THE WESTFALIA

Satellite

MATERIALS HANDLING TECHNOLOGY NEWS AND INFORMATION FROM WESTFALIA TECHNOLOGIES

OCTOBER 2003

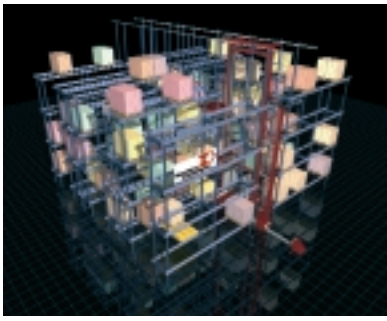
Why AS/RS?

When I travel, I meet people from all sorts of backgrounds. When we talk about warehouse automation, I find that the majority of them are quite skeptical about the technology. The first question typically posed is, "What happens when it breaks?" or "How will I be able to afford this?" To those who are skeptical about AS/RS, read on:

Simply put, warehouse automation is one of the only remaining areas that can significantly reduce long-term costs. So why don't more companies take advantage of warehouse automation? The answer often comes down to initial cost rather than genuine, long-term value.

There is a golden rule in automation that I have become firmly convinced of over the years: **Purchasing low-cost, low-quality warehouse automation machinery is often more expensive than staying with a manual system**. The bottom line is if you are going to do it, you need to do it right. There is no middle ground here. Those companies that have had serious problems with their low-cost, low-quality project give fuel to skeptics who say the technology is risky and may fail.

There are a few simple rules to investing in warehouse automation:



- Buy only the highest quality equipment. Don't think that the best deal will provide the lowest cost to your firm. The down-time associated with problems from lower quality equipment is too expensive and will quickly erode the initial cost savings.
- Think long-term. Every successful business has a vision that requires small, steady steps to reach goals that are realistic and profitable. Because an AS/RS has a 20+ year life, don't expect a 12-month payback.
- Introduce operating personnel early in the process and make them a part of the project team before the system goes on-line.
- Think proactively. Preventive maintenance is far less expensive than reactive repair. Talk to the experts who design and maintain the equipment and take necessary action.
- Don't buy from companies that cannot demonstrate their successful expertise in environments similar to your project requirements.

These rules sound basic and simple. All too often, however, one or more are not applied, which results in unrealistic expectations and frustration. At Westfalia, we avoid this by sticking to the fundamentals, staying within our core competencies, and making sure that we can fully identify with the customer's problem domain.

I hope you enjoy this Fall 2003 newsletter and look forward to speaking to you about your materials handling requirements in the near future.

Sincerely,

Daniel Labell

Daniel Labell,
President

Inside

- **Pallet Flow**
  "Imported" goods make it to their destination with the help of a Gravity Flow system.
  ..... *page 2*
- **WMS**
  Welcome to the future.
  ..... *page 3*
- **Automation**
  Which palletizer is right for you?
  ..... *page 4*
- **Palletizing**
  Maple Veil/Dririte/Morton's.
  ..... *page 5*
- **AS/RS**
  Where's the beef?
  ..... *pages 6-7*
- **Departments**
  Meet the latest additions to Westfalia's sales team.
  ..... *page 8*
- **Westfalia On Tour**
  New European HQ..... *page 8*

Turkey Hill Goes With the Flow

A Gravity Flow system from Westfalia helped this company maximize their storage capability while reducing labor costs.

With so many warehouse systems to chose from, how do you know what is best for your business? That's easy. Westfalia's experts evaluate your situation and work with you to recommend the best configuration. Eighteen months ago, Lancaster, PA-based Turkey Hill came to Westfalia with their warehouse needs.

If you live on the East Coast, you probably enjoy Turkey Hill products on a regular basis. Their ice cream, frozen yogurt, iced tea, ice cream sandwiches and sundae cones, all of which are "Imported From Lancaster County" as Turkey Hill's slogan says, receive awards for taste, quality and freshness.

To accommodate the growth of their ice cream business, Turkey Hill needed a cost effective way of improving their extensive storage and distribution system. The goal was to develop a pallet storage system that would maximize storage density and allow FIFO (First-In, First-Out) product rotation. After working with Westfalia's in-house experts, Turkey Hill chose a storage solution with a perfect fit for their needs.

