

## Floor manufacturing facility Selma Oak increases production capacity, creates ergonomic benefits

### Application information

Oak and laminated flooring manufacturing facility

The situation: As the housing construction and remodeling boom continues across America, companies like Selma Oak Flooring do what it takes to keep productivity in step with demand. For this manufacturer of oak and laminated flooring this meant upgrading an outdated and cumbersome material handling operation.

The Tillar, Arkansas-based company manufactures high-quality pre-finished

one of the country's leading hardwood-flooring companies.

Prior to the new system, Selma used a partially conveyerized system comprised primarily of older equipment. As the wood moved through the various stages of production and inspection, workers were required to do a significant amount of physical handling and moving.

### The impact

The problem was particularly acute



carts. Three or four people were needed to transport the rework or recovery items alone.

Besides its ergonomic impact, the old handling operation suffered from another problem that detracted from needed productivity. It was too slow to meet market demands.

The desired solution: Selma needed to reduce the physical handling of both work in process and waste while at the same time increasing the output of finished product to meet rising market demands in a timely manner.

Solution implemented: Key to this upgrade was the introduction of Hytrol conveyors—primarily horizontal belt conveyors—at critical parts of the flow process. The Selma Oak Flooring operation is simple and cost-effective. It gets the job done smoothly and efficiently without the need for costly computer

**“The conveyors have improved every aspect of our operation—people, productivity, and costs.”**

flooring for the residential housing market. In 1995 it was purchased by Harris-Tarkett Inc. of Johnson City, Tennessee,

with the scrap and rework material that is generated at various points in the production process. For one thing, workers had to physically remove the waste outside of the plant—a time-consuming and heavily labor-intensive drain on productivity.

“We use conveyors throughout the whole manufacturing, rework, and recycling process,” says Dave Clark, the plant’s manufacturing operations manager. “We used to do a lot of hand carrying or moving around the material on skids and in



# The system reduces wear and tear on employees by reducing the number of times material has to be manually handled

controls. The designers also made the system compact so that it could fit in the existing building configuration.

After the “green” raw material is fully air-dried or dried by kiln, it’s introduced into the conveyORIZED materials-flow process. Saw operators remove knots and other imperfections from board that has been placed on slat conveyors in front of them. The length of the cut wood can range anywhere from 82 inches down to 12 inches. The cut pieces then move on another slat conveyor where the tongue-and-groove operators square them away in preparation for movement through the dust-removing ventilators. After ventilation, the wood moves onto another set of slat conveyors that leads to quality control station. There an operator separates the waste and scrap from the good-quality pieces.

The scrap material moves on a Hytrol TA horizontal belt conveyor that links up with another TA conveyor running the length of the building. This is the main scrap-removal conveyor line. It includes an incline section that takes the waste material up and outside of the plant to an outdoor recycle bin. This automated scrap flow system replaces the old method of removing trash, which was largely a manual operation. In addition, it eliminates the problem of scrap falling onto the floor or having to be placed in dump carts, thereby creating congestion.

The good wood moves on to the sorting stations. At this point, operators place the pieces on a Hytrol chain-drive conveyor, which feeds into one of three belt conveyors. These belts, which have angled sides to minimize damage to the wood

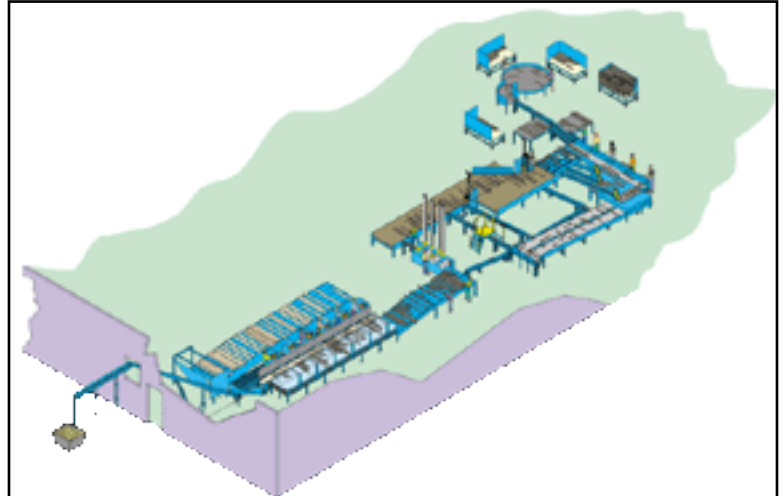
and prevent scraps from falling into the bearing mechanisms, feed into the final quality control station. At this critical juncture in the process, operators carefully examine the pieces for any blemishes. The first-quality wood travels on a takeaway conveyor to the shipment preparation stations.

## The results

Since Selma Oak Flooring completed installation, production has increased by more than 40 percent and labor savings have exceeded 25 percent.

The new conveyor system reduces wear and tear on the company’s employees by lessening the number of times material has to be manually handled.

Simplicity, efficiency, and compactness are the hallmarks of this installation. Reflecting on his experience with the



new system, Dave Clark concludes, “The conveyors have improved every aspect of our operation—people, productivity, and costs.”

This means that Selma Oak Flooring can keep on top of the booming demand for its product.



### Facility Information

Application: Floor manufacturing facility

Size: 150,000 square feet

Employees: 106 (per shift)

Product handled: 3/4-inch oak

Key material handling hardware: TA and TR belt, chain drive conveyors

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