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Hello,

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## Process Safety Dispatch

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### Chittagong Explosion -- and Hydrogen Peroxide



(AP Photo)

Some of you may remember our [Process Safety Dispatch article](#) written seven months ago concerning the massive explosion that shook Beirut port when industrial quantities of ammonium nitrate, a Class 5, Division 5.1 oxidizing substance, destroyed the heart of Beirut.

Here we go again....

Whether or not you're involved in process safety, you'll certainly have heard of the massive explosion that took place at a container depot just outside Chittagong, Bangladesh on Saturday 4<sup>th</sup> June 2022. It is understood that a fire developed in shipping containers holding clothes destined for western markets. **The fire ultimately led to a massive explosion resulting in the deaths of over 50 individuals. Hundreds were taken to hospital for treatment.** Over the next few weeks and months, all eyes of the process safety community around the world will be on this incident with a view to establishing what happened, why it happened, and how to make sure something like it doesn't happen again anywhere else. Just like the Beirut explosion!

In this article we take an early look at what has been reported, and we focus-in on **hydrogen peroxide** and its properties as a 'heads-up' for those that handle this and other potentially difficult oxidizing substances. Yes, hydrogen peroxide is another Class 5, Division 5.1 oxidizing substance.

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[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



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## The Tale of the Process Engineer and the Dust Explosion Specialist



Once upon a time there were two professional engineers. Firstly, there was the '**Process Engineer**' who was busily working on powder processing design (technology selection, capacity...); and then there was the '**Dust Explosion Specialist**' who came along afterwards to evaluate powder processing facilities and advise on **how to change the plant** and add equipment to guard against the dust explosions risk.

Anyone spotted the problem here?

Process Engineers and Process Safety Engineers both have incredibly valuable expertise, but it's pretty clear to us that if you can,

- bring together the expertise of these groups at **plant design** stage, there is huge opportunity to design and build plant that is economic, efficient, and safe. But further,
- for **existing plant**, there are sometimes process engineering solutions to be found that **do not** involve the installation of yet more sophisticated explosion protection or prevention equipment.

"Keep it simple, stupid" is still alive and kicking – so long as you have the **combined expertise** to see it!

In this article for Process Safety Dispatch, **we draw upon the insight of some of our safety specialists** at Stonehouse who have come from the world of process engineering who often seamlessly join the disciplines together. If you want to learn more, we will gladly arrange a discussion about the opportunities to improve your plant with one of them.

[Arrange a Discussion with Us](#)

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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.

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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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