PLANT SAFETY

LINT CONTROL: MANAGED VS. ENGINEERED

Operators can reduce risks to staff and effectively control lint with advanced technology

By Brad Carr

Controlling fugitive lint continues to be of critical concern to textile services providers. Combustible lint poses a serious fire hazard. Anyone who's witnessed the lightning speed at which lint can spread a fire throughout a plant via overhead joists can attest to the danger.

Although there are many ways to deal with lint, they all fall into one of two basic categories: a managed or an engineered approach. Even though the goal is the same, the principles underlying each approach are vastly different. Let's examine each alternative, and evaluate its strengths and weaknesses.

MANAGED = 'MANUAL HOUSEKEEPING'

A managed approach is essentially manual housekeeping: Third-party cleaning services or plant employees intermittently remove accumulated lint by mounting scissor lifts or ladders to remove accumulated lint in overhead areas.

MANAGED APPROACH: PROS AND CONS

With manual cleaning, no significant capital investments is required. Instead, ongoing costs are absorbed in operational budgets.

Manual cleaning also doesn't need a strategic plan, which some may view as a benefit. If companies don't have a capital investment plan, it can be extremely difficult to allocate the funds needed for an engineered approach.

The first weakness of a managed approach is the fact that it puts your employees at risk. Cleaning overhead areas from a ladder or scissor lift increases the danger to the employee. This seems to be a solution that uses risky practices to eliminate a dangerous situation. That's not a trade-off that makes sense.

Another weakness is the cyclical nature of manual cleaning. This allows for too much accumulated lint, preventing the plant from being safe and in continuous compliance with OSHA.

The third weakness is that the managed approach requires never-ending costs. You have to keep the cleaning services forever to remove the lint.

ENGINEERED = 'AUTOMATED HOUSEKEEPING'

The assumption driving an engineered approach is that operators can leverage technology to automate cleaning processes and continuously protect against the risks of accumulated lint.

Two types of engineering solutions exist. The first is localized filtration: the equipment captures the lint either by vacuuming or suctioning. This approach is often needed, but the reality is that it can't be used alone. Localized filtrations simply can't capture every lint particle.

The second option is clean fan technology, which prevents fugitive lint from accumulating on overhead structures using a robotic clean fan. With this approach, there is a one-time deep clean of fugitive lint. Once that lint is removed, the clean fan technology prevents it from ever accumulating again. Often there is synergy between the filtration and the clean-fan technology for enterprisewide compliance, since they can be effectively used together in one facility.

ENGINEERED APPROACH: PROS AND CONS

The primary strength is its operating principle: An ounce of prevention is worth a pound of cure.

Only engineered solutions provide proactive lint control; instead of cleaning up after the lint has accumulated, engineered solutions prevent lint buildup from occurring in the first place.

Other strengths include:

- Employees are not put at risk to clean. No longer do people have to mount scissor lifts to reach the overhead fugitive lint.
- A one-time cost means a permanent clean.
- Laundries now can be in continuous OSHA compliance and avoid stiff fines.

The most difficult part of an engineered approach is breaking with the status quo. You have to budget strategically for the capital investment required for any engineered solution. Far too often, we stay comfortable with the status quo until something cataclysmic happens. The tragedy of a lint fire then forces a change. I hate to tell you how many people have called me and said, "I just had a fire. I need to do something different."

Another potential weakness is implementing the technology. The equipment has to be installed correctly, and the technology needs to be used appropriately so process areas are clean.

So take your pick. There are clear alternatives to controlling fugitive lint, each with its own value proposition. Choose the one that makes most sense for your plant. Either way, we must control fugitive lint. Otherwise, we'll have to deal with the consequences of dangerous lint controlling us.

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