

We are



Hello,

June 2020

### Your Process Safety Questions Answered

In this issue we have a tale of **two explosions** on consecutive days in different facilities – and why the absence of water helped save the day. We also introduce a **new feature** to Process Safety Dispatch in which we answer your questions. Enjoy...

## Process Safety Dispatch

### In this Issue

- Safety Feature: Two Explosions, Two Fires, Two Days, No Water
- Your Process Safety Questions Answered
- Free On Demand Webinars

### Two Explosions, Two Fires, Two Days, No Water

April 4<sup>th</sup>, 2020 was a normal Saturday at a specialist cored-wire manufacturing plant in Plum, Pennsylvania. The day's routine was abruptly shattered by an explosion and fire in a production machine handling titanium and calcium powders (ref. 1). Three people were hospitalized. The fire service attended and extinguished



the fire. The Fire Chief attending the scene remarked that he was grateful that the water fire extinguishing sprinkler systems DID NOT operate.

Meanwhile, **1 day later** in the Hannover region of Germany, the local fire service was in attendance at a metal recycling facility (ref. 2). An explosion, a fire, and one worker hospitalized. Again, the attending fire service made a point of NOT using water to extinguish the fire.

So, let's look at the problems with metal powders, why they can be potentially so dangerous, and what to do to reduce the risk ...[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

## Your Process Safety Questions Answered



We regularly receive written questions from industry on process safety matters. **WE ENCOURAGE THIS** Sometimes the questions come through our [website](#) and other times they follow our consulting colleagues' web presentations or public speaking engagements. We'd like to share some of these questions and our responses with you. The questions in this edition of **Process Safety Dispatch** were received

following a webinar, "Dust Explosion Testing – How to Get the Right Data Without Breaking the Bank", by Dr. Vahid Ebadat, CEO of Stonehouse, for Powder & Bulk Engineering, <https://www.powderbulk.com/webinars/dust-explosion-testing-how-to-get-all-the-right-data-without-breaking-the-bank/>.

Here are the questions, together with our considered answers:

**Questions 1:** What is the chargeability test vs. volume resistance?

**Questions 2:** How do you handle product testing for a facility when there are over 150 different raw material products that are used? They can't expect us to test them all!

**Question 3:** Since ASTM explosivity testing is done in a closed system or bomb on a static cloud of dust, do these results apply for a non-static concentration of dust that is in high velocity motion in air, such as in a pneumatic conveying system?

All answers available on our website [here](#).

**Question 1: What is the chargeability test vs. volume resistance?**

**Answer 1:** We would contend that there are 4 critical material properties that contribute to evaluation of electrostatic hazards in a powder handling processes. Three of them are independent of each other. These properties are: [Read more...](#)

---

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 \[watch\]](#)

---

If you received this newsletter from a colleague and would like to sign up to receive our newsletters in the future -- Sign up [Here](#).

\*Cybersecurity and Infrastructure Security Agency