We are Stonehouse process safety

Hello,

September 2020

# Process Safety Dispatch

## In this Issue



## Flour Packaging Explosion: The Normalization of Risk

In this article, we would like to discuss the concept of **'normalization of risk'** and then go on to illustrate the concept by looking at a real combustible dust explosion story from Europe:

**Normalization of risk:**

- The gradual process through which risky/dangerous practices or conditions become acceptable over time
- Getting used to risky situations because we see them every day
- Unwittingly accepting unsafe situations because they have not caused an incident before; there has been a lack of "bad outcomes"

Accepting some level of risk is a something that we all do; it's normal! If we did not accept some risk, we would never drive a car, fly on a plane, or even buy a restaurant meal. But what we have to guard against is **over-normalization** of risk where consequences of 'failure' are big. A combustible dust explosion can, of course, have severe consequences to life, the environment, and your business – but combustible dust explosions are not usually everyday events. Being surrounded by a familiar, seemingly unchanging process plant and equipment, day on day, easily leads to complacency and quite often, the 'normalization of risk'. To read more and read about the flour packing explosion, **click here…**

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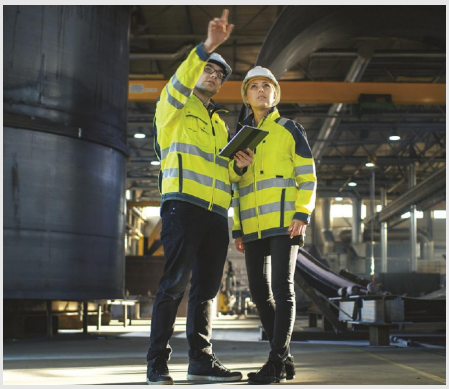

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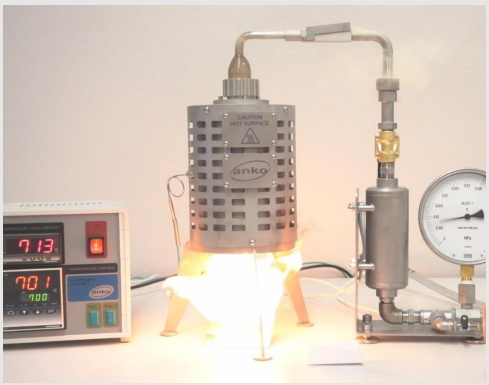
- Dust Explosion Prevention & Mitigation
- Control of Static Electricity
- Hazardous (Electrical) Area Classification
- Process Hazard Analysis
- Process Safety Management
- Fire and Explosion Hazard Assessment
- Incident Investigation
- Organizational Process Safety Competency Assessment



## Specialist Laboratory Testing

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

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# Spontaneously combusting hand sanitizer?

## Understanding Auto-ignition Temperature and Flash Point

It all started with a social media post by Wisconsin's Western Lakes Fire District [Ref. 1]. The Facebook post featured a photograph of interior damage to a car and warning that hand sanitizer could ignite, if exposed to open flame. The post was shared many thousands of times, and before long the message had morphed into 'fire started when hand sanitizer in car spontaneously combusted' [Ref. 2, Ref. 3].

https://www.fox19.com/2020/05/21/police-warn-about-leaving-hand-sanitizer-hot-car/

So, let's take a look at what's going on here:

- Can a container of hand sanitizer suddenly spontaneously explode if left inside a car in the hot sun?
- Can hand sanitizer explode at all?
- How can hand sanitizer be stored and handled safely?

To understand the issues, we need to learn about **Flash Point** and **Auto-ignition temperature** – and be sure we understand the difference between the two! ***Read more…***

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## 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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