We are Stonehouse process safety

Dear Vahid,

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Process Safety Dispatch

In this Issue

William de la Barre & Washburn A Mill Explosion: Tragedy, Heroism and Industrial Safety

The Mill City Museum, Minneapolis, in the ruins of the former Washburn "A" Mill

On May 2, 1878, the city of Minneapolis was struck by a devastating industrial disaster known as the Washburn A Mill Explosion. This catastrophic event not only resulted in the loss of numerous lives but also left an indelible mark on the history of industrial safety. At the center of this tragedy stood William de la Barre, an engineer whose innovative ideas and tireless efforts would influence the way society approached workplace safety.

In this article we explore the life of William de la Barre, the events leading up to the Washburn A Mill Explosion, and the lasting impact of this incident on industrial process safety. There is much in this story that is relevant today, from causes, to standards, regulation to training and a warning to those that fail to appreciate the devastating potential of the dust explosion. Read on to learn from our mistakes of the past!

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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

Explainer: What is a Gas or Vapor Explosion?

Gases or vapors, under certain conditions, can undergo a rapid combustion process known as an explosion. The primary contributors to any gas or vapor explosion are the presence of fuel, an oxidizing agent (usually oxygen), and an ignition source. Let's break down these factors:

- Fuel: Gases such as propane, methane, hydrogen, and various volatile organic compounds (VOCs) can act as fuels. These gases contain a significant amount of stored energy in the form of chemical bonds.
- Oxidizing agent: Oxygen is the most common oxidizing agent, but other gases like chlorine and fluorine can also serve as oxidizers. An oxidizing agent is required to sustain the combustion process by providing the necessary oxygen atoms to react with the fuel.
- Ignition source: An ignition source is needed to initiate the combustion reaction. It can be a flame, impact spark, heat, electrical spark, electrostatic discharge, or any other source that provides sufficient energy to start the reaction.

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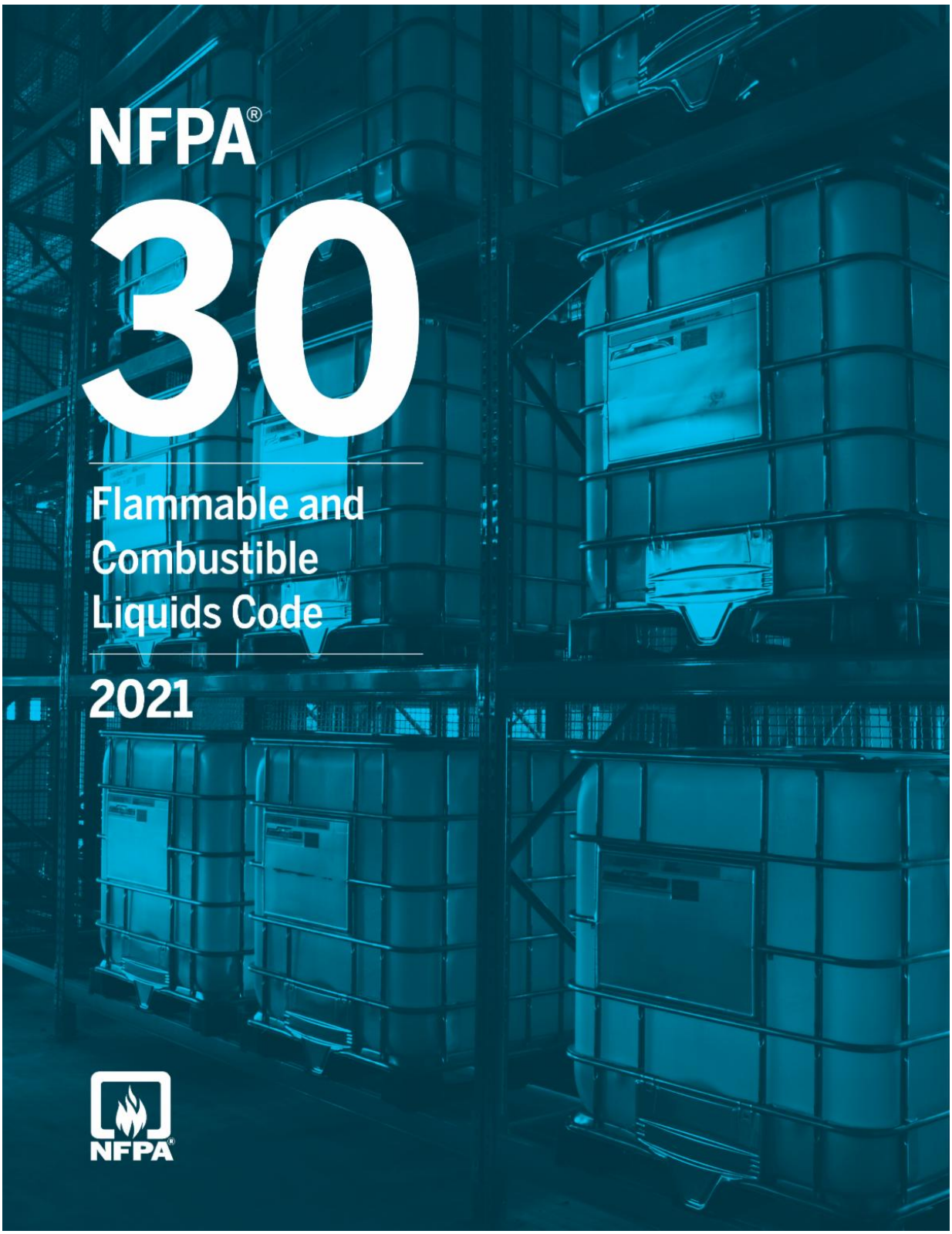
Explainer: NFPA 30 Flammable and Combustible Liquids Code



NFPA 30 [Ref 1] is an important safety code developed by the National Fire Protection Association (NFPA) that sets requirements for the safe storage, handling, and use of flammable

and combustible liquids. This comprehensive document covers various aspects, including the design and construction of storage facilities, ventilation requirements, and fire protection measures

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