

We are



Hello,

July 2020

## Process Safety Dispatch

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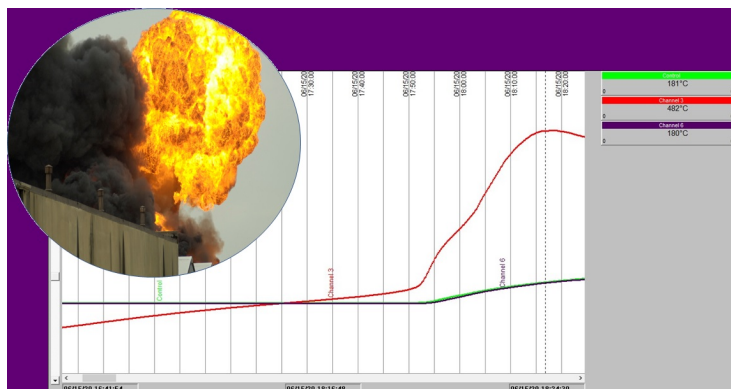
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### Pet Food Factory Explosion - A Lesson in Combustible Dust

It was the neighbors that first noticed the problem.

Think Italy. Think a small, provincial town in Lombardy in the north; an area that would eventually be badly struck by the devastating Coronavirus pandemic.

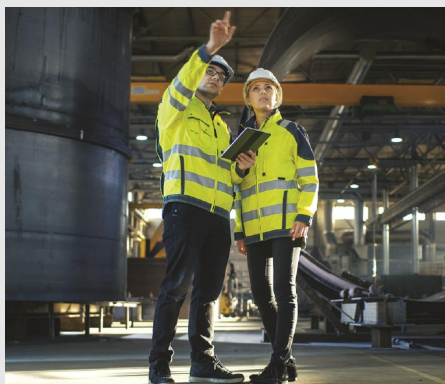
On April 1<sup>st</sup>, 2 years ago, residents near a pet food factory became aware of an unusual odor – a ‘miasma’ (ref. 1). Three technicians were sent to the plant to investigate. Two of them would never return home.



The trio quickly identified the source of the problem. It seemed to be associated with a

flour drying facility which, according to reports (ref. 1), had been shut down for 4 days. They established that the odor was coming from inside one of the dryers. They set out to see what could be done. Two of the technicians climbed onto a platform adjacent to the dryer. There was an explosion which apparently killed the 2 technicians on the spot.

At the time of reporting, investigations were ongoing, but it was surmised that it was an 'out of control chemical reaction' which was at the root of the problem. [Read more...](#)



### Expert Consulting

- Dust Explosion Prevention & Mitigation
- Control of Static Electricity
- Hazardous (Electrical) Area Classification
- Process Hazard Analysis
- Process Safety Management
- Fire and Explosion Hazard Assessment
- Incident Investigation
- Organizational Process Safety Competency Assessment



### Specialist Laboratory Testing

- Combustible Dust Testing
- Electrostatic Testing
- Self-Heating / Thermal Instability Testing
- Flammability Testing of Gases & Vapors

## Explainers: Flammability - Static Electricity in Plastic Liners and Drums



Take a party balloon and rub it against your shirt. Impress your friends by putting the rubbed area of the balloon against the wall. Hey, it sticks!

Static electricity can be great fun. It can also have serious consequences in process safety if it is not properly understood and controlled. Not everyone realizes that insulating materials (plastic containers, plastic powder scoops, insulating linings of pipes, insulating drum liners, spiral reinforces hoses..... party balloons) can not only accumulate and hold electrostatic charge for hours or days, but if they hold enough charge then '**brush discharges**' can be drawn from the surface. These discharges can have enough energy to ignite most of the common solvent vapors used by the chemical, pharmaceutical

and in many other industries where flammable liquids and gases are handled or processed.

In this EXPLAINER piece, we look at electrostatic discharges from insulating surfaces. The phenomenology we describe here is what is behind best practice to control electrostatic hazards in such standards as NFPA 77 'Recommended Practice on Static Electricity' and IEC/TS 60079-32-1 'Explosive atmospheres – Part 32-1: Electrostatic hazards'. [Read more...](#)

## ANNOUNCEMENT

Dr. Ebadat will be presenting, "NFPA 652: The Gap Between Industry's Understanding and Compliance" at AIChE's 16<sup>th</sup> GCPS Virtual Conference on August 18, 2020 at 11:00am. [Click here...](#)



A graphic for a virtual conference announcement. It features a white background with a purple border. On the left, there is a diamond-shaped collage of images: a hand holding a glowing orb, a worker in a hard hat, and a close-up of hands. In the top right corner, there is a red button with a white icon of a person at a computer and the word "VIRTUAL". The center text reads "20 AIChE Spring Meeting" in blue and orange, followed by "16TH GLOBAL CONGRESS ON PROCESS SAFETY" in black and red, and a globe icon. Below this, it says "Vahid Ebadat is Speaking!". At the bottom, there is a red banner with the text "JOIN US: AUGUST 17-21, 2020" in white.

If you would like a quote for any of our testing and/or consulting services, please click on the button below. We will get back to you promptly with your proposal.

[REQUEST A QUOTE](#)

## Free On Demand Webinars

[Combustible Dust Hazards: Assessment, Prevention and Protection Including the Requirements of NFPA 652 \[watch\]](#)

[Electrostatic Hazards in Processing Industry: The Nature of the Problem and Practical Measures for its Control \[watch\]](#)

[Fire and Explosion Hazards: How to Identify and Control Them in Your Process \[watch\]](#)

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