered. The most impressive feature Don likes about the Lachenmeier Power Flex T1 stretch hooder is its ability to automatically lower the top hood applicator down to floor



level. This innovative design is a unique patented feature associated with the Lachenmeier equipment. The process of lowering the hood applicator to floor level eliminates the safety risk of an operator having to climb to the top of the machine to complete any routine maintenance. Don also stated that when any of his workers must conduct work off the ground, it is typically a two person process which takes twice as long. This increases down-time, costs, and safety risks. The workers must be harnessed in, or tied down to the equipment to prevent the risk of falling.

Other impressive features Don points out on the Lachenmeier equipment are: the quality of the construction associated with the machine. The four legged structural support provides maximum machine stability, allowing the stretch frame to travel smoothly up and down, while applying the film over the load. Some competitive models use a two legged support structure and cantilever design. Two legged support structures are less stable and cause the top of the machine to sway when the stretch frame starts and stops during the process of applying the film. The cantilever design can create pinch points and binding, when the stretch frame is attempting to apply the film.

Finally, Lachenmeier's patented film delivery system was another feature Don was impressed with. This feature allows Lachenmeier to maintain complete control of the film stretching process before it begins applying it to the load. It also controls the film throughout the process of applying it to the load. The benefit is: it keeps the film flatter to the top of the load, thus reducing the risk of the film gussets being exposed to wind while in transit. It also reduces the film consumption per load, reducing the cost per load.

The five sided protection offered by Lachenmeier's Power Flex T1 stretch hooder is superior to the conventional method of top sheets and stretch wrap. Because the stretch hood is one solid piece of film, consisting of a sealed top and four sides, there is nowhere for rain, dirt, animal dropping etc. to get inside the hooded load. Top sheets and stretch wrap are very easily penetrated by rain, dirt, animal droppings, etc. because they are able to work their way between the layers of film. The result is a load with poor visual appearance, dirty and potentially damaged products.



The water that gets trapped between the layers of film also adds weight to each pallet load. One customer of ours said the trapped water and moisture absorbed into their product from this water added an additional 150 pounds to each pallet. This was very significant because they ship 28 pallets on a truck, multiplied by 150 extra pounds per pallets equates to an additional 4,200 pounds per shipment. With the implementation of Lachenmeier's stretch hooding system this is an extra cost they no longer have to absorb.

Besides the waterproof packaging, the film used for wrapping is a colored film preventing the actual product bags getting "hurt" by the UV light from the sun when being stored outside.

Lachenmeier's stretch hooding film has no cling. This is very important when loads are being or have been loaded for transportation onto a flatbed truck or into a box trailer. In an effort to increase storage space, or reduce freight costs, loads are generally very close to each other. This causes the loads to rub. The stretch hood film does not tear, which eliminates the need to re-wrap loads.

Stretch film, on the other hand, can be very clingy and more often than not, the film will tear when rubbed by another load. As a result, the loads may have to be re-wrapped. For those loads that were already shipped, the tears will not be evident until they reach the distributor, box store, etc. At this point it is too late. The load appearance is poor, the film torn, you might find leaning load and potentially damaged products. The end result could be an unhappy customer and potentially unanticipated costs to the supplier. Customer overwhelmingly prefer the arrival condition and appearance of a stretch hooded load versus a stretch wrapped load.

Don stated: "Since installing the Lachenmeier system, the end of line packaging process has operated much more efficiently. The finished products are more stable, much more appealing to the eye and have saved us on operating and labor costs and have reduced cost per load. I am very happy with the Lachenmeier system and would recommend it to any company that experiences the previous issues they had with the outdated stretch wrapping equipment. In general, all the drawbacks of our former stretch wrap equipment have been offset by implementing the Lachenmeier stretch hood technology", he concludes.