TECHNICAL

Looks Car **Be Deceiv**

By Steve Hahn

What's about 2 1/2" long, 3/4" wide, 1/8" of an inch thick, weighs only a few ounces – and falls apart? . . . If you guessed a fusible link, you're absolutely correct! It seems somewhat ironic that this small, relatively unimpressive looking, fairly inexpensive part is arguably the most critical component of many fire protection systems - including fire doors.

A fusible link is rather deceiving - it looks so simple, yet at the same time, is fairly complex. In its simplicity, it is two pieces of metal soldered together. But when examined more closely, its complexity is hidden in a sophisticated design intended to hold a specific load without pulling apart until it is heated to an exact temperature.

Also deceiving is the fact that two fusible links that look alike may not be! Similar appearing fusible links may have different temperature ratings, and might also be rated for different load ranges. They are generally marked with the manufacturer's name, temperature rating, manufacturing date, and series or model designation that can be traced to determine a load range. It is critical that when a fusible link is replaced, that it be replaced with one that will handle the same load and

- under most circumstances - separate at the same temperature.

And when should fusible links on fire doors be replaced? With all the codes and standards related to fire doors, there is no apparent clear answer. Anytime a fusible link has separated, it obviously must be replaced. But is that the only time?

- NFPA 80 Standard for Fire Doors and Other Opening Protectives states that fusible links cannot be painted, or coated with dust or grease, but does not specifically address their replacement.
- FM has some guidelines for inspecting the condition of fusible links, but neither UL nor FM has requirements for replacing them.
- Several but not all fusible link manufacturers recommend annual replacement.
- DASMA TDS 255 Guidelines for Fusible Links contains valuable information on the subject, includes an expanded list of conditions that can compromise their performance, addresses their replacement when compromised, and recommends considering annual replacement in severe exposures.

As you can see, there is no set answer. But remember, fusible links are relatively inexpensive. And since all fire doors are required to be inspected and tested annually, why not consider

replacing fusible links at that time? Don't forget to also check the condition of the sash chain or cable and their connections, make sure they are flexible and not kinked or pinched, and replace them as well if necessary. Recommend it to your customer, sell it as a valueadded benefit, and give yourself the peace of mind that there is one less thing that can go wrong after you've completed your work.

DASMA TECHNICAL DATA SHEE

Guidelines for Fusible Links

#255



Steve Hahn is Product Manager for Lawrence Roll-Up Doors, Inc. He has been in the rolling door industry for more than 30 years, is a member of the NFPA-80 Standard for Fire Doors and Other Opening Protectives Technical Committee, and serves on three UL Standards Technical Panels.