

Gas Tubing Fires Linked To Lightning Spark Concern

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WESTERVILLE, Ohio (AP) — Reports of lightning-related fires and gas leaks in at least a dozen states have sparked concerns about the use of flexible gas lines made of corrugated stainless steel tubing.

The same type of lightning strikes is suspected of causing fires in four homes in central Ohio over a stormy 12-hour period this summer. Genoa Township Fire Chief Gary Honeycutt said he believes lightning struck at or near the homes, and the electrical charge traveled along the plastic-coated metal tubing, known as CSST, before jumping to a less resistant pathway nearby such as a metal ventilation duct. It then punctured a hole the size of a pencil tip in the tubing and created a gas leak that could ignite, he said.

One of the fires charred the ceiling in the lowest level of Michael Wagner's dream home, a two-story property near a country club and golf course in an area where farmland has been turned into neatly manicured neighborhoods of newer homes.

"It had been burning the joists much like a blowtorch," said Wagner, whose family moved into the home a few weeks before the fire and has been displaced for months because of smoke damage. The home passed inspection without problems, they said, but they later learned lightning had struck it and created a gas leak in 2004.

Reports of such fires and gas leaks, ranging from such states as Florida, which has a high occurrence of lightning strikes, to those where strikes are less frequent, have led to lawsuits, studies and efforts to better track the incidents. Manufacturers defend CSST, which has become increasingly common in new homes since it was introduced domestically more than two decades ago, and fire officials and researchers are trying to determine whether to blame a faulty product, unsafe installation or something else.

Firefighters and gas providers point out that the fires seem to occur with an unusual combination of factors — a newer building that has CSST, a lightning strike in just the right place, the puncture of the tubing and the spark to ignite the gas. Most of the Ohio fires were in the central part of the state, though it's possible there are others that haven't been linked to the tubing because the reports didn't include that detail.

"I'd say we've got a problem with that product, but it's very anecdotal evidence that we have," said state Fire Marshal Larry Flowers, who recently started collecting information about such fires around Ohio.

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A class-action lawsuit filed in Arkansas against several manufacturers claimed the tubing posed an unreasonable risk of fire from lightning strikes, leading to a 2006 settlement that was worth up to about \$29 million, according to a copy of the settlement agreement provided by an attorney not affiliated with the case. Lawyers involved in the case did not respond to messages for comment.

And an unresolved wrongful death lawsuit blames a CSST failure for a 2008 blaze that killed three children and their grandmother in rural Jefferson, S.D.

"For a homeowner or a business owner, really the problem with the product is it's very unpredictable when it's going to fail, and it's a very difficult product to make safe," said Mark Utke, a lawyer with the Cozen-O'Connor firm in Philadelphia, which is working on the South Dakota case and dozens more it connects to CSST.

Manufacturers say the flexible tubing was developed in Japan as an alternative to rigid gas piping that could break during an earthquake, and hundreds of millions of feet of tubing have been installed in U.S. homes and other buildings. It can cost significantly more than black metal pipe, with one recent estimate putting the cost at 65 cents for a foot of rigid pipe in Ohio and about a dollar more for standard CSST. But the tubing is easier to install and can bend around corners, appearing much like a garden hose affixed to ceiling joists.

Both types of lines meet existing product and code requirements, but manufacturers say that CSST is the safer option and that it's less likely to crack, leak or cause a gas explosion because it doesn't require as many joints to follow the shape of a building's interior.

"Of course we would like everything in the house to be safe from lightning, but that's not a requirement," said Bob Torbin, the director of codes and standards for Exton, Pa.-based Omega Flex Inc., one of the producers targeted in lawsuits. "And so we have to ask ourselves: Does this represent an unreasonable risk compared to other risks that you take when you occupy your home?" That's a measurement that's tough to quantify, he said.

In response to concerns, Omega Flex stopped offering its earlier CSST product this fall and instead is promoting tubing wrapped in a special covering intended to make it more resistant to lightning strike damage.

Some manufacturers and builders say there may be other contributing factors in the tubing fires, including whether gas lines are correctly grounded and bonded, meaning they're linked into a system that would direct energy from a lightning strike into the earth.

The president of the Ohio Home Builders Association said he has used the tubing and has no doubt that it's a safe product when installed properly.

"We have it in our home," said Bill Owens, who's also founder and president of Owens Construction in suburban Columbus. "A lot of it is just paying attention to the actual installation requirements and the code requirements associated with safe

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installation."

In Indiana, officials increased code requirements for bonding and grounding in new homes and expanded the required gap between gas tubing and other metal items to help decrease the risk of a problem. The research foundation affiliated with the National Fire Protection Association, which sets national codes that pertain to construction, is studying how to mitigate any lightning-related dangers of CSST and has sought information from various stakeholders in the discussion, including manufacturers and insurers.

"Now that it's out there, how do we make it safe?" said Mitchell Guthrie, an engineering consultant from Blanch, N.C., who has researched CSST and lightning protection and worked with a panel studying concerns.

Iowa Fire Marshal Ray Reynolds said people in the insurance industry have linked the tubing to more than 200 fires in his state over the past two years, and he doesn't believe proper grounding and bonding is the only solution. He said Iowa has seen some problems with properly bonded systems, and he decided to replace the tubing in his own home with the updated, extra-protected CSST.

Wagner, the Ohio homeowner displaced by a fire, said he decided to replace his flexible tubing with rigid lines to help his family feel safer.

The American Gas Association, which represents gas providers, doesn't think CSST is a defective product, but it has helped develop product standards and has supported the industry's effort to educate the public about concerns and to minimize any dangers.

"It's just a situation that could occur, just like lightning could penetrate a home and damage wiring," said Jim Ranfone, the AGA's managing director of codes and standards.

"It's not a panic situation, but it's one that I would sort of keep tabs on to make sure the system was properly bonded," he said.

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