the lament of lint

BY THAD SOUTHWICK

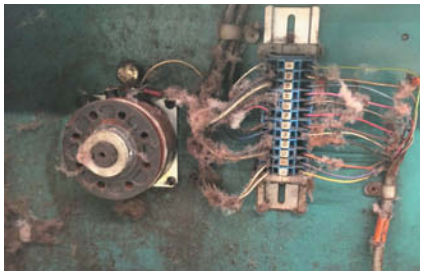
WHILE SOME TEXTILES CREATE MORE lint and at a faster rate than others, the presence of lint in a laundry is inevitable. Regardless of the amount of time for lint build-up to occur, care must be taken in removing it from a facility. Including a process for the removal of lint build up as part of a Preventative Maintenance Schedule is vital for a myriad of reasons. If lint build-up is not preventatively maintained, it's likely that effects will emerge and have a negative impact on operating costs.

Equipment functionality is impacted by excessive lint. The collection of lint on an electric motor, for example, can cause the motor to overheat prompting shutdown or worse, motor failure. Another example pertains to the integration of photo-eyes in various equipment. Photo-eyes are often utilized in the operation of soiled and clean goods transport conveyors, monorail systems, automated wash systems and finishing equipment. Lint is a culprit of originating misreads and communication errors by blocking photo-eye signals, i.e., sending the wrong message and creating an error in processing and/or material handling. It is important to note that as equipment functionality is reduced, rework increases and costs per pound are increased. Motors will require more power to endure elevated heat conditions, increasing electricity usage. Equipment processing errors will require manual intervention to correct the condition and employees spend more time re-feeding linen that didn't feed or fold properly and re-washing contaminated linen thereby decreasing pieces per operator hour (labor productivity) and increasing operating costs.

Lint behind a compressed air dryer. Lint causes the cooling coils to heat up, thus reducing the efficiency of the air dryer.

Another area of concern is the presence of airborne lint in and around the finished product and make-up area. Lint build-up directly on textiles reduces the quality of the product, negating the processes in place that produced a clean quality textile in the most efficient manner. Manual shake-out and/or rewash of textiles may be warranted, should an unacceptable level of lint collect on a product prior to finding its way out for delivery.

In the interest of safety, compliance to OSHA Directive Number CPL-03-00-008 should be followed. This instruction contains policies and procedures for inspecting workplaces that create or handle combustible dusts, of which lint is included in SIC 2299, NAICS 313111. The NFPA also specifies combustible dust to be below a Minimum Explosive Concentration (MEC) level. The level of safety coincides with the level of lint build-up within a facility. Essentially, the greater the build-up, the greater safety is put at risk. Suffice it to say, lint is an aggressive fire agent and reducing its presence reduces the risk and potential magnitude of a fire. Another safety



Lint build-up inside the control panel can cause erroneous signals and potentially catch fire if ignited by a spark.

Lint is extremely flammable. Once on fire, lint fires spread quickly. (Photo: courtesy of SonicAire®)

concern is the potential for causing physical injury. Should lint accumulate in any employee traffic area, it poses the risk of slipping. Finally, lint is also viewed as a safety issue with regard to infection control. Lint can act as a carrier by collecting and transmitting airborne molds, toxic vapors and chemicals, bacteria, etc. and coming into contact with, or breathing lint laden air can pose health threats. Given time, mold and bacteria can also grow on unattended lint build-up. Again, the reduction of lint directly increases the level of safety, in this case by reducing the risk of infection and physical injury.

With the goal being to minimize lint accumulation, there are a couple methods that aid in cleaning air and reducing lint from settling on equipment surfaces, textiles and overhead building construction. One method utilizes a vacuum-type design. Lint collecting units are installed overhead in higher concentrated lint areas and "pull" the air through a media filtration collecting lint and other airborne contaminates, thereby cleaning the air. Another method utilizes a rotating and oscillating fan design. These units are installed overhead and upward air movement is interrupted to reduce airborne lint from settling on high surfaces. The lint laden air is forced downward for collection at the floor level.

Whether or not equipment is in place to help in the lint cleaning process, a periodic scheduled blow-down, collection and removal procedure is an instrumental part of a cleaning process for managing the build-up of lint within a facility. Most importantly, an appropriate procedure to control and remove lint must be developed, implemented and carried out. Should the product mix change at a facility, the developed procedure should also be reviewed to ensure operational efficiencies and safety continue to be maximized. The benefits in doing so are immeasurable. ●

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