"We supplied a solution based on the design and operation of our DeepLane™ storage system, which offers easy gravity flow operation and high-volume FIFO rotation," said John Hinchey, Westfalia's Sales Manager. "Because it requires no power or air source, our DeepLane™ system offers the benefits of high-density storage. A flow-through gravity-fed design minimizes labor needs."

If You Really Need to Know...

Westfalia's storage solution for Turkey Hill incorporates a DeepLane™ series 2300 gravity flow system that creates 3,318 pallet rack positions. The system is designed to accommodate 48" x 40" GMA pallets measuring 75" high and weighing up to 2,500 pounds. This 3,318 pallet position system utilizes 1,318 positions of pallet flow; 1,976 pushback positions and 24 pallets positioned in selective rack - all of this in a 26,223 square foot facility that is kept at minus 20° Fahrenheit.

Turkey Hill began more than 60 years ago with one man – Armor Frey – one milk truck, and one milk route. Mr. Frey could only dream of the company's future needs: Westfalia was there to answer them.

"In addition to maximizing storage density and providing FIFO product rotation, we are realizing the benefit of labor savings and a reduction in truck-loading time," says Manager Randy Ream.

Morphing With Warehouse Management Systems

With flexible and modern Warehouse Management Systems, Westfalia says, "Welcome to the future."

Years ago people idealized 21st-century machines as being able to easily handle almost every aspect our lives. It hasn't been the case. Likewise, being able to effortlessly run an entire plant from one location hasn't gone smoothly either.

Yesterday's Warehouse Management System (WMS) technologies were good; but as times and technologies changed, they proved difficult to upgrade. In fact, upgrading generally required replacing the entire system. In addition, buying a new WMS usually meant massive supply chain overhauls that made even the most innovative companies squirm.

Build it and they will come

Forward-thinking WMS providers realized they had to create a system flexible enough to change as their clients' business needs and the marketplace change. The best WMS suppliers are designing their systems to be both flexible and focused on continuous growth. By designing custom configurations and easy adaptability, Westfalia provides outstanding WMS solutions for businesses today and tomorrow.

Because real-time information is essential to any supply chain execution system today, Warehouse Management Systems have never been better at solving the challenges of managing inventory and orders. Despite this, surprisingly few system users actually have a real WMS. Most are using homegrown systems or typical inventory modules found in large ERP systems. They are finding that these configurations simply don't answer today's order fulfillment challenges.

"Today's devices are not dumb terminals that just receive instructions," says Ryan Smith, software manager for Westfalia. "They have evolved into true computing devices that allow the order picker to take the WMS with them wherever the work is being performed."

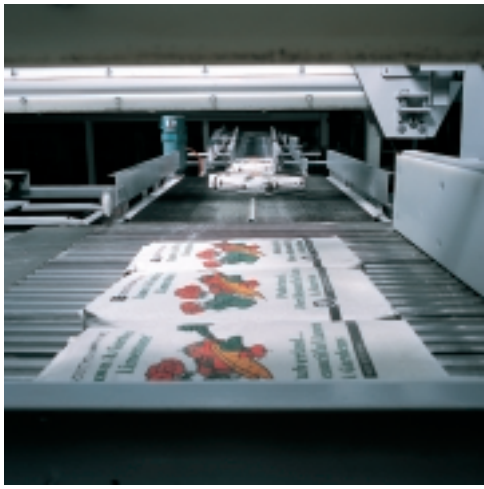
Consider several of the many advantages of a properly designed WMS:

- Complete integration with automated material handling equipment, such as Automated Storage and Retrieval Systems (AS/RS), Conveyors, Palletizers, etc.
- Paperless inventory tracking and order selection using technologies such as RF Units, Pick-To-Light Systems and Pick-To-Voice Systems.
- Rapid development leading to reduced cost for customization.

- Simple connectivity to multiple sites and existing software/networks leads to more streamlined integration of corporate data.
- Availability of real-time information through web-based technology.

These overall benefits are most effective when software is implemented with a fresh code base. To that end, Westfalia uses tools such as C#/.NET to develop the most economical software. To unleash the true potential of Warehouse Management Systems, adding an AS/RS is well worth the investment. Customers tell us that this combination results in the highest customer service levels with the lowest long-term cost.

