

TIP SHEET

BEWARE OF RECONDITIONED MEDIUM VOLTAGE FUSES

BY RUSS BERNSTEIN, PRODUCT MARKETING MANAGER
AND PETER WALSH, SENIOR FIELD ENGINEER

What is a reconditioned fuse? It is a fuse that had been in use at one time, served its purpose, and is now being offered for re-sale. The fuse has typically been restored to look as if new on the outside, but oftentimes the fuse may have internal damage from water immersion, rough handling, or prior overcurrents. Resistance testing may show that the element is intact, but does not indicate other problems.

Use of reconditioned medium voltage fuses generates risks for everyone in the electrical community. Sometimes they are repackaged and sold as new to unsuspecting distributors and customers. The sourcing of fuses by internet has increased the frequency of the problem. The users of these fuses can suffer equipment damage, personal injury, extra labor costs, and needless equipment downtime.

Many fuses were subjected to water immersion during Hurricane Sandy. Once dried-out, the fuses can be cleaned to look normal. However, water can cause the sand inside the fuse to coalesce in some areas, causing voids in others. If a void is formed near the element, a sustained arc can occur and the fuse can explode.

Mystery Fuse

Mersen experienced a more typical situation involving a medium voltage fuse that was manufactured in the 14th week of 1999, indicated by the "14-99" stamped into the metal end. It went

through the normal sales channel to an authorized distributor and to the end customer in 1999. The end customer renovated his switchgear during 2008 and had no need for that particular fuse. The electrical contractor then sold the old fuse to a scrap dealer. The dealer later sold the fuse to an electrical distributor.

Another end customer shopped the internet in 2010 and found this medium voltage fuse at a low price with no indication it was a reconditioned fuse. Upon installation, it overheated when used with a normal load.

Mersen, the manufacturer of the fuse, was summoned to investigate. The fuse had a partially broken element that was causing the overheating. Mersen determined the true history of the fuse and referred the customer to his distributor for resolution. Mersen has a one-year warranty for its customers. The normal expected lifetime is ten years depending on the environment and load.

Mersen was aided by the date codes to determine when the fuse was manufactured, as shown in the photo on the reverse side. Brand labels can also be used to determine the approximate date of manufacture. Our brands have migrated from Chase-Shawmut, Gould-Shawmut, GE to Ferraz-Shawmut and now, Mersen. Medium voltage fuse sales are recorded for each authorized distributor. With the date of manufacture, the fuse is traceable through the authorized Mersen sales network.



Always look for the manufacturer's date code!

Recommendations

- 1) When purchasing medium voltage fuses, always use a trusted, authorized distributor.
- 2) Insist on an approval directly from Mersen if the fuse is more than 3 years old.
- 3) If the date stamped on the medium voltage fuse is missing or altered, notify your supplier for a replacement.

Mersen Select-A-Fuse

Quickly and accurately choose the right overcurrent protection fuse for your application with Mersen's Select-A-Fuse. [Click here to go to Mersen's Select-A-Fuse.](#)