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Is Enough Done To Stop Explosive Dust?

Sugar Plant Blast In February That Killed 13 Is The Latest Preventable Tragedy

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(CBS) You might not think of sugar, corn, or metal as materials that can cause a catastrophic explosion in a factory, but when they're ground into dust-and suspended in the air-all it takes is a small spark to set off a major disaster. As **correspondent Scott Pelley** reports, devastating dust explosions at American factories are more common now than ever.

Since 1980, there have been at least 350 such explosions in the U.S., killing 133 people and injuring hundreds more. There are at least 30,000 factories in the nation vulnerable to dust explosions, and yet, some top federal safety officials tell ***60 Minutes*** the government agency whose job it is to protect workers is ignoring a tried-and-true way to prevent those explosions.

The Danger Of Combustible Dust

Scott Pelley reports on the deaths and property damage caused by dust explosions at American factories, a problem critics say the government needs to do more to prevent.
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On the night of Oct, 29, 2003, the Hayes Lemmerz factory in Huntington, Ind., exploded in a ball of fire. The plant made wheels for cars, and federal investigators said aluminum dust had piled up and detonated.

Thirty-three-year-old Shawn Boone was a mechanic at the plant. His sister, Tammy Miser, got a call with word that her brother was seriously injured. "Shawn and a couple of his co-workers were in the furnace room. And there was an explosion. And then there was a second more intense blast," she remembers.

Asked what happened to him, Tammy tells Pelley, "He laid on the building floor. And the aluminum dust actually continued to burn through his flesh."

Tammy says her brother had third and fourth-degree burns on 92 to 100 percent of his body. She says the doctors said there wasn't any hope. "That his internal organs were burned beyond repair. They wouldn't even bandage him. They said that the only solution we had was to take him off of life support."

Shawn Boone was one of 15 people killed in dust explosions that year. It was a turning point for Carolyn Merritt, who was then the head of the Chemical Safety Board, the federal government's own experts who find the cause of the nation's worst industrial disasters.

Merritt ordered the most comprehensive investigation ever done on dust explosions. Her conclusion: hundreds of industries create huge amounts of lethal dust and aren't even aware of the risk. "If this material were gasoline, there would be no doubt in any owner's or operator's mind what needed to be done," Merritt tells Pelley.

Asked if that would be an emergency, Merritt says, "Absolutely."

"Is dust, functionally, the same thing?" Pelley asks.

"It has the same power if a dust explosion occurs," Merritt explains.

"Can you just explain to me how it is that the dust is explosive, I mean, what's going on here?" Pelley asks,

"Okay, if you take an ear of corn, you're not gonna be able to light it with a match. But if you grind that

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into a powder, the smaller the particle size, the more explosive it is. Metal dust. People don't think metal can burn. But you turn it into a fine powder, and you have a very explosive and flammable material," she explains.

Even a thin layer of dust, once airborne, can be ignited by the smallest spark-a machine being plugged in or a forklift scraping the ground.

One explosion, also in 2003, at West Pharmaceutical Industries in Kinston, N.C., showed just how insidious the problem can be. Because it was a drug company, the factory floor was immaculate. But plastic dust was hidden above the workers' heads.

"We know that as much as two inches of dust had accumulated in the ceiling, probably about a ton of material. That makes for a powerful explosion," Merritt says.

Hours after the blast employees were still trapped inside; seven died and scores were injured. Merritt's investigation concluded that OSHA-the government agency created to safeguard workplaces-had no effective regulation on its books to deal with explosive dust. And she found that OSHA inspectors routinely overlooked the hazard.

Merritt tells Pelley OSHA had been at that worksite before the explosion and that they didn't find any dust issues.

Continued

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To rf35 you should really listen to the story before you make comments like the one you made to usmwf about blame you obviously have some connection to those who don"t care who dies or how. If you dare to claim that Tammy is pushing blame. You are just trying to get a negative rise out of her which will not happen. She doesn"t have time to waist fighting the negative which would explain how shes gotten so far with doing the right thing not for herself but for others. You might want to try that yourself someday.

