

Ask The Expert



Q: *We are a small Indiana food manufacturer and there is a big disagreement between our QA manager and general manager about whether we should go with a steel belt for conveying*

product or whether we should go with plastic.

A: There are significant dangers to be considered when designing any conveyor system used in the food packaging industry; the potential breeding of micro-organisms in the machinery is huge. Non-corrosive materials that are easy to clean and are free from crevices, which are potential dirt traps, become essential. Traditional conveyor types employing chains or plastic belts are still frequently utilized despite the potential risk of contaminants.

There are an increasing number of food products that have been recalled, have become contaminated by the chain lubricant in the manufacturer's machinery. Germs and potentially harmful bacteria are attracted to the dust gathered by the lubricant grease, which can be transported and fall in the food during the manufacturing process.

To overcome this problem, the use of steel belts in such applications is ever increasing. The benefits and features can overcome the variety of cleanliness problems faced by users of conventional belts in the food industry. Steel belts are easy to clean and can be made from a number of stainless steel grades which possess very high anticorrosion properties. Steel belts do not need lubrication in order to transmit power and, unlike other types of belting, are totally free from particulate.

The washdown with corrosive fluids is commonplace in applications such as the transportation of dairy products and similar conveying lines since the prevention of harmful bacterial infection is critical. Due to their high temperature resistance and good heat transfer properties, steel belts can even be cooked on, thus saving processing time during food manufacture.

Steel belts are not just available as flat conveyors; often they are customized providing a novel solution to a myriad of complicated conveying challenges. Belts can be designed with complex perforation pat-

terns for timing, vacuum and dosing applications. The belts can be made with custom-designed attachments that are used as timing elements, location devices or product carriers. Attachments can be riveted, screwed, welded or glued to the steel belts to match the customers' exact requirements. Belts can be furnished with a variety of coatings to alter their surface properties, such as FDA-approved Teflon for nonstick effects or silicone for additional friction.

According to Lucia Falek, quality assurance manager for Butterball Farms in Grand Rapids, Mich., "In a conveyor application where the product comes in direct contact with the conveyor, the belt line material is very important. We are happy to see new materials and designs that bring us away from the plastic coated fabric belts that cracked and frayed easily - putting a product at high risk to contain fibers or pieces of plastic coating; a new conveyor system can increase efficiency and product integrity simultaneously."

The versatility of steel belts makes them an important tool in the prevention of hygiene problems in food conveying lines and other areas.

Q: *We are a Lexington, Kentucky-based manufacturer. With all the options available how should we select a lean workshop training organization?*

A. The answer may be in your own backyard. Jim Price is the point of contact within University of Kentucky for hands-on coaching/workshops related to helping companies transform to lean. His responsibilities include providing clients on-site workshops designed to improve their entire enterprise value streams through transformation to lean practices. These include focus on dock-to-dock internal manufacturing value stream kaizen, executive flow and process kaizen leadership training, manufacturing-related business process flow kaizen, and just-in-time supply chain, distribution channel, and overall logistics processes. Jim's work background involves over 32 years directing manufacturing and logistics operations, most at the general manager/director of operations/plant manager level.

Jim tailors his flow kaizen workshops to focus on the client company's business and organizes them around appropriate case studies of manufacturing companies (e.g., forklift assembly, steel forging, gray iron casting, pneumatic valve machining and product assembly, etc.). Jim notes, "I personally have transformed to lean. I nor-


mally organize my value stream flow kaizen training into four or five-day, team-based, hands-on shop floor workshops depending on the manufacturing/logistics/business process we are analyzing/mapping and the company's level of knowledge of lean principles."

The results of the kaizen provide a roadmap for the client's organization to achieve the future state's performance improvements in terms of cost savings, lead time improvements, inventory reductions, and teamwork enhancement. Jim notes, "As we are a university, and training is our primary mission, I organize my workshops to ensure that each participant can

personally and effectively apply the techniques I cover to improve other successive value streams within their company after I'm gone."


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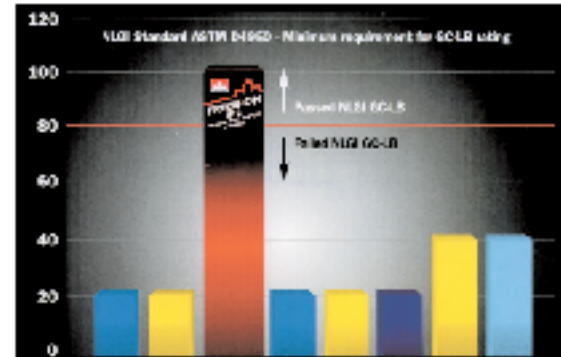


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