The goal is to save your company money. Using Westfalia's innovative WMS will unlock major savings within the four walls of a warehouse. Call Westfalia to find out how we can help you.



E = mc palletized

Layer Forming or Pick and Place? Which is right for you?

Deciding to palletize is easy — deciding which technology is best for your business is not. Both the Layer Forming and the Pick and Place palletizers have their distinct niche in the packaging world. Which is best for you? Westfalia demystifies the process by showing you where each technology shines.

Surprisingly, simple mathematics develops the right solutions for your palletizing needs. If you first gather the information needed to solve the equation, you'll head in the right direction from the start, saving you time, money and frustration down the road.

The first step in the equation is to determine the answers to three fundamental questions:

- What is the desired number of unit loads per minute/hour?
- What is the desired number of units per layer?
- What is the desired number of layers per pallet?

The answers will define the right direction. If, for instance, you determine that the number of layers per minute is over three or four, then a high level, Layer Forming palletizer is probably the right choice for you.

The second step is to evaluate the type of product(s) being palletized. If the product is considered hard to handle, such as pails, drums, cans and other containers requiring both nesting and interlocking layers with separation, then a Pick and Place unit is generally the best choice. On the other hand, if your product needs to be compressed or tamped between each layer, as is the case with most bagged products, than a Layer Forming palletizer may be a better choice.

The third step is to determine the number of lines being fed to the system. Pick and Place palletizers are suited for medium speed applications with up to three or four lines. If there are more than four lines, multiple robots or gantry style robots may be the answer.

Although these are the main factors, final recommendations are normally made after the project is formally reviewed and testing is conducted. Design details may include available space, number of products running through the system, use of slipsheet and tier sheets, budgets, and growth potential. Ultimately, the question is not Layer Forming versus Pick and Place designs, or even modern versus traditional, but "What does your mathematical equation say is best for you?"

Put Westfalia to the test!

Send us your product and we will test it for you on our Layer Forming and Robotic Palletizer Demos. Westfalia will help you determine which system gives you the best results – even if it is not one of ours! You can take that promise to the bank.

Three Unique Palletizing Challenges Require Three Unique Solutions

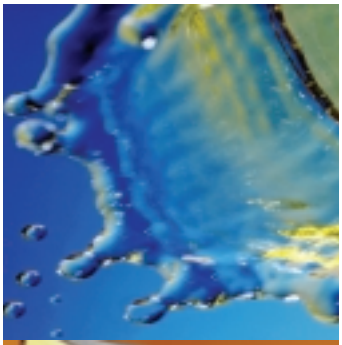
Dririte Absorbs Productivity Improvements with an 870 Automatic Palletizing System

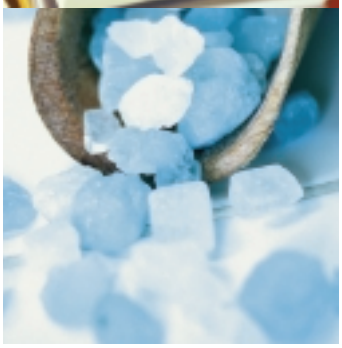
Due to rising customer demand and rising labor costs in the Chicago, Il market, The Dririte Company decided to automate their manual packaging and palletizing procedures.

Dririte searched for a partner to develop a palletizing solution that would handle more than 30 bags per minute and carry out quick and frequent changeovers. Furthermore, Dririte wanted to work with a company that would be there during -- and after -- the project was complete.

Westfalia was chosen to design and manufacture an automated palletizing system, and was given three and a half months to complete the entire process.

Westfalia met Dririte's strict demands and installed the 870 Automatic Palletizer in early September – just in time to be operational for the ice control season.





It's on the Books – Maple Veil Gives Westfalia's Robotic Palletizer Two Thumbs Up!

For over 100 years, Maple Veil in York, PA, has crafted books that have entertained and educated readers throughout the world. They pride themselves on their quality, accuracy and consistency in shipping 99 percent of their orders within 48 hours.