Posted by LifeSaver01 at 02:14 AM : Jun 11, 2008
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Posted by LifeSaver01 at 02:13 AM : Jun 11, 2008
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I thought I"d wait for a couple days to give the public a chance to respond on this issue before doing it myself. And after doing so all I can say is I"m shocked at the comments of those who don"t understand the need for the government to step in. To them all that can be said is I pray that understanding for them does not have to wait until they themselves are affected. Above all else I want Tammy to know how very proud of her we all are. Heres a woman who on a daily basis does all she can to assure that others will not have to survive the reality of loosing a loved one this way. Or any other way that lives are lost in preventable workplace tragedies. I would also like to express my gratitude to CBS & 60 minutes for covering this very important story and I hope that they continue to investigate further into the far too many injustices of all workplace fatalities. For more information on Tammy"s efforts please visit United Support & Memorial for Workplace Fatalities & The weekly toll.
Mary Vivenzi
usmwf.org
Transforming Tragedy Into Prevention.

Posted by LifeSaver01 at 02:02 AM : Jun 11, 2008
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amazing & W is gonna Veto , is anyone surprised??

Posted by scomule777 at 09:42 PM : Jun 10, 2008
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Cal/OSHA, which is California''s version of OSHA for California workers, has it''s own law on the books for Combustible Dust safety (http://www.dir.ca.gov/Title8/5174.html) and Combustible Metals (http://www.dir.ca.gov/Title8/5175.html) which references existing NFPA safety standards. California workers are protected, and California employers have been cited for failure to comply. Step up to the plate, Feds. You don''t even have to reinvent it from scratch, NFPA and California have done it for you.

Posted by doomscribe at 01:39 PM : Jun 10, 2008
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While OSHA certainly is asleep at the switch, given how many inspectors they have, they only get to any plant once every 5 years. These companies certainly know the risk better than anyone. Today''s (June 10)Dilbert is particularly to this point. Check www.dilbert.com and look at it.

Posted by jdk1951 at 08:55 AM : Jun 10, 2008
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It is clear to me that 99.9% of the posters are clueless about explosion hazardous areas. Building codes and regulations and NFPA 70 are pretty solid and cover the basis. OSHA inspectors are not building inspectors or licensed electricians. They use guidelines developed by OSHA in Washington to perform their job. OSHA in Washington should be held responsible for the guidelines they publish.
OSHA should take full responsibility for the errors and misrepresentations of equipment suitability in OSHA 1910.178, which allows untested and uncertified equipment in explosion hazardous areas. OSHA knows that all authority having jurisdictions use this guideline to determine suitability, yet it does not appear that they ever bothered reading UL583 and UL558 to verify NFPA 505 claims of equipment suitability.
To all the authority having jurisdictions I suggest to read the equipment ID tag before allowing the use of equipment in explosion hazardous areas. If the equipment ID tag lists an explosion hazardous area, it can be used in that specific area. However, if an OEM is unwilling to list a hazardous area rating on the ID tag, than the equipment is probably not designed, build, tested and certified for this purpose.

Posted by EXGURU at 09:38 PM : Jun 09, 2008
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I am a building inspector for a large jurisdiction. I was assigned to a new post and on my first visit I closed a paper products factory that is state of the art and only seven months old at the time. This factory is several hundred thousand square feet and the investment must be well over $20,000,000.00. From the roof sheathing to the floor, every horizontal surface except the floor was covered with a 1/2" to 3/4" layer of fine dust. None of the electrical system is classified dust tight and virtually none of the machinery is UL listed. Obviously the government was not doing it''s job until I showed up. It is up to the building dept. to ensure that what is being built is safe and the fire dept. to ensure that it remains safe.
OSHA is a joke to us. We never see OSHA until after the accident. I have had no dust training since I was a child in the farm town of Rochelle IL. Heck, I inspect carnivals with no training. Oddly enough my supervisor is way upset that I closed the factory. But hey, my mother loves me and right away she said please stay out of that factory and check your truck every morning for bombs.

Posted by tigerloose at 09:17 PM : Jun 09, 2008
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Posted by tigerloose at 09:13 PM : Jun 09, 2008
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This is one of the shallowest segments I have seen 60 Minutes broadcast. If you don"t know enough about a subject to present a responsible program, don"t do it.

This is not an OSHA problem. OSHA doesn"t exist to perform research. 50 years ago the aluminum industry recognized that there was an explosion hazard involving molten aluminum and water in casting operations. The Aluminum Association initiated extensive testing to determine the causes and make recommendations to prevent explosions. That"s what is needed in every industry whose processes produce oxidizable dust.

And by the way, only oxidizable airborne dusts in certain densities have explosive potential. To all those people living along dusty roads that you scared to death last night, you should apologize.

Posted by trumpetcr at 02:48 PM : Jun 09, 2008
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