

Coin Laundry owners should be aware of a problem called "spontaneous combustion." Several articles on the topic have appeared in previous issues of The Journal; however, we've been receiving reports that the frightening problem is rearing its ugly head again in all parts of the country. Because of this, we feel that a refresher course on the topic is due, along with tips on how you can try to avoid this problem from happening in your coin-op. Spontaneous combustion is this month's focus on *Loss Control Lane*.

### **What is spontaneous combustion?**

Spontaneous combustion in laundries most often occurs when oily or greasy fabric is washed, dried, and then left alone for a time in a pile or neatly folded, it seems not to matter. In fact, Carolyn Verweyst, an expert at Whirlpool, notes that spontaneous combustion may even occur if the fabric is line dried.

Without getting too complex the combustion is the result of an "exothermic reaction." An exothermic reaction is a chemical reaction in the oils left on the fabric (even after the laundering process), in which heat is produced. Once the reaction starts, the temperature escalates very rapidly. Left unnoticed, fire soon develops.

When an oil contaminated fabric is exposed to a constant temperature of 212' F, a spontaneous heat increase can occur within two to three hours; but the greater the oil residue left in the fabric - again even after laundering- the faster the exothermic reaction occurs. A Whirlpool study shows that even line-dried, oil contaminated towels- when washed, folded, and stored at a temperature of 120' F- can produce an exothermic reaction within 29.5 hours.

### **Baffling to many fire professionals**

Neil Dennis, a CLA member in Australia, wrote to the Association last spring about a spontaneous combustion situation he viewed first- hand. He has laundered 120 oily 'tea towels.' When the towels finished in the dryer, he spread the hot toweling around his storage area, not wanting to leave them in a bundle, for fear of spontaneous combustion.

"Thinking that I had taken all the precaution needed, I gave it no more thought, until the phone rang at 5:00 the next morning," Dennis wrote. Luckily , fire damage was minimal, and was contained in the rear of his store. "No matter how careful you are, or how many precautions you take, you can still be caught with a spontaneous combustion fire."

In his letter, Dennis noted that the local fire investigator was baffled as to what started the fire." The investigator who, according to Dennis, had 12 years of fire investigation experience, was unaware of the effect heat can have on oily, greasy fabric.

"I actually told *him* what caused the fire." Dennis noted. "But he wouldn't believe me. It was only when I had been home to get my insurance policy number that I remembered a photocopy I had of The Journal article on spontaneous combustion. I gave it to the fire investigator, and that's when he finally began to consider the cause of the fire might have been hot tea towels."

### **Preventing the unpreventable**

As Neil Dennis observed, regardless how much care and thought you put into trying to avoid tragedy, it's never truly avoidable. There are, however, some steps you can take to try to lessen the likelihood that spontaneous combustion will happen in your store.

- When wiping up oily or greasy spills, use disposable paper, not cloth toweling, and simply discard when through.
- Pre Treat oily stains on fabric
- Wash items with oily stains in the hottest water available, and use heavy duty liquid detergent
- Never wash fabric saturated with oils or grease in an automatic washer or dryer. Wash them in a sink or laundry tub, and try to make sure that all the oil and grease is thoroughly removed before drying or storing fabrics
- If you know customers are laundering oil or grease soaked fabrics in your store, monitor them; or advise them against washing them in your store altogether.
- For more information contact Consumer Product Safety Commission, an organization monitoring fire hazards of vegetable oil soaked fabrics.