In order to maintain a 48-hour turnaround time on all orders, Maple Veil's manual palletizing process required two people per shift. Through automation, their goal was to palletize stacks of books at a rate of up to 16 stacks per minute.

Westfalia's innovative robotic palletizing solution was chosen to do the job. Because Westfalia designed a unique end-effector for Maple Veil, the robot is capable of picking up stacks of books ranging from 4" x 6" to 9" x 12" in size.

According to Morton, Westfalia's Automatic Palletizer is Worth its Weight in Salt...

n 1848, Morton Salt began in Chicago as a small, Midwestern sales agency. It grew as population headed West, and kept growing long after the West was settled. Today the business, still headquartered in Chicago, is North America's leading producer and marketer of salt for home, industrial, agricultural and highway use.

In order to fulfill their customer's demands, Morton used a manual operation running three shifts a day, seven days a week. They identified inefficencies with this manual system, and were concerned about employee safety. After researching options, Morton decided to install a new automated bagging and palletizing system. They searched for a partner to help them design a system palletizing 40- to 80-pound bags at an average rate of 20 bags per minute.

Through Westfalia's experts, Morton chose the high-level bag palletizer Model 1500, which is manufactured in York, PA, under the Newtec license agreement. A well-seasoned solution!

***Look for more details on these projects in future issues of* Satellite.**

Where's the Beef? Westfalia Systems Know!

Food safety is a critical priority at Beef Products, Inc. With manufacturing approaching 1,000,000 lbs per day, it was essential for BPI to automate the material handling and inventory control process

Beef Products, Inc., the world's leading manufacturer of boneless lean beef, is headquartered in the heartland of America, Dakota Dunes, South Dakota.

BPI operates under one simple guideline: to be the best at what they do. This drive to be the leader within the meat industry has resulted in continuous development in new processing techniques, sanitation programs, and food safety innovations.

To ensure quality control, superior inventory management and shipping accuracy, BPI decided to build a state-of-the-art automated warehouse. After investigating the top suppliers, BPI turned to Westfalia Technologies of York, PA, for an efficient automated warehousing system that could track every individual case of beef product.

Challenges

BPI needed storage capacity in excess of 20 million pounds of beef in a continuous manufacturing operation. Land for the freezer was 400' away from manufacturing with a railroad track separating the building lots. In addition, manual handling of finished products and outside freezer storage costs were eroding BPI's profit margin.

While the product type is identified by a bar code label on each individual case, the final product grade is not determined – and no product is shipped -- until quality control results are known. As a result, BPI needed a way to apply bar codes read at several crucial production points, as well as their customer's dock. In addition, BPI needed the ability to quarantine all products until quality results were proven and then provide automatic release of palletized products as ready-to-ship inventory.

Solution

BPI's inventory characteristics allowed Westfalia to minimize building size requirements with a high-density Satellite® Storage System. Westfalia's design includes a 213' long x 95' wide x 102' high rack-supported freezer with two high-speed Storage Retrieval Machines (SRMs) operating in the same aisle to allow peak performance of 150-pallets-per-hour throughput, plus 100% redundancy.

BPI's state-of-the-art automated warehouse, designed by Westfalia, includes a 213' long x 95' wide x 102' high rack supported facility, providing 12,000 pallet rack positions in a 20,000 sq. ft. freezer.

The freezer storage system is configured with 40 bays of storage x 15 levels high and a single aisle, with two SRM's servicing 10-deep storage lanes on both sides of the aisle. Westfalia's innovative design provides 11,886 pallet rack positions in a 20,235-square-foot freezer.

After exiting a 400' tunnel, cases are scanned and diverted to one of two accumulation lanes, which are supported by a mezzanine. Cases then merge into a single conveyor for transport to Westfalia's layer forming Palletizer.

System

The system starts at manufacturing with frozen cases of beef products conveyed through a 400' tunnel to the automated warehouse. Each case is marked with a serial number, allowing scanned identification at the tunnel exit.

As cases exit the tunnel, they are scanned and diverted to one of two accumulation lanes that are mezzanine-supported above the receiving dock. Cased products are then merged to a single conveyor for transport to Westfalia's Layer-Forming palletizer.

When cases arrive at the palletizer, they are identified again using a fixed bar code scanner. The Warehouse Management System (WMS) creates a pallet and assigns a pallet identification number. Data uploaded to BPI's host system includes the pallet identification number and the records of each case on the pallet. Pallets are then stretch-wrapped and conveyed towards the infeed of the Automated Storage & Retrieval System (AS/RS).

Westfalia designed the conveying system to include approximately 18 pallets of accumulation between the palletizer and a print-and-apply station. This allows time to gather additional information regarding product grade prior to the print-and-apply labeling station.

After applying a label to the leading face of the pallet load, the pallet is automatically aligned with the conveyor, profile checked to verify compliance with the predefined pallet load envelope, and scanned for identification. Pallets are then conveyed into the freezer, where they arrive at a turntable and directed to either SRM 1 or SRM 2, where an additional bar code scanner ensures the pallet arrived at the correct SRM. The pallet is again aligned with the conveyor and picked up for storage.

Pallets are initially stored as quarantined product until completed lab results are communicated through BPI's host computer to Westfalia's WMS. At that time, a grade is assigned to each pallet, and Westfalia's WMS releases the pallets as ready-to-ship product.

When lab tests provide a different result than what is expected, the product grade is changed. The WMS then instructs the SRM to re-warehouse the pallet, grouping the same product grades within the same storage lanes.

Westfalia's WMS automatically exchanges messages with BPI's host computer to create product orders. The Control Room Operator (CRO) then uses the WMS to release orders, allowing automatic retrieval and delivery to one of four truck-staging lanes within the freezer. These lanes allow the benefits of processing orders in advance, staging products at the proper temperature, and freeing valuable dock space.

There are four LED displays on the shipping dock, one at the outfeed of each truck-staging conveyor. When trucks arrive at the dock, an overhead LED provides direction to the forklift operators for accurate and efficient truck loading. As each pallet is removed from an outfeed conveyor, the forklift operator scans to verify and remove that pallet from inventory.

Westfalia's AS/RS has resulted in the following benefits:

- Eliminating the need for outside freezer storage space, for significant annual savings.
- Significant labor savings since there is no human contact with BPI's product until the shipping dock.
- Accurate inventory tracking plus the increased ability to control product quality from production to dock.

Along with BPI's motto, to be the best at what they do, these features ensure their future as the world's leading supplier of boneless lean beef.

Two Additions Strengthen Westfalia Sales Team

As we continue to grow our palletizing division, Westfalia proudly introduces two new members of the sales team, Tom Price and Guy Ayel.

For 17 years Tom was responsible for evaluating, acquiring and implementing all dry process material handling projects. This gave him a tremendous amount of exposure to packaging, palletizing and conveying systems from the customer's perspective. His training and experience as an engineer and project manager add knowledgeable depth to a sales position.

"I feel that I have a great understanding of what is important to a growing business," Tom explains.

Tom Price

Guy Ayel

With 20 + years in the packaging industry, Guy has expertise in a wide range of packaging technologies, including Palletizing/De-Palletizing, Low and High Level Palletizers, Gantries and Robots. Most of his professional experience was with Newtec International, a manufacturer of palletizing systems.

"Westfalia provides a broad product line that allows us to offer the customer a superior solution based upon the requirements," explains Guy. "I joined Westfalia because I also saw the company's impressive commitment to satisfying the customer, especially after the sale."

Both Tom and Guy will apply their considerable experience to providing superior, knowledgeable customer service.

"To be a premier supplier of palletizing systems is not an easy challenge," states Tom. "But with the technical support of Westfalia's in-house mechanical, electrical and manufacturing groups, we can easily provide the best solutions for our customers' warehousing needs."

New Growth Means New Offices

As Westfalia's European client base continues to expand, more outstanding people have joined the company to maintain our excellent customer service. To accommodate growth, a new, state-of-the-art building for Westfalia's European Headquarters in Borgholzhausen, Germany now stands next to the manufacturing facility. July 1st, 2003, saw the dedication of this stunning, 100-foot-tall, glass-covered building that boasts 30,000 sq. ft. of office space.

The architectural style, both interior and exterior, represents Westfalia's business philosophy – Innovative, individualistic and technically superior.