Maintain Your Conveyor System Like a Pro

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Most manufacturing and distribution warehouses rely on conveyor systems to keep their daily operations running. However, when conveyor systems experience unplanned downtime, the costs add up quickly, especially during peak seasons. If one minute of downtime stops 350 cases from going out, and a case is worth $40, then that one minute of downtime could cost a company $14,000 in lost opportunities.

Fortunately, well-trained operators and maintenance technicians can reduce the risk of conveyor downtime by executing a preventive maintenance plan. In addition to avoiding the stress of missed shipment deadlines and lost profits, preventive maintenance keeps conveyors running at peak efficiency, extends system lifecycle, and eliminates the cost of expediting replacement parts.

Inspect Equipment with a Daily ‘Walk, Look, Listen’

A good preventive maintenance (PM) plan doesn’t need to be expensive or time consuming. In fact, a daily floor walk is one of the best techniques for checking a system’s health. Small, easily observed clues such as oil drippings, belt shavings, and unusual noise can indicate a worn or failing part. To ensure you’re not overlooking these signs, keep your operation clean and alternate PM technicians on a quarterly rotation to ensure fresh eyes. Here’s what technicians should look for on their daily walk:

1. Litter. Look for signs of dust, liquid, or shavings that may indicate problems like premature belt wear, misalignment, or oil leaks. When the conveyor is off-line, remove any dust, debris, or dirt from conveyor surfaces. It will be easier to notice these signs if the operation is kept clean.
2. Noise. While the conveyor is running, listen for unusual noise that may indicate a failed bearing, drive, or misaligned sprocket or belt.
3. Safety Equipment. Ensure that guarding is in place using visual cues and color indicators. Position guardrails to protect conveyors from moving equipment within the facility.
4. Loads. Make sure conveyors aren't overloaded. Confirm that conveyors are only transporting packages defined as conveyable by your OEM or vendor.
5. Operators. Ensure equipment regulations and safety procedures are being followed properly. If equipment is being misused or safety hazards are identified, consider implementing a refresher-training course.

As techs make their daily facility walk-through, be sure they document and report what they observe and keep detailed records of equipment repairs, replacement parts, and maintenance activities. Accurate records are invaluable in determining when to replace parts and assist with warranty and manufacturer support. Maintenance teams should also perform more comprehensive system checks both quarterly and annually.

Involve System Operators

While the main focus of a PM plan is on the work of maintenance crews, a certain amount of responsibility for equipment care and management falls on system operators. To recruit operators into a PM program, follow these best-practice tips from our maintenance experts:

1. Train. Operators can cause problems if they aren't fully trained in conveyor operation or safety compliances. By training operators, you not only ensure that equipment is being used properly, you also increase the number of eyes and ears capable of noticing discreet clues that indicate a problem.
2. Communicate. Talk to operators daily to see if anything out of the ordinary is happening with your system. Ask about any package or throughput changes, particularly during peak season.
3. Slow down. When possible, operators should run conveyor systems as slow as throughput requirements allow. Constantly operating at full speed can result in premature equipment wear.
4. Report damage immediately. Many times, maintenance is not notified until a system component is completely broken and the operation is compromised.
5. Plan for emergencies and breakdowns. Practice a contingency plan so everyone is well prepared in case of a conveyor breakdown or loss of power.

Why Bother?

It's easy to take a conveyor system for granted — until there's a problem. We're all familiar with the old adage, "If it ain't broke, don't fix it," but heed our advice, this

isn’t your conveyor system’s motto. A system will benefit more from the philosophy, “an ounce of prevention is worth a pound of cure.”

Poor maintenance techniques can lead to major meltdowns, no matter the size of the operation. After ignoring a small number of routine maintenance responsibilities, a warehouse manager found himself in the middle of peak season with a sorter going offline every few days. An investigation revealed the culprit to be an ignored air supply. Dirt and water in the operation’s compressed air lines had fouled the air cylinders and actuators — something a well-developed PM plan can prevent.

Still not convinced it could happen to your facility? In another example, operators were overloading inclines and declines. Eventually, the practice resulted in prematurely burned out motors, which shut the entire system down. For that reason, it is vital that operations and maintenance teams work together to identify overloading as a problem and prevent system failure.

System Audits — When to Involve an OEM

If you are creating a PM plan for the first time, you may want to start with an audit of equipment. An OEM can assess the condition of a conveyor system and make recommendations for immediate and future repairs, as well as suggestions for a sustainable PM schedule.

Qualified OEM service technicians perform complete infeed-to-discharge technical inspections, including an in-depth analysis of key system components such as wear points, chains, rollers, and other moving parts. A comprehensive annual audit gives a snapshot of system health and provides a baseline for noting trends and implementing procedures that ensure proper operation. Once the inspection is complete, system auditors generate a detailed report for your records, including a complete description of findings, digital photographs illustrating recommended maintenance, upgrades and modifications, and a list of recommended spare parts. Safety audits review guarding, clearance distance, light curtains, electrical wiring, and emergency stops. OEM technicians can save time and money by creating customized DIY monthly, quarterly, semi-quarterly, and annual maintenance checklists to keep you up and running during peak season.

Upgrades: Look for Built-In Features to Ease PM

Today’s leading OEMs engineer products with features aimed at simplifying preventive maintenance. If you’re looking to add new conveyor equipment to your operation, search for a system that’s engineered with ease of maintenance technology, such as software that enables easy troubleshooting and early problem detection via remote diagnostics. Diagnostics offer maintenance professionals peace of mind through remote access to current and historical data about the conveyors as well as early and accurate problem recognition and analysis. Other features include lexan drive covers, clear inspection panes, easy-to-read lubrication levels, and color indicators.

While in-house maintenance teams can catch problems before they start with a preventative maintenance program, partnering with a trained OEM can provide reliable and qualified support and onsite services such as audits, system upgrades and 24X7 customer service and support.

Whichever method you choose, implementing a sound PM plan increases operational uptime and productivity by extending a system's meantime between failure and lifecycle.

For more information, please visit www.intelligrated.com [1